WORLD FOOD PROGRAMME IN COLLABORATION
WITH UNITED HIGH COMMISSIONER FOR REFUGEES

REPORT OF THE FOOD CONSUMPTION SURVEY IN
DADAAB AND KAKUMA REFUGEE CAMPS

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ACKNOWLEDGEMENTS

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**ACRONYMS**

<table>
<thead>
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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ANC</td>
<td>Ante natal clinic</td>
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<td>ARI’s</td>
<td>Acute Respiratory Infections</td>
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<td>CHWs</td>
<td>Community Health Workers</td>
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<tr>
<td>CSB</td>
<td>Corn-Soya Blend</td>
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<tr>
<td>EMOP</td>
<td>Emergency Operation</td>
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<tr>
<td>FGDs</td>
<td>Focus Group Discussions</td>
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<tr>
<td>GAM</td>
<td>Global Acute Malnutrition</td>
</tr>
<tr>
<td>GMP</td>
<td>Growth Monitoring Promotion</td>
</tr>
<tr>
<td>ICS</td>
<td>International Services</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, Education and Communication</td>
</tr>
<tr>
<td>IGA</td>
<td>Income Generating Activities</td>
</tr>
<tr>
<td>IMCI</td>
<td>Integrated Management of childhood Illnesses</td>
</tr>
<tr>
<td>IPs</td>
<td>Implementing Partners</td>
</tr>
<tr>
<td>IRC</td>
<td>International Rescue Committee</td>
</tr>
<tr>
<td>IS</td>
<td>International Services</td>
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<tr>
<td>JAM</td>
<td>Joint Mission Assessment</td>
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<td>LWF</td>
<td>Lutheran World Federation</td>
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<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
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<tr>
<td>MoU</td>
<td>Memorandum of Understanding</td>
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<tr>
<td>MSG</td>
<td>Multi-storey gardening</td>
</tr>
<tr>
<td>PDM</td>
<td>Post Distribution Monitoring</td>
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<tr>
<td>SAM</td>
<td>Severe Acute Malnutrition</td>
</tr>
<tr>
<td>SFP</td>
<td>Supplementary Feeding Programme</td>
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<tr>
<td>TBAs</td>
<td>Traditional Birth Attendants</td>
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<td>TFP</td>
<td>Therapeutic Feeding Programme</td>
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EXECUTIVE SUMMARY

DESCRIPTION OF THE FOOD CONSUMPTION SURVEY

This report summarizes the outcomes of a food consumption survey whose aim was to assess the food habits and utilization of the WFP food items among the refugee populations in Kakuma and Dadaab camps. The assessment was a joint venture between UNHCR and WFP, and was meant to identify ways to enable the two agencies improve the nutritional status of the refugees. The assessment was undertaken in January 2004.

BACKGROUND TO FOOD CONSUMPTION SURVEY

UNHCR and WFP have been working together to ensure that food needs of the refugees are adequately addressed. In this respect, WFP is responsible for the provision of the general food ration and UNHCR and its Implementing Partners (IPs) are responsible for the distribution of the food, non-food items and the provision of health, education and other community services. Since October 1998, WFP has planned the food ration at the level of kcal 2,100 per person per day in accordance with the FAO/WHO recommendation as the level of kilocalories required to sustain life. CSB has been included in the general ration to provide micronutrients in the diet. Despite the efforts made by the two agencies and their IPs, the nutrition situation in Dadaab and Kakuma refugee camps has not improved significantly.

MAJOR FINDINGS AND CONCLUSIONS

1. Food Economy

The majority of the refugee population was largely dependent on the food ration as their source of food and income. The poor households had the greatest difficulty in meeting their food and non-food needs. Most of the household income was used in the purchase of food.

2. Food Ration

- There was an improvement in the food basket since May 2003 with an average of kcal 2,000 per person per day. This improvement has however, not translated into better nutritional status of the population as demonstrated by the increased malnutrition in Dadaab according to the MSF survey, June 2003.
- The food ration was considered to be inadequate in quantity and quality by the households despite the fact that it was meeting the kcal 2,100 target because it was sold to purchase basic non-food items and other foods (usually non-equivalent nutritionally). Unless the economic situation of the refugees improves, the nutritive value of the food basket will continue to be lowered by the sale of food to meet other basic requirements.
- The composition of the food basket varied from time to time and sometimes consisted of culturally inappropriate/unfamiliar foods due to lack of donor commitment.
• Even when fully met, the food basket does not provide all the necessary micronutrients required for optimal health.

3. Food Utilization and Consumption

• There was limited diversity in the diet resulting in inadequate micronutrient content.
• It is important to be sensitive to cultural preferences of the refugees. Wheat flour was the preferred staple for both the Somalis and the Sudanese and yet its absence in the current food basket lowered the nutritive value of the ration because larger amounts of maize were sold to buy less amounts of wheat flour.
• Despite the fact that women were in control of food, the practices regarding intra-household food allocation was guided by traditional norms. For example, women, including those pregnant and lactating, did not receive priority in food service despite their vulnerability.
• Overall, the food consumption habits were not ideal in terms of frequency of meal consumption.
• Food was commonly cooked in one pot for all household members because of scarcity of food and firewood and thus the special needs of the vulnerable members of the households were not given special consideration.

4. The role of CSB in the food basket

• CSB was a vital source of micronutrients given the limited supplementation of the food basket for the majority of the population.
• CSB benefited the whole household, although some households indicated that preference was given to children;
• The Somalis did not perceive CSB as palatable without the addition of sugar. In contrast, the Sudanese did not have as big a problem taking the porridge without sugar or with salt.
• The population did not know the nutritive value of CSB relative to other foods in the food basket.

5. Health

• On the whole, accessibility to health services was good. The health situation of the refugees was stable going by the health indicators of mortality, in relation to emergency benchmarks.
• The majority of the households in Dadaab were satisfied with the health services. In contrast, those in Kakuma reported unavailability of drugs and inaccessibility to doctors as major problems. Women strongly expressed their wish to have the services of a woman gynaecologist.
• Despite the high ANC attendance by mothers, most deliveries took place at home with the assistance of trained TBAs.
• MCH attendance was high leading to high immunization rates although there was no strong growth monitoring promotion.
• There was low family planning acceptance especially among the Somalis.
• The CHWs had many responsibilities and appeared to lack supervision in the execution of their duties as the level of effort made seemed to depend on an individual’s initiative. This was especially true for Dadaab where in some blocks, households reported infrequent or no visits by the CHWs.

6. Water and Sanitation

On the whole the availability of and accessibility to water was excellent and within the SPHERE standards. The level of sanitation in terms of availability of toilets was also within the SPHERE standards. There was a great improvement in Dadaab and Kakuma camps in the provision of toilets in the schools in the year 2003. Overall, the availability and accessibility of water and availability of toilets was better in Dadaab than in Kakuma.

7. Nutrition

The nutrition situation of the underfives has remained precarious over the last five years and the prevalence has remained over 10%, a level considered to be serious according to WHO. The level of anaemia among the underfives and mothers was also high.

The causes of malnutrition, (based on the UNICEF conceptual framework [see Annex 3] on the causes of malnutrition in emergencies) included:

Immediate Causes:

a) Inadequate food intake due to:

• Irregular food ration over the years in terms of quantity and composition with the exception of 2003
• The sale of food ration
• Unfamiliar/culturally inappropriate food items in the ration
• Limited diversity in the diet resulting in inadequate micronutrient content
• Lack of knowledge on how to prepare some of the foods, resulting in limited consumption of such foods.

b) High incidences of diseases: Infections such as malaria, diarrhoea and acute respiratory infections aggravate malnutrition because of the synergism between them and malnutrition.

Underlying Causes

a) Food insecurity at household level: The majority of the refugee population had difficulty in meeting their food needs because they were largely dependent on the food ration for their food needs and as a source of income. Intra-household food allocation was unfavourable to women despite their vulnerability, making them food insecure.

b) Poor hygiene practices leading to infections such as diarrhoeal diseases.
c) Social Care Environment

i) Poor Family Planning acceptance led to poor child spacing especially among the Somalis. Consequently, the mothers become anaemic and malnourished due to the frequent pregnancies and deliveries, in addition to having no time or the energy to take adequate care of their young children.

ii) Infant and young child feeding practices. Poor breastfeeding and complementary feeding (weaning) practices especially among the Somali women could partly explain the high malnutrition rates among children 12-24 months. Weaning foods were introduced as late as at one year of age instead of the recommended 6 months. Children were fed too few times in a day (on average twice a day) instead of the recommended four times.

iii) Lack of knowledge on nutrition issues. Mothers lacked adequate knowledge on the nutritive value of foods and appropriate child feeding practices.

Basic Causes

The food insecurity situation was aggravated by the limited possibilities for self-sufficiency, because the camps are located in semi-arid areas and opportunities for sustainable agriculture are almost non-existent. The government maintains a restrictive policy that prevents refugees from engaging in meaningful agricultural or economic activities.

8. Selective Feeding Programmes

- Supplementary feeding programmes targeted the most vulnerable groups of people and acted as a ‘safety-net’ by cushioning their nutritional status and thus saved them from further deterioration.
- The programme was used as an entry point to provide complementary interventions such as health and nutrition education and micronutrient supplementation.
- Whereas the programme was to provide blanket feeding, in Kakuma only those who were anaemic gained admission into the programme.
- Screening for malnourished children and follow-up of those admitted into the programme was weak.
- SFP was viewed as the central activity for solving nutrition problems, undermining other more important and sustainable interventions.

9. School Feeding Programme

- The programme was beneficial to many students who went to school without having taken breakfast and thus dealt with short-term hunger and enabled the students to concentrate on their studies.
- There was increased school attendance by the children as reported by the school administration.
• The main concern of the students, especially the Somalis, was lack of sugar, because the porridge was perceived as unpalatable without it.
• The feeding programme was not operational in Dadaab at the time of the survey due to lack of firewood. Inadequate water storage containers was also reported to be a hindrance to the effective implementation of the programme.

KEY RECOMMENDATIONS

Health

The community outreach needs to be strengthened in the following ways:

• A team of CHWs should concentrate on health education so that they become fully conversant with the necessary content in order to be more efficient in their services;
• The number of CHWs and TBAs should be increased to make them more effective in the delivery of services. The TBAs could be trained to pass messages on infant feeding to the women they attend;
• More avenues for health education should be explored, for example, women groups. The content areas that require emphasis are family planning, hygiene promotion, home management of childhood illnesses and growth monitoring promotion.
• The use of information, education and communication (IEC) materials is critical and a budget should be allocated to this. The CHWs in Dadaab reported that they lacked such materials, specifically training manuals and books;
• There is need to strengthen the capacity of CHWs on communication skills, the use of participatory approaches, the causes of malnutrition and on reproductive health, which were pointed out by the CHWs in Daddab as areas needing attention;
• Men should also be targeted with health and nutrition messages, as they are stakeholders in decision making on issues relating to their children’s welfare;
• A woman gynaecologist should be recruited in Kakuma to deal with sensitive women issues as requested by the women.

Water and Sanitation

The following recommendations are made for Kakuma camp:

• Provision of jerry cans to households for water storage;
• Increase water-pumping time to enable more households fetch water;
• Target the communities who have cultural constraints in the use of toilets and provide education on a continuous basis on the importance of proper human waste disposal.

Nutrition

• Provision of adequate amounts of basic non-food items by UNHCR is critical so that food ration is not sold to meet these needs. As long as basic non-food needs are not adequately provided, the poorer sector of the refugee population will continue to sell a large part of their food ration to acquire these items, since they have no other source.
of income and consequently, the ration will not meet the kcal 2,100 as planned by WFP. The non-food items, which were most frequently, mentioned as inadequate included; fuel (both kerosene and paraffin), cooking utensils, clothes, jerry cans, sleeping mats and soap.

- Identification of complimentary food/s to be supplied as part of the food ration to provide the required micronutrients. The challenge however, is in the identification of food/s that can be easily sourced in large enough quantities and which can be handled effectively without the quality being compromised. The recommended complimentary foods, the rationale for their selection and their nutritive value is given in Annex 4. It is recommended that UNHCR consider providing more than one of the recommended foods in an effort to compensate for the shortfall of micronutrients in the food basket. It is suggested that the amounts of complimentary foods to be provided per person per day be worked out on the basis of the nutritive value of the selected foods, in relation to the shortfall of micronutrients in the food basket. The final selection of complimentary foods will be the responsibility of UNHCR and will be determined to a large extent by the level of funding and logistic considerations.

- Efforts should be made by WFP to distribute the staple and preferred wheat flour because its absence in the current food basket negatively impacted on the nutritive value of the ration.

- There is need for demonstrations on the preparation of the food items in the food basket with special emphasis on CSB porridge and the split yellow lentils. It was reported that the training of CHWs on the preparation of CSB had already taken place; efforts should now be made to replicate the same at the community level.

- Up scaling of micro finance activities especially those targeting women in order to increase their income and enable them feed their families better.

- Nutrition education on Infant and young child feeding practices need urgent attention given the poor breastfeeding and complementary feeding practices. It is recommended that the SEVENTEEN Care Practices identified as crucial in the development of children (see Annex 5) be adopted in the communication of desirable behaviours. The Care Practices need not be all introduced at once, but selected depending on the most urgent needs for individual communities. This intervention can take place concurrently with the other on going activities in both Dadaab and Kakuma camps. Changing attitudes and practices take time and therefore needs continuous effort.

An Action Plan for Sensitization, Training and Implementation of the Care Practices is proposed (See Annex 6).
Selective Feeding Programmes

• Nutrition education should be introduced in the SFP in Dadaab and mothers given feedback on the progress of their children. In both Dadaab and Kakuma, mothers should be educated on the importance of growth monitoring and encouraged to take their children for this activity regularly.

• The community outreach activities should be strengthened by:
  ➢ Training a team of CHWs to deal only with nutrition issues given that nutrition is a major component of the services rendered to the refugees;
  ➢ Improving case finding strategies by screening all children with MUAC and also increasing the frequency of general screening to at least three times per year;
  ➢ Improving the supervision of CHWs to ensure that they deliver services efficiently.

• Identification of families with children who have high relapse rates and addressing the root cause of their vulnerability.

• Kakuma and Dadaab camps are no longer emergency settings; therefore, SFPs need not continue to be viewed as the central nutrition activity. The guidelines on SFP need to be revised from time to time, depending on the prevailing circumstances. When this is done, the rationale should be explicitly stated so that programme performance can be evaluated on the basis of these modified objectives, and appropriate actions taken. Efforts should be made to improve the general ration and the supply of basic non-food items rather than in establishing SFPs as a counter balance to insufficient general ration.

• It is recommended that a nutritionist be recruited in Dadaab and in Kakuma to coordinate nutrition activities.

School Feeding Programme

• The school feeding programme should continue for the achievement of educational outcomes.

• Demonstrations on how to prepare the porridge should be held at the school level.

• The supply of firewood and water storage containers should be addressed urgently to enable the feeding programme be fully operational in Dadaab.

GENERAL RECOMMENDATIONS

The causes of malnutrition are many and complex and become even more complex in emergency situations. Food-based approaches will only deal with the problem in the short-term. Interventions targeting the underlying causes need to be put into place to make impact on the long-term. An approach linking emergency and developmental activities offers the potential for long-term solutions to the problems and should therefore be strengthened given that the situation in the camps is no longer an emergency but a crisis. In this respect, a strong commitment from UNCHR in dealing with the underlying
causes of malnutrition is required to improve the nutritional situation of the refugees.

The following recommendations are made for the improvement of nutrition situation:

- Identification of other vulnerable groups of people such as the elderly for admission into the supplementary feeding programme.
- Nutrition surveys to be undertaken twice a year to ensure closer monitoring of the nutrition situation to enable timely and appropriate interventions.
- A nutritionist is assigned by WFP or UNCHR to oversee the fragile nutrition situation of the population as recommended by JAM 2002.

Way forward for CSB

CSB is a vital source of micronutrients because the cereals supplied in the ration are not fortified and there is limited supplementation of the food ration by the majority of the refugees. Even when fully met, the current food basket provides only 81% iron, 43% of Vit C, 62% of Vit B₂ and 89% of Vit B₁ of the requirements. This situation is compounded by the fact that part of the ration is sold and thus the levels of the micronutrients are lowered.

When the population is entirely dependent on food aid or is at risk of micronutrient deficiencies (as is the case in both Dadaab and Kakuma), blended food should be included in the general ration for the benefit of the total population. The blended foods are also given to provide a suitable food for small children.

The reduction of or removal of CSB from the current food basket would therefore have detrimental effects on the nutritional status of the refugee population. Its reduction or removal in the general distribution should only be considered when the suggested recommendations to improve the nutrition situation have been effected and stabilized and when the majority of the refugee population is able to meet their macro and micronutrient needs. In this respect, the following recommendations should be treated as urgent:

1. The provision of:
   - The preferred staple in the ration;
   - Adequate amounts of basic non-food items;
   - Complimentary foods to provide the shortfall of micronutrients in the food basket.

2. Education to improve the poor infant and young child feeding practices.

3. Health education to encourage acceptability of Family Planning.
1. INTRODUCTION

This report summarizes the outcomes of a food consumption survey whose aim was to assess the food habits and utilization of the World Food Programme (WFP) food items among the refugee populations in Kakuma Camp in Turkana district in the Rift Valley province and Dadaab camp in Garissa district in the North Eastern Province, Kenya. The assessment was a joint venture between United Nations High Commissioner for Refugees (UNHCR) and WFP, and was meant to identify ways to enable the two agencies improve the nutritional status of the refugees. The assessment was undertaken in January 2004.

1.1 Background

Kakuma and Dadaab camps host the registered refugee population in Kenya. Dadaab is located 100km east of Garissa town, in the north central part of Garissa district. Dadaab comprises of three camps (Ifo, Dagahaley and Hagadera) established in 1991 and 1992 and host a population of 134,718 refugees (UNHCR population figures, as at January 2004). The majority (97%) of the refugees are of Somali origin, while the remaining are Sudanese, Ethiopians and Eritreans. The population of Dadaab town and the surrounding areas are almost exclusively Somalis. The Camps are divided into sections, which are subdivided into blocks. Each camp has a hospital, satellite clinics, distribution centre, market and schools.

Kakuma camp is located in Turkana district, in the Rift Valley Province, at about 110 km from the Sudanese boarder at Lokichokio and 50 km from the Ugandan boarder. The camp was established in 1992 to cater for Sudanese refugees, the majority of whom, at that time, were Dinka fleeing conflict in Bor County, Upper Nile. Kakuma is divided into three camps; Kakuma I, Kakuma II and Kakuma III that are subdivided into zones. The majority (81%) of the refugees are Sudanese, followed by Somalis (14%), and Ethiopians 3%. The rest are Ugandans, Eritreans, Congolese, Rwandese and Burundians.

Both Dadaab and Kakuma refugee camps are located in semi arid areas prone to recurring drought and low economic viability. The areas around the camps are characterized by high insecurity, which to a large extent is caused by the presence of the large number of refugees, who receive regular food and non-food items and thus the refugees become easy targets of bandits.

UNHCR is responsible for the protection and humanitarian assistance programmes in both Dadaab and Kakuma camps. The UNCHR and its Implementing Partners (IPs) provide health services, water and sanitation, shelter and basic non-food items (firewood, cooking utensils, sleeping mats, jerry cans, soap etc). UNHCR’s main implementing partner in Dadaab is CARE which handles camp management, food distribution, community services to include water and sanitation, income generating activities and education. GTZ International Services (IS) is the agency dealing with health and nutrition while GTZ Rescue is concerned with environmental conservation and has been involved in the facilitation of the multi-storey gardening (MSG) technology and kitchen gardening. GTZ Rescue is also responsible for the provision of firewood to the refugee
population and for the school-feeding programme. NCCK implements a reproductive health programme.

In Kakuma, UNHCR’s main implementing partner is International Rescue Committee (IRC), which is responsible for the implementation of health, nutrition and sanitation services. The Lutheran World Federation (LWF) is a major partner agency handling camp management, food and non-food distributions, education and community services. As in Dadaab camp, GTZ is concerned with environmental conservation and has also facilitated the multi-storey gardening as well as supplying firewood to the refugees and schools. Other agencies with programmes in the camp are Jesuit Relief Services (JRS) and Don Bosco.

UNHCR and WFP have been working together to ensure that food security and related needs of the refugees are adequately addressed. In this respect, WFP is responsible for the provision of the general food ration in the two camps and UNHCR and its IPs are responsible for the distribution of the food as agreed in the Memorandum of Understanding (MoU) between WFP and UNHCR1.

UNHCR is also responsible for the provision of complementary foods either through direct distribution of commodities or seeds for kitchen gardening or both to make up for the shortfall in micronutrient content of the food basket. UNHCR has been faced with the challenge of providing fresh vegetables because of issues of handling and quality control. In 2002, the UNHCR Sub-Office in Kakuma purchased beans to fill the kilocalories gap left in the general food distribution.

Since October 1998, WFP has planned the food ration at the level of kcal 2,100 per person per day in accordance with the FAO/WHO recommendation as the level of kilocalories required to sustain life. The general food distribution takes place bi-monthly and the food is provided to every registered refugee in the camps based on a family distribution system. The ration scale is the same for children and adults.

According to the Protracted Relief and Recovery Operation (PRRO) 6226, the general food ration was to be as follows:

<table>
<thead>
<tr>
<th>Food item</th>
<th>Amount in grams/person/day</th>
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</thead>
<tbody>
<tr>
<td>Maize</td>
<td>235</td>
</tr>
<tr>
<td>Wheat flour</td>
<td>220</td>
</tr>
<tr>
<td>Pulses</td>
<td>60</td>
</tr>
<tr>
<td>Vegetable Oil</td>
<td>25</td>
</tr>
<tr>
<td>CSB</td>
<td>40</td>
</tr>
<tr>
<td>Salt</td>
<td>5</td>
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Allowing for 25 grams for milling, this basket provides the required kcal 2,100. There have been irregularities in the distribution of the general ration over the years and the
food basket has often fallen short of the kcal 2,100 target due to lack of donor commitments. Since 1997, the full ration had rarely been attained. There was an improvement however, in the year 2003 when an average of kcal 2000 was distributed. In addition, there have been variations in the composition of the food basket due to the fact that what is received as in-kind donations may not necessarily be what is required. Furthermore, compensation is necessary incase of late arrivals of the preferred food item/s. CSB was included in the general ration to provide micronutrients in the diet given that the majority of the people were not able to purchase complementary foods such as fresh vegetables, fruits, milk and meat.

At the time of the assessment, the food basket was composed of:

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<thead>
<tr>
<th>Food item</th>
<th>Amount in grams/person/day</th>
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<tbody>
<tr>
<td>Maize</td>
<td>235</td>
</tr>
<tr>
<td>Maize Flour</td>
<td>214</td>
</tr>
<tr>
<td>Pulses</td>
<td>60</td>
</tr>
<tr>
<td>Vegetable Oil</td>
<td>25</td>
</tr>
<tr>
<td>CSB</td>
<td>40</td>
</tr>
<tr>
<td>Salt</td>
<td>5</td>
</tr>
</tbody>
</table>

Yellow maize flour and the split yellow lentils had temporarily replaced the wheat flour and beans respectively with effect from October 2003.

Despite the efforts made by the two agencies and their IPs, the nutrition situation in Dadaab and Kakuma refugee camps had not improved significantly. Over the last five years, the prevalence of global acute malnutrition (GAM) among the underfives had remained 14% to 20% (-2 Zscore). The findings of a nutrition survey in Dadaab in 2003 (MSF Nutritional Survey, June 2003) revealed that the level of malnutrition had risen to 23.9%, which according to WHO is indicative of a crisis. Anaemia was noted as a significant problem at a prevalence level of 61.3% among children in Kakuma camp and 75% among pregnant women in Dadaab camp according to the micronutrient studies carried out by IRC, UNHCR in collaboration with the Centre for International Health in 2001.

1.2 Survey Objectives

1.2.1 General Objective

Assess and understand food habits and use of WFP food items at the household level in the refugee camps in relation to the other factors that contribute to the high malnutrition and micronutrient deficiencies in the camps with a view to determine importance of CSB as a source of essential minerals and vitamins and recommend viability of its continuation in the general food distribution.
1.2.2 **Specific Objectives** (See Annex 1 for Terms of Reference)

1.2.3 **Survey Methodology**

An external consultant carried out the survey. The methodology was participatory in nature and involved the collection of qualitative data, which was complemented by the existing quantitative data. The approach used in the assessment was based on a three-phase process. An overview of the project operation was obtained from discussions with WFP Refugee Advisor and UNHCR Senior Health Officer at the Nairobi offices. A thorough review of documentation: MoU between UNHCR and WFP, Post Distribution Monitoring (PDM) Reports, WFP Protracted Relief and Recovery Operation Kenya, Household Economy Assessment reports, Joint Assessment Mission (JAM) reports and Nutrition Survey reports was conducted.

The second phase of the assessment included visits to Dadaab and Kakuma refugee camps for in-depth interviews and consultations with the UNHCR and WFP Head of Sub-Offices as well as with the implementing partners. The third phase involved field visits to the refugee camps for household interviews and Focus Group Discussions (FGDs) with the beneficiaries who were selected to represent the major nationalities and ethnic groups. FGDs were held with women, Community Health Workers (CHWs) and students (girls and boys separately). Field visits were made to Supplementary Feeding and Therapeutic Feeding Centres, markets, schools and IGA projects in order to observe the respective activities and to have discussions with those involved in programme implementation as well as the mothers of children admitted to the feeding programmes (see Annex 2 for the Itinerary and people met).

The information gathered through this process was analyzed in relation to the requirements of the ToR. This report is therefore the final output of the assessment.

2. **ASSESSMENT FINDINGS**

The findings for Dadaab and Kakuma camps are presented together because of the many similarities in programme implementation. Differences in the findings are highlighted.

2.1 **Food Economy**

The majority of the refugee population (35-45%) is “poor” while the rich and the ‘better off’ constitute the minority (5-15%). The main determinant of wealth in Dadaab is a household’s connection. Those who are “well-connected” have access to remittances from outside of Kenya, or Kenya Somalis or refugees involved in countrywide trade, are wealthier. Households without access to these wealthier people are poor (SCF, Household Food Economy Reports, 1999).
The following conclusions can be made about the food economy:

- On the whole, Somalis were wealthier than the Sudanese;
- The major food source for the majority of the refugees is the food ration supplied by WFP (Third Quarter PDM Reports, 2003 for both Dadaab and Kakuma camps); The poor households have the greatest difficulty in meeting both their food and non-food needs. The majority is largely dependent on the food ration for their source of food and income. For the “poor” households, 80-85% of the food came from the food ration, 5-15% from gifts and 5-10% was purchased (SCF, Household Food Economy Reports, 1999);
- The largest portion of the household income was spent on food and a lesser portion on non-food items. The poorer the household the higher the proportion of income spent on food. Overall, households in Dadaab spent about 77% of their incomes on food and food related expenditure and the rest on non-food items. In Kakuma, 67% of the household incomes was spent on food and the rest on non-food items (3rd Quarter PDM reports, 2003);
- The households with relatively stable incomes (above Kshs 2,500) rarely sold food ration purchased (SCF, Household Food Economy Reports, 1999);
- Access to food from livestock and agriculture was negligible;
- The Somalis have more alternatives sources of food (from gifts and own produce) compared to the Sudanese (Third Quarter PDM Report for Kakuma camp, 2003);
- Major constraints to the improvement of the welfare of the refugees is the government’s encampment policy which restricts refugee movement outside the camp and also the fact that the areas which host the refugees are amongst the most impoverished in Kenya;
- Opportunities for self-reliance for the refugees are limited because of the semi-arid nature of the surrounding areas making sustainable agriculture almost non-existent; the government maintains a restrictive policy that prevents refugees from engaging in meaningful agricultural and economic activities.

2.2 Food Utilization and Consumption

The following observations were made about the food ration:

- The food ration has been irregular over the years due to an unhealthy pipeline. The ration has, on average, provided less than the required kcal 2,100 to sustain life;
- Overall, there was an improvement in the year 2003 with an average of kcal 2000 per person per day. However, during the months of March and April the ration was down to kcal 1600 due to an unhealthy pipeline;
- The food ration did not provide all the necessary micronutrients required for optimal health. Even when fully met, the current food basket had a shortfall of vitamins B₁, C and B₂ as well as iron;
- The food ration for most households did not last for the intended 15 days but lasted on average 8-12 days in Dadaab and 10-12 days in Kakuma as reported by the households;
• The food ration was sold to buy basic non-food items or supplementary foods to improve the palatability of the food ration. The food sold in largest amounts (25%) in the current food basket in Dadaab was maize (3rd Quarter PDM Report) while in Kakuma it was reported that 10.3% of maize was sold (3rd Quarter PDM Report). This was attributed to lack of wheat flour, considered essential by both the Somalis and the Sudanese, forcing households to sell significant amounts of maize to purchase relatively smaller quantities of wheat flour. The foods least sold were oil (3%) and CSB at less than 1%. The nutritive value of the food basket was thus lowered when some of the food items were sold to buy foods that are non-equivalent nutritionally to what was sold. For example, wheat flour or maize was sold to buy sugar, a commodity cherished by the Somalis. This means that for the majority of the refugees, the food basket did not provide the kcal 2,100 as intended.

Reasons for Sale of Food Aid

The reasons given by the households for sale of food in Dadaab included: lack of other sources of income (41%), to purchase basic non-food items (35%), food aid not appropriate (14%), to meet food aid transportation costs (7%) and for milling costs 3% (3rd Quarter PDM report). The same reasons were also recorded in Kakuma. All the reasons given for sale of food aid except the fact that the food is inappropriate, all point to lack of or inadequate income. This can be interpreted to mean that unless the economic situation of the refugees improves, the nutritive value of the food basket will continue to be lowered by the sale of food to meet other basic requirements.

Methods of food preparation

The methods of food preparation were generally similar among people of the same nationality or ethnic groups. The staple dish for the Somalis was Anjera made from wheat flour. In the absence of wheat flour the mostly commonly consumed dish was Ambulo made from maize and which was usually accompanied by lentil or bean sauce. Beans were preferred to lentils and thus many times lentils were sold to buy beans. The lentils had lower market value than the beans and this meant that less quantity of beans was purchased compared to the amount of lentils sold. The most common breakfast food for the Somalis was tea (with or without milk) taken with a lot of sugar. Another common breakfast dish was porridge made from CSB. However, its intake was limited by lack of sugar while a few reported that they took it with salt if sugar was not available.

The staple dish for the Sudanese was Kisra (prepared from a mixture of maize and wheat flours). Similar to the Somalis, the Sudanese sold some of the maize to buy wheat flour, which was lacking in the current food basket. Another dish eaten by the Sudanese was Ugali, made from maize flour. Both Kisra and Ugali were accompanied by lentil or bean sauce. As was the case with Somalis, the Sudanese preferred beans to the lentils. For the Sudanese, the most common breakfast was CSB porridge. Despite the fact that the Sudanese also preferred to take the porridge with sugar, salt was an acceptable option and thus lack of sugar did not restrict the consumption of porridge to the same extent as it did for the Somalis.
Among both the Somalis and the Sudanese, no special meals were prepared for any specific persons because of scarcity of food and firewood and also because of inadequate cooking utensils. Consequently, the special needs of some of the household members were not taken into consideration.

Food control

In Dadaab camp, more males than females collected food from the distribution centres whereas in Kakuma the opposite was the practice. However, at the household level, in both camps, more women controlled the food. In Dadaab, 80% of the women and about 91% in Kakuma made decisions on what to sell, how much to sell and when to sell it (3rd Quarter PDM reports, 2003 for camps).

Intra-household food allocation

Despite the fact that women were in control of food, the practices regarding its utilization in the household were guided by traditional norms. The majority of households reported that children were served food first while in a few households men were given priority in food service followed by children and lastly women. Women, irrespective of their physiological status (pregnant or lactating) did not receive any priority in food service. While it is commendable that the vulnerability of children was acknowledged, it is unfortunate that women, who are also vulnerable especially when pregnant or lactating, came last in the order of food service, both in times of adequacy and scarcity.

Frequency of food consumption

The frequency of food consumption varied from one community to another. For the majority of the Sudanese, adults ate twice a day when there was adequate food. During times of food scarcity, adults skipped breakfast and ate lunch only. Children were fed twice a day both during times of food adequacy and scarcity. This practice is inappropriate because children need more energy per kg of body weight than adults, and because of their small stomachs, should eat at least 4 times a day to get their requirements, according WHO recommendations.

For the Somalis (including Somali Bantu) both adults and children ate three times a day when food was available. In times of scarcity, adults ate two meals per day. The Ethiopians reported that they ate twice a day. The breakfast consisted of porridge and lunch of either ugali or githeri (a mixture of maize and beans), when beans were available. It is desirable that three meals are eaten per day so that the body can maintain enough energy levels to enable it to carry out its functions and be engaged in meaningful activities throughout the day.

Food storage

Food was stored for the few days it lasted in the same bags in which it was brought from the distribution centres. Some households especially the Sudanese ones stored the food in
a secluded corner on a raised mud platform. The openings of the bags were tied to prevent entry of foreign bodies. Despite this, rats and insects gained entry into the foods through the nylon bags. However, a negligible amount of food was lost given the short period of storage. Proper storage is also important to prevent disease outbreaks due to food contamination.

Coping mechanisms in times of food scarcity

The main coping mechanisms were cited as:
- Skipping meals
- Remittances from relatives and friends
- Acquisition of food on credit and paying later when the food ration is distributed.
- Begging for food from neighbours
- In Kakuma, restriction of meals by adults to allow more food for the children was also reported (Third Quarter Report, 2003).

In Dadaab, it was reported that some of the basic non-food items such as clothes, paraffin, shoes, and books for children were also acquired in the same ways.

The role of CSB in the Food Basket

1. CSB was a vital source of micronutrients given the limited supplementation of the food basket for the majority of the population. It is also a rich source of protein (18 g per 100g of dry finished CSB) and energy due to the high fat content (6 g per 100g of dry finished CSB).
2. CSB benefited the whole household, although preference was given to children, the elderly and the sick.
3. CSB was the most commonly mentioned breakfast food.
4. CSB was well accepted by the majority of the population. Its acceptability was influenced by its physical condition. For example, at the time of data collection for this assessment, the CSB in Dadaab was infested with weevils and mothers reported that it gave their children diarrhoea. Some indicated that they gave it to their animals. It was not possible to verify the extent of this practice. It was however, the feeling of the programme staff that this was not a common practice.
5. In Kakuma, CSB was the most commonly consumed food at 98-100% (Third Quarter PDM report, 2003).
6. CSB was the least sold food item in the basket. It was reported that it did not have a high market value.
7. Taste perceptions. CSB was not perceived as palatable without the addition of sugar, especially by the Somalis, some of who reported that they could not take porridge made out of it without the addition of sugar.
8. The population did not know the nutritive value of CSB relative to other foods in the basket.
9. CSB provided a porridge pre-mix, which cooks quickly and therefore did not require a lot of firewood.
10. CSB was the most appropriate food for young children in the current food basket.
Concluding remarks about food utilization and consumption.

The following observations were made about utilization and consumption of the food provided by WFP:

- The food ration was considered to be inadequate in quantity and quality by the households despite the fact that it was meeting the kcal 2100 per person per day, because it was sold to purchase other foods and non-food items;
- There was limited diversity in the diet resulting in inadequate micronutrient content. Few households supplemented the food basket with vegetables, milk and meat. Efforts to supplement the diet were constrained by inadequate incomes for the refugee population. Similarly, efforts by UNHCR to provide complementary foods had been frustrated by lack of funding and logistic reasons such as handling and quality control of fresh produce such as vegetables. Moreover, the areas surrounding the camps are unproductive therefore fresh produce would have to be sourced from far distances. Nevertheless, UNHCR had supplied beans in the year 2003, but this was irregular and scattered. No complementary food had been provided in Dadaab since the year 2000;
- The diet was monotonous and lacking in a variety of colours. The foods in the current food basket were all yellow with the exception of maize;
- Overall, the acceptability and utilization of food items was dependent on nationality and ethnicity. Wheat flour was the most preferred staple food item among the Somalis, Sudanese and Ethiopians because of its versatility in use, as it can be used to make a variety of dishes. It also fetched more income when sold to buy other foods to supplement the diet and to purchase basic non-food items. The refugees were therefore concerned about the fact that wheat flour had been replaced by the less preferred yellow maize flour in the current food basket;
- Unfamiliar/culturally inappropriate food items in the ration reduced total food intake. The yellow split lentils were unpopular among all the nationalities because it was unfamiliar and was believed to cause diarrhoea among children. Beans were preferred to the lentils;
- Maize was considered inappropriate for children, the sick and the elderly, as they could not eat it;
- Some women, especially from the Somali community reported that they did not know how to prepare porridge and thus this restricted the consumption of CSB in their households. Further, mothers from both Somali and Sudan origin reported that they did not know how to prepare the yellow lentils. The same finding is reported in the Third Quarter PDM report for Dadaab camp. In Kakuma, the Somali Bantus reported that they did not know how to prepare *Ugali* from the maize flour distributed in the current food basket because it was more fine that what they are used to;
- The most preferred food in the current basket was maize because it was more versatile in use than the other foods. The Somalis mainly used it to make *Ambulo* and the Sudanese made *Githeri* out of it. It also had the highest market value among the foods in the current food basket;
- The vegetable oil was used mainly in the lentils sauce, with a few households reporting that they also used it in porridge. A few women indicated that they used it for cosmetic reasons.
• Overall, the food consumption habits were not ideal in terms of frequency of meal consumption. This was especially true for children who had fewer meals per day than recommended;
• Intra-household food allocation gave the necessary special consideration to children in that they were the first to be served food. Unfortunately women, whether pregnant or lactating did not receive the same attention;
• Food was commonly cooked in one pot for all the household members because of scarcity of food and firewood. This can negatively impact on health of the vulnerable members in the household such as children who need to eat more frequently than adults.

2.3 Health Services

In Dadaab, health services are delivered through a hospital and a health post in each of the three camps. In addition, there is a community outreach programme and a referral system to Garissa district hospital. In Kakuma, the health services are delivered through a hospital, four clinics and a community outreach programme. In addition, there are two VCT centres and a referral system to Kakuma Mission hospital.

The Health Situation

On the whole, accessibility to health services was very good. Despite the fact that the health situation of the refugees continues to be marginal, the situation could be said to be stable going by the health indicators of mortality in relation to emergency benchmarks, although considerable variation existed among the camps in the seasons and among age groups. In 2002, the underfive and crude mortality rates were (in both Kakuma and Dadaab camps) on average 1.3 and 0.5/10 000/month. These rates varied with seasons, with higher mortality rates being recorded during the rainy seasons characterized by high incidences of diarrhoeal diseases, ARI’s and malaria, conditions that aggravate malnutrition and mortality. In June 2003, the underfive and crude mortality rates were 2.1 and 0.5/ 10 000/ per day respectively in Dadaab, (MSF Nutritional Survey, June 2003) from a survey undertaken during the rainy season. In both camps, maternal and neonatal mortality rates were higher than expected. In Dadaab, the neonatal mortality rate was 14/1000/live births and the maternal mortality rate was 479/100,000/live births. In Kakuma, the rates were 12/1000 live births and 130/100,000 live births for neonatal and maternal mortality respectively (UNHCR Country Operation Plan 04. Health and Nutrition 2003).

The most common disease conditions in both camps were malaria, ARIs, and diarrhoea. The prevalence of HIV/Aids in Kakuma was reported to be 5% (Country Operation Plan 2004). The prevalence of HIV/Aids in Dadaab is not known. In Dadaab, there was an increase in TB cases that are not HIV-related. Cases of goitre were also diagnosed, which could be an indication of lack of iodine in the diet.

In Kakuma, the focus of the health system is delivery of preventive services. For malaria prevention, for example, pregnant women were given prophylaxis and supplied with
insecticide-treated bed nets of which 1,000 had already been distributed in the year 2003. Other measures included vector control activities such as spraying of drainage twice a year. The health system was in the initial stages of adopting the Integrated Management of Childhood Illness (IMCI), a broad strategy developed by WHO and UNICEF designed to reduce childhood mortality, and morbidity. It encompasses improving case management skills of health workers, the health system and community practices. The initial first level training for 24 health workers had taken place in December 2003, facilitated by the Ministry of Health. This was a positive move given the great potential of IMCI in reducing childhood mortality and morbidity because of its holistic approach in dealing with the child’s problems.

Reproductive health

Most of the pregnant mothers attended ante-natal clinic (ANC) and received standard routine treatment such as folic acid micronutrient supplementation, although compliance to them was not known. Family Planning acceptance was low especially among the Somalis. Of concern to the women in Kakuma was the lack of privacy in the provision of family planning services and the attitude of some of the health workers who divulged the information to their husbands especially those who were opposed to family planning.

Low acceptance of family planning leads to poor spacing of children and this can negatively impact on the health of mothers and their children. The mothers could become anemic and malnourished due to the frequent pregnancies and deliveries, in addition to having neither time nor the energy to take adequate care of their young children. When a mother became pregnant, they stopped breastfeeding thus denying the youngest child the benefits of breastfeeding. Despite the high ANC attendance, most women in Dadaab and Kakuma delivered at home with the assistance of trained TBAs. The women preferred home delivery because of the privacy and familiarity of the environment while some reported that they preferred the services of TBAs who were mostly older than the health staff.

Maternal and Child Health (MCH)

Attendance to MCH was high leading to high immunization rates. The main weakness was lack of strong and well-established growth monitoring promotion. It was reported that this service had been started in Dadaab in November 2003. The mothers tended to take their children to MCH for immunization purposes only and had probably not understood the concept of growth monitoring. Consequently, growth faltering for most children was not detected early.

Communities’ Perceptions on Health Services

In Dadaab, the majority of the households were satisfied with the health services provided. Despite the fact that the most commonly required drugs were available most of
the time, the majority of the people viewed syrups, injections and intravenous fluids as more effective than capsules and tablets.

In Kakuma, the community was dissatisfied with the following aspects of the health services:

- Unavailability of drugs was perceived as a major problem despite the fact the health staff indicated that this was not a constraint. The households reported that most of the times they were prescribed Paracetamol irrespective of the disease condition. All those interviewed were of the same opinion and knew the drug by name;
- Inaccessibility to doctors;
- Lack of a woman gynaecologist to deal with women’s problems.

Community outreach programme

The community outreach programme was an important link between the community and the health system. In Dadaab, the programme was headed by a nurse working with a team of coordinators and supervisors together with the community Health Workers (CHWs) and Trained Birth Attendants) TBAs. The roles of the CHWs included health education and making follow-up visits, treatment of minor ailments, and health education. The duties also included non-health related issues such as food basket monitoring and enumeration of demographic data. In Kakuma, the roles of the CHWs also included mobilization of the community to take part in hygiene promotion activities. However, health education formed a major component of the community outreach programmes in both camps, and was particularly important in a community that is largely illiterate in assisting them acquire knowledge and skills to improve their well-being.

The following constraints and challenges were noted in the community outreach programme:

1. CHWs had a lot of responsibilities and health education many times did not receive the necessary attention. In Kakuma, it was reported that the system had adopted the horizontal approach whereby a CHW is trained to deal with all aspects of health;
2. The level of coverage by CHWs differed from one area to another. Some of the areas reported active involvement of CHWs while in some areas CHWs were rarely seen. This was particularly true in Dadaab. This could be an indication of a heavy workload of the CHWs or laxity in supervision;
3. CHWs did not appear competent in some issues pertaining to nutrition. For example, in Dadaab some of them indicated that exclusive breastfeeding should be practiced up to 4 months and others up to 6 months. It would appear, therefore, that mothers were receiving contradictory messages on some issues such as this;
4. It was also argued that some of the CHWs who were supposed to be the change agents were themselves not convinced of the changes they advocated for or were not themselves role models. For example, some of them did not practice family planning or breastfeed their children exclusively and would therefore not easily convince the community to do so.
**Recommendations for the community health education programme**

The community outreach needs to be strengthened in the following ways:

- A team of CHWs should concentrate on health education so that they become fully conversant with the necessary content in order to be more efficient in their services;
- More avenues for health education should be explored, for example, women groups;
- Participatory approaches should be encouraged in health and nutrition education in order to get an in-depth understanding of the community practices. Those practices, which are scientifically sound, should be encouraged while at the same time discouraging those that are not;
- Communication skills are critical in the delivery of messages and should be accorded emphasis in the training of the CHWs;
- The use of information, education and communication (IEC) materials is equally critical and a budget should be allocated to this. The CHWs in Dadaab reported that they lacked such materials, specifically training manuals and books;
- The content areas that should be emphasized in health education include:
  - Family Planning
  - Hygiene Promotion
  - Home management of childhood illnesses
  - Growth monitoring promotion (GMP);
- There is need to strengthen the capacity of CHWs on causes of malnutrition and reproductive health, which were pointed out by the CHWs in Dadaab as areas needing attention. The refresher courses should not be repetitive in content. The CHWs reported for example, that they had undergone many training sessions in the use of MUAC for screening of malnourished children;
- The TBAs could be trained to pass messages on infant feeding to the women they attend;
- Men should also be targeted with health and nutrition messages, as they are stakeholders in decision making on issues relating to their children’s welfare;
- The number of CHWs and TBAs should be increased to make them more effective in the delivery of services;
- A woman gynaecologist should be recruited in Kakuma to deal with sensitive women issues as requested by the women refugees.

### 2.4 Water and Sanitation

The programme is commended for the excellent availability of and accessibility to water in the Dadaab and Kakuma camps. In Dadaab, the camps were supplied with water from 12 boreholes, all of which were within 250 metres from the households, with the exception of an area in Dagahaley camp where a borehole had been dug and installation of the pumping equipment was due for completion in February this year. Water was pumped in two shifts per day in both camps. The amount of water pumped on average was 18-19 litres per person per day in Dadaab and slightly less in Kakuma at 15-17 litres per person per day, both of which were within the SPHERE standards. The water was
safe for human consumption because it was from boreholes and had also been treated with chlorine.

**Constraints in the supply of water in Kakuma**

- Low pressure limiting the number of households who can fetch water within the time it is pumped;
- Inadequate storage containers by the households. Most households reported that they had only one 20-litre jerry can and thus could only fetch this amount of water per day which was not enough;
- Limited pumping time and therefore not all households were able to fetch water;
- Overcrowding in some areas thus overburdening the water points and consequently decreasing pressure;
- Use of water for other purposes such as agriculture, use in restaurants and brick making while the water was adequate for household purposes only.

The level of sanitation in terms of the availability of toilets was commendable and within the SPHERE standards. In Dadaab, the community was expected to dig the latrines as part of their in-kind contribution while CARE provided the superstructure for construction. Two to three families shared a latrine (an average of 15-18 people). The community was enthusiastic in having family latrines but this was constrained by inadequate availability of superstructure and overcrowding in some areas, limiting space for the construction of more toilets. Unlike in Dadaab, the majority of the refugees in Kakuma were not willing to dig latrines. In Kakuma, on average, 16 people used one toilet. There was an increase in the number of toilets in the schools in both Dadaab and Kakuma camps during the year 2003, resulting in 1:70 toilets to student ratio. Plans were underway in Kakuma to increase this to 1:50 ratio by end of June 2004. Separate toilets were built for the girls and boys, with those for girls being built in secluded places.

The major shortfall in terms of sanitation was the lack of bath shelters especially in Dadaab and therefore the toilets doubled as bath shelters. This practice had the added indirect benefit that the toilets were kept clean because of being used for bathing.

**Main Challenges of Sanitation in Kakuma:**

- Limited space to put up more toilets especially in Kakuma I zone 5;
- Some of the community members did not want to dig latrines;
- Poor utilization of toilets by some communities due to cultural practices (Sudanese from Equatoria region) although the situation had improved.

**Recommendations for Water and Sanitation in Kakuma:**

- Provision of jerry cans to households for water storage;
- Increase water-pumping time to enable more households fetch water;
- Target the communities who have cultural constraints in the use of toilets and provide education on a continuous basis on the importance of proper human waste disposal.
2.5 Nutrition Situation

The nutrition situation of the underfives over the last five years has been described as precarious (Joint Assessment Mission 2002). The nutrition situation is characterized by a level of global malnutrition (GAM), above 10%, which signifies a serious situation according to WHO. In Dadaab, the nutrition situation worsened in 2003 when a GAM 23.9% was recorded (MSF Nutrition Survey, June 2003). In Kakuma, there has been a slight but consistent decrease in the prevalence of wasting since May 1999 but the improvement was not statistically significant (IRC Nutritional Survey, September 2002). The results of a nutrition survey conducted in Kakuma in December 2003 were not out at the time of writing this report.

The level of anaemia was high in both Dadaab and Kakuma camps. In Dadaab, the level of anaemia among pregnant women had reached a level of 75%, this in turn affected the birth weight and increased the risk of maternal mortality. In Kakuma, the level of anaemia was high among the children; the rate of anaemia (hb <11.0 g/dl) was found in 61.3% of the children while severe anaemia (<7.0 g/dl) was found in 6.2% of the 6-59 months old children. Vitamin A deficiency was found in 47.2% of the 6-59 months old children according to studies carried out by IRC, UNHCR in collaboration with the Centre for International Child Health in 2001. According to WHO, anaemia levels above 45% is considered of public health concern. Further, anaemia and malnutrition are strongly correlated and decrease the intellectual level of the affected children. The problem of anaemia is associated with the relatively high maternal and neonatal mortality rates.

Causes of malnutrition

The causes of malnutrition were analyzed in relation to UNICEF’s Conceptual Framework of the Causes of Malnutrition (see Annex 3). According to the consultant’s assessment and the information documented, the following were identified as the causes of malnutrition in both Dadaab and Kakuma camps. The causes have been categorized into immediate, underlying and basic causes.

Immediate Causes

a) Inadequate food intake due to:

1. The irregular food basket leading to the provision of, on average, less than kcal 2,100 per person per day.
2. Limited diversity in the diet resulted in inadequate micronutrient content. Even when fully met, the current food basket provided only 81% of iron, 43% of vitamin C, 62% of vitamin B2 and 89% of vitamin B1 requirement.
3. Sale of food ration to buy basic non-food items and supplementary foods, some of which are non-equivalent nutritionally to the food sold.
4. The provision of unfamiliar or culturally inappropriate food items in the food basket reduced to a certain extent, the amount of food taken.
5. The provision of inappropriate foods for some sub-groups of the population for example, maize for children, the sick and the elderly interfered with the food intake of these groups of people.
6. Lack of knowledge on how to prepare CSB and the yellow lentils restricted, to a certain extent, the consumption of these foods in some households.

b) Incidences of diseases

The seasonal high incidences of malaria, diarrhoeal diseases, and ARIs aggravated malnutrition among the underfives and thus higher malnutrition rates coincided with high incidences of these diseases because of the synergism between infections and nutrition.

Underlying Causes

a) Food Insecurity at the household level

• The ‘poor’ who formed the majority of the refugee population were the most food insecure and had the greatest difficulty in meeting their food and non-food needs;
• Intra-household food allocation was influenced by culture and was unfavourable to women, even those pregnant and lactating. In the majority of cases, women ate last even when pregnant or lactating. Consequently, women were likely to have smaller meals or miss food altogether. The consequences of this practice are unhealthy women incapable of having optimal pregnancy outcomes or women not capable of breastfeeding their children adequately.

b) Social Care Environment

i) Poor hygiene practices leading to infections such as diarrhoea.

Observations revealed that most of the mothers were not clean in the way they handled food and observed environmental hygiene. Dirty cooking utensils were left lying around which could be a source of infections particularly to children.

ii) Poor Family Planning acceptance especially among the Somali community leading to poor child spacing and consequently impacting negatively on the health and nutrition status of the mothers and their children.

iii) Infant and young child feeding practices.

Breastfeeding Practices

Inadequate infant and young child feeding practices have been identified as a major deterrent of child health and development. Breastfeeding is important to provide immunity and adequate nutrition to the child and is even more important in emergency situations because of the high levels of infections. Breastfeeding practices were poor especially among the Somali women. The duration of breastfeeding was short due to
frequent pregnancies. The women stopped breastfeeding when a child fell sick especially if it had diarrhoea. In Dadaab, for example, in a TFC in Ifo camp, (with children 6 months to 1 year old) only 4 out of 24 mothers were still breastfeeding their children at the time of the visit by the consultant. The Somali hardly practiced exclusive breastfeeding. Boiled water to which sugar was added was the first pre-lacteal given to children during the first few days of life.

The Sudanese women were better in their breastfeeding practices and traditionally practiced longer duration of breastfeeding up to 3 years as a means of spacing children. They however did not practice exclusive breastfeeding either.

**Complementary Feeding Practices**

Complementary feeding (weaning practices) was, on the whole extremely poor especially among the Somalis who introduced complementary foods to their children at one year instead of the recommended 6 months. Many of the Somali women fed their children on breast milk, and/or other milk (cow’s/goat’s/camel’s) up to the age of one year. This meant that children did not get all the required nutrients for proper development since breast milk is inadequate to cater for the child’s needs from the age of 6 months. In the TFC in Ifo camp in Dadaab visited by the consultant, only one out of the 24 admitted children had been given CSB porridge before admission into the programme.

The Sudanese women’s weaning practices were better than those of their Somali counterparts because many of them reported that they introduced porridge to children at the age of 4-6 months and would breastfeed for 2 years or longer.

**Frequency of feeding children**

The frequency of feeding of children was also found to be inappropriate. Most of the children ate three or two times per day instead of the recommended 4 times or more.

v) Lack of knowledge on nutrition issues. Many women believed that children were malnourished because of the presence of diseases only and did not also relate malnutrition to feeding practices. This places a challenge in convincing mothers to change child feeding practices. In addition, there was ignorance on the nutritive value of foods. This was demonstrated for example, by the practice of some Somali mothers who reportedly gave black tea to their children.

c) Basic Causes

The food security situation was aggravated by the limited possibilities for self-sufficiency, because the camps are located in semi-arid areas and opportunities for sustainable agriculture are almost non-existent. The government maintains a restrictive policy that prevents refugees from engaging in meaningful agricultural or economic activities.
Recommendations for the improvement of the nutrition situation

- Provision of adequate amounts of basic non-food items is critical so that food ration is not sold to meet these needs. As long as basic non-food needs are not adequately provided, the poorer sector of the refugee population will continue to sell a large part of their food ration to acquire these items, since they have no other source of income. This means that the ration will not meet the kcal 2,100 as planned by WFP. The non-food items, which were most frequently mentioned as lacking included; fuel (both kerosene and paraffin), cooking utensils, clothes, jerry cans, sleeping mats and soap. In addition to these, lack of adequate jerry cans and sleeping mats was a concern for the refugees in Kakuma;

- Identification of a complimentary food/s to be supplied as part of the food ration to provide the required micronutrients. The challenge however, is in the identification of a food/s that can be easily sourced in large enough quantities and which can be handled effectively without the quality being compromised. The recommended complimentary foods, the rationale for their selection and their nutritive value is given in Annex 4. It is suggested that the amounts of complimentary foods to be provided per person per day be worked out on the basis of the nutritive value of the selected foods in relation to the shortfall in the food basket. The final selection of complimentary foods will be the responsibility of UNHCR, and will be determined to a large extent by the level of funding and logistic considerations.

- Efforts should be made to distribute the staple and preferred wheat flour because its absence in the current food basket negatively impacted on the nutritive value of the ration. More maize was sold to buy less wheat flour and this resulted in lowering the kcal value of the ration.

- There is need for demonstrations on the preparation of the food items in the food basket with special emphasis on CSB porridge and the split yellow lentils. It was reported that the training of CHWs on the preparation of CSB had already taken place; efforts should now be made to replicate the same at the community level.

- Nutrition education on Infant and young child feeding practices need urgent attention given the poor breastfeeding and complementary feeding practices. It is recommended that the SEVENTEEN Care Practices identified as crucial in the development of children (see Annex 5) be adopted in the communication of desirable behaviours. Care Practices (defined as actions and decisions made directly and independently by the care provider) have been identified as having a major impact on child health and development. The Care Practices package is detailed, comprehensive and focused. The Care Practices need not be all introduced at once, but selected depending on the most urgent needs for individual communities. The most urgent needs for the different communities should therefore, be first identified so that they are addressed appropriately. Changing attitudes and practices take time and therefore needs continuous effort.
This intervention can take place concurrently with the other ongoing activities in the both Dadaab and Kakuma camps. An Action Plan for Sensitization, Training and Implementation of the Care practices is proposed (See Annex 6).

- Health Education to encourage family planning acceptability especially among the Somalis;
- Up scaling of micro finance activities especially those targeting women in order to increase their income and enable them feed their families better.

**2.6 Selective Feeding Programmes**

In Dadaab, the Supplementary Feeding Programme (SFP) targeted moderately malnourished children and provided blanket feeding for pregnant women, from 6 months and lactating mothers up to 6 months. The Therapeutic Feeding Programme (TFP) was meant to rehabilitate severely malnourished children. In Kakuma, the SFP targeted moderately malnourished children as was expected but did not provide blanket feeding for pregnant and lactating women. In addition, the SFP in Kakuma targeted those with chronic illnesses such as TB and HIV/Aids, both of which are wasting diseases that have profound negative effects on nutritional status. The double ration provided in the SFP (see below) was similar for the children and the women. These foods were given as a pre-mix on a weekly basis in Dadaab and on a bi-monthly basis in Kakuma.

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Amount per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSB</td>
<td>225g</td>
</tr>
<tr>
<td>Vegetable Oil</td>
<td>25g</td>
</tr>
<tr>
<td>Sugar</td>
<td>20g</td>
</tr>
</tbody>
</table>

**Strengths of the SFP**

1. Targeted the most vulnerable groups of people and acted as a safety-net by cushioning their nutritional status to save them from further deterioration;
2. It was viewed by the community as beneficial, not only to the target groups but also to the whole household because of food sharing;
3. Observations at SFP in Dadaab revealed accuracy in the taking of anthropometric measurements by the staff;
4. The programme was used as an entry point for complementary interventions. In Dadaab, the interventions included: deworming of children, Fe/folic acid supplementation, and vitamin C supplementation for children and ORS sachets for the management of diarrhoea among children. In Kakuma, health and nutrition education and demonstrations on food preparation and kitchen gardening took place at both the SFPs and TFPs.
Weaknesses

- In Dadaab, no nutrition education and counselling was offered to mothers at the SFP due to inadequate staff. Mothers did not therefore receive feedback on the progress of their children and as such the exercise was mechanical and boiled down to a food distribution exercise;
- In Dadaab, many of the CHWs were men and women expressed their interest in having more women whom they could feel comfortable with discussing sensitive issues pertaining to women;
- Whereas the programme was to provide blanket feeding for pregnant women and lactating mothers up to 6 months, household interviews revealed that it was only those who were anemic who gained admission in to the programme in Kakuma;
- Frequency of screening differed from one area to another. While some blocks and zones reported frequent screening a few reported that the CHWs did not visit their blocks at all. This was reported more in Dadaab than in Kakuma. It would appear that the level of effort put in by CHWs depended on an individual’s initiative. This may be a pointer to a laxity in management and supervision and/or a heavy workload of the CHWs;
- Only children who looked clinically malnourished were screened. The mildly malnourished may look clinically normal and probably they were missed out and deteriorated to a worse state when they could have been helped in good time. In deed, some mothers mentioned that the help from SFP came too late when the children’s condition had deteriorated;
- Mothers in both camps reported that there was hardly any follow-up of the children admitted in SFP;
- SFP was viewed as the central activity for solving nutrition problems, undermining other more important and sustainable interventions. SFP is a short-term curative measure meant to address a specific problem. The ultimate aim should be to move away from SFP as soon as possible.

Constraints to SFP in Kakuma

- The community felt that the CHWs emphasized curative services rather than preventive services;
- The mothers reported that they were discouraged by the many cases that were referred to the supplementary feeding centre by the CHWs (having been screened by MUAC) only to be turned away that their children were normal;
- Some mothers did not see the benefit of the supplementary feeding given that it was the same food (CSB) as that distributed in the general ration that was given in the programme but would have preferred a different food such as milk;
- Distance was another factor that discouraged mothers from attending the SFP. Mothers in Kakuma I zone 5 reported that the supplementary feeding centre at clinic 4 was too far, especially for expectant mothers to walk all the way. Moreover, they felt that the quantity of food given was so little and the opportunity cost they had to incur in terms of time and the children they left at home without care was not worth the amount of food provided;
• The CHWs reported that there were some cases of inaccurate recording of information at the supplementary feeding centres. Cases had been observed, for example, of children recorded as defaulters and upon follow-up it was discovered that they had been discharged;
• Some of the mothers reported a non-friendly environment at the feeding centres. They indicated that there was inadequate communication between them and the staff.

Recommendations for SFP

Recommendations for both Dadaab and Kakuma camps:

• There is need to strengthen community outreach activities by improving the supervision of CHWs to ensure that they deliver services efficiently;
• Train a team of CHWs to deal with only nutrition issues to strengthen and improve nutrition-related activities given that nutrition is a major component of the services rendered to the refugees;
• Mothers should be educated on the importance of growth monitoring and encouraged to take their children for this activity regularly so that faltering in the growth of their children may be detected early;
• Demonstrations should be held to show mothers how to prepare CSB porridge;
• Identification of families with children who have high relapse rates and addressing the root cause of their vulnerability;
• Strengthen case finding strategies by screening all children with MUAC and also increasing the frequency of general screening to three times per year;
• The supervision of CHWs should be improved to ensure that they deliver services efficiently;
• Kakuma and Dadaab camps are no longer emergency settings; therefore, SFPs need not continue to be viewed as the central nutrition activity. The guidelines on SFP need to be revised from time to time, depending on the prevailing circumstances. When this is done, the rationale should be explicitly stated so that programme performance can be evaluated on the basis of these modified objectives, and appropriate actions taken. Efforts should be made to improve the general ration and the supply of basic non-food items rather than in establishing SFPs as a counter balance to insufficient general ration.
• It is recommended that a nutritionist be recruited to coordinate nutrition activities in the camps.

Recommendations for Dadaab:

• Nutrition education should be introduced at the SFP, informing mothers among other things, what is expected of them and the expected progress of the child;
• Mothers should be given a feedback on the progress of their children and counselled appropriately or encouraged if the child is making good progress as a motivation.
Recommendations for Kakuma:

- Blanket feeding of pregnant mothers from 6 months and lactating mothers up to 6 months should be initiated urgently as recommended by JAM 2002;
- The supervision of services at the SFP should be strengthened to make the feeding centres user-friendly and to improve the accuracy of data recording.

2.7 School Feeding Programme

The school feeding programme was started in 1997 in Kakuma and in 2002 in Dadaab, and targeted both primary and secondary schools students. The aim of the programme was to increase enrollment and the attention span of students. The students were served daily with a porridge consisting of 70g of blended food per person at 10.30 am mid morning break.

The following observations were made about the programme:

- The programme was beneficial to many students who went to school without having taken breakfast and thus dealt with short-term hunger and enabled the students to concentrate in their studies;
- The majority of the children took the porridge;
- There was increased school attendance by the children as reported by the school administration. Previously many children went back home at break time for breakfast and did not come back to school;
- The impact on enrollment and drop out rates had yet to be established since no formal evaluation of the programme had been undertaken.

Challenges for Dadaab and Kakuma camps

- The main constraint was lack of sugar especially for the Somalis who did not view the porridge as palatable without sugar. Despite the fact that the Sudanese also liked the porridge with sugar, they took it with salt if sugar was not available and thus lack of sugar was not as big a problem for them as for the Somalis;
- The students reported that the porridge was not enough;
- Some of the students reported that the porridge was watery and not properly cooked.

Challenges for Dadaab camp:

- At the time of the survey, the feeding programme was not operational in Dadaab due to the fact that schools had not received the supply of firewood from GTZ since the beginning of the year 2004;
- There were inadequate water storage containers in the schools;
- Construction of kitchens was still ongoing although had been completed in some of the schools;
• The schools reportedly had difficulty in providing separate facilities for serving girls and boys the porridge. Traditionally, Somali women do not eat together with men and as such the girls could not take the porridge in the same place as the boys.

**Recommendations for the school feeding programme**

• The school feeding programme should continue for the achievement of educational outcomes;
• Demonstrations on how to prepare the porridge should be held at the school level;
• In Dadaab, the supply of firewood and water storage containers should be addressed urgently to enable the feeding programme be operational.

### 2.8 GENERAL RECOMMENDATIONS

The causes of malnutrition are many and complex and become even more complex in emergency situations. Food-based approaches will only deal with the problem in the short-term. Interventions targeting the underlying causes need to be put into place to make impact on the long-term. An approach linking emergency and developmental activities offers the potential for long-term solutions to the problems and should therefore be strengthened given that the situation in the camps is no longer an emergency but a crisis. In this respect, a strong commitment from UNHCR in dealing with the underlying causes of malnutrition is required to improve the nutritional situation in both camps.

The following recommendations are made for the improvement of nutrition situation:

• Identification of other vulnerable groups of people such as the elderly for admission in the supplementary feeding programme.
• Nutrition surveys to be undertaken twice a year to ensure closer monitoring of the nutrition situation to enable timely and appropriate interventions.
• A nutritionist should be assigned by WFP or UNCHR to oversee the fragile nutrition situation of the population as recommended by JAM 2002.

**Way forward for CSB**

CSB is a vital source of micronutrients in the diet because the cereals supplied in the ration are not fortified and there is limited supplementation of the food ration by the majority of the refugees. Even when fully met, the current food basket provides only 81% iron, 43% of Vit C, 62% of Vit B_{2} and 89% of Vit B_{1} of the requirements. This situation is compounded by the fact that part of the ration is sold and thus the levels of the micronutrients are lowered.

When the population is entirely dependent on food aid or is at risk of micronutrient deficiencies (as is the case in both Dadaab and Kakuma), blended food should be included in the general ration for the benefit of the total population. The blended foods are also given to provide a suitable food for small children.
The reduction of or removal of CSB from the current food basket would therefore have detrimental effects on the nutritional status of the refugee population. Its reduction or removal in the general distribution should only be considered when the suggested recommendations to improve the nutrition situation have been effected and stabilized and when the majority of the refugee population is able to meet their macro and micronutrient needs. In this respect, the following recommendations should be treated as urgent:

1. The provision of:
   - The preferred staple in the ration;
   - Adequate amounts of basic non-food items;
   - Complimentary foods to provide the shortfall of micronutrients in the food basket.

2. Education to improve the poor infant and young child feeding practices.

3. Health education to encourage acceptability of Family Planning.
ANNEX I: TERMS OF REFERENCE FOR DAILY CONSUMPTION SURVEY IN THE KENYA REFUGEE CAMPS OCTOBER 2003

1. BACKGROUND
WFP is responsible for the provision of the general food-basket and UNHCR and its implementing partners are responsible to distribute the food to the approximately 217,000 Sudanese and Somali refugees living in the Kakuma and Dadaab refugee camps in Kenya, as agreed in the Global MoU between WFP and UNHCR.

The planning figure for the food basket is 2,100 kcal and is based on FAO/WHO recommendations. The food-basket provided by WFP includes: cereals, pulses, edible oil, blended food and salt. A Joint Assessment Mission consisting of Government of Kenya, WFP, UNHCR, and UNDP and Donors as observers, have assessed the food and non-food needs of the refugees in September/October 2002. The JAM examined the pipeline and regularity of the food distribution in the camps. The Mission also looked at coping mechanisms and self-reliance of the refugees, use of the various food commodities in the camps, the health and nutritional status of the refugee population and the planning figure for the food distribution.

The mission found a precarious nutrition status in the camps with high acute malnutrition and anemia levels. At same the assessment found low coverage of the malnourished groups in the selective feeding program.

After considering the above factors, the mission recommended the following among others. Refer to the mission report for details.

- Expansion of the selective feeding program in relation to the precarious nutrition situation of the refugee population and strengthening of the services.
- Provision of complementary food to the refugees by UNHCR to supplement WFP food commodities.
- Although the mission recommended continuation of 40gms of Corn Soya Bean in the general food distribution with a consideration for its reduction to 20gms if the cereals are fortified with adequate minerals and vitamins in its debriefing note to WFP/UNHCR at the end of the assessment, this recommendation was partially dropped from the final report due to disagreement on the issue by UNHCR and WFP Kenya.

2. CURRENT PROGRAMMES AND RATION SCALES

2.1 General Food Distribution
Under the general food distribution, which takes place bi-monthly, WFP provides the following:

<table>
<thead>
<tr>
<th>Maize</th>
<th>W. Flour</th>
<th>Total Cereals</th>
<th>Pulses</th>
<th>Veg. Oil</th>
<th>CSB</th>
<th>Salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRRO 6226*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ration Rate</td>
<td>235</td>
<td>220</td>
<td>455</td>
<td>60</td>
<td>25</td>
<td>40</td>
</tr>
</tbody>
</table>

*PRRO 6226 closes on 30 December, 2003; to be replaced by PRRO 10258.

This food is provided to every registered refugee in the camps (currently 217,000), based on a family distribution system. The ration scale is the same for children and adults. UNHCR has
allocated funds for the purchase of the complimentary food for Kakuma refugee camps. However, due to irregularities of WFP food and difficulties in transportation and distribution of fresh fruits and vegetables, UNHCR Sub-Office in Kakuma has so far purchased beans to fill Kcalories gap left in the general food distribution.

2.2 Supplementary Feeding Programme

Food is also provided to the supplementary feeding programme, which targets moderately malnourished under five children (between 70 and 80 percent of median weight-for-height), pregnant women from the sixth month of pregnancy and lactating women up until six months following delivery. Under the current PRRO, the planning figure was 3,400 beneficiaries per month though full capacity was never reached due to restrictive policies of health agencies and weaknesses in active case finding. Under the proposed PRRO, the planning figure is 13,620 beneficiaries per month. The increase reflects the recommendation of the JAM to expand the selective feeding program for children and pregnant/lactating women.

The level of anemia among the refugees is also very high. Studies carried out in collaboration with the School of International Child Health in 2002 found that 63.1% of the children in Kakuma camp and 75% of the pregnant women in Dadaab camp were anemic. These are extremely high levels of anemia. According to WHO, anemia level more than 45% is considered of public health concern.

Although the food basket has improved in 2003 (1992 Kcal on average as of September), WFP food distribution has provided an average of 1859 Kcal in the past 3 years instead of the recommended 2,100 Kcalories. This is 11.5% less than the minimum food required for an inactive person.

Even when fully met, the current food basket provides only 81% of iron, 43% of Vit. C, 62% of Vit. B2 and 89% of Vit B1 requirement. In addition, refugees sell food items to buy other non-food items (clothes, kerosene etc) that are not provided by UNHCR on regular basis or not at all, but essential to life. Therefore, the high anemia among the refugee population does not come as a surprise.

The ration scale for this programme is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Blended food</th>
<th>Veg. Oil</th>
<th>Sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRRO 6226</td>
<td>225</td>
<td>25</td>
<td>20</td>
</tr>
</tbody>
</table>

2.3 Therapeutic Feeding Programmes

The therapeutic feeding programme targets severely malnourished children on an inpatient basis. The programme provides:
Table 3: Ration/person/day in grams

<table>
<thead>
<tr>
<th></th>
<th>Blended food</th>
<th>Veg. Oil</th>
<th>Sugar</th>
<th>Therapeutic Milk*</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRRO 6226</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ration Rate</td>
<td>100</td>
<td>70</td>
<td>50</td>
<td>300</td>
</tr>
</tbody>
</table>

*Provided by UNHCR.

The current and planned PRRO target 600 beneficiaries per month. Again, the targeted numbers are not being reached.

2.4 School Feeding

A daily porridge of blended food is provided to children who attend school in both camps. Under the new PRRO up to 60,000 school aged children can be reached through this programme. The porridge consists of 70g of blended food, and under the new PRRO, 5g of salt. The purpose of the SFP is to enhance the enrolment of the children in the schools and increase the attention span of the children. The children receiving the porridge are in the primary and secondary schools. The programme does not cover the under-five children.

3 MALNUTRITION RATES

The Joint Food Assessment Mission in 2002 described the nutrition status of the refugees as precarious. According to nutrition surveys in the past four years, global acute malnutrition remained high (14-20% <2 Zscore W/H). The last nutrition survey conducted in Dadaab at end of June 2003 found a global acute malnutrition rate of 23.9% -2 Zscore. As per WHO classification, the above rates are indicative of severe state of malnutrition among the refugee population. In addition, about 28% of the children surveyed were on the borderline of becoming malnourished.

Table 2: Malnutrition Levels in Dadaab

<table>
<thead>
<tr>
<th>% of median</th>
<th>August 2000</th>
<th>February 2001</th>
<th>June 2002</th>
<th>June 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>14.8%</td>
<td>10.2%</td>
<td>10.5%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Severe</td>
<td>5.0%</td>
<td>3.6%</td>
<td>1.6%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

One of the main findings of Dadaab report is that only 25% of children who are moderately malnourished are enrolled in the supplementary feeding programme in the camps while only 20% of acutely malnourished children are enrolled in the therapeutic feeding programme. This finding was also emphasized during the 2002 JAM.

For Kakuma, nutrition data for 2003 has not yet been collected. According to the 2002 report prepared by IRC, the global malnutrition rate was 6.9% and 0.5% for severe malnutrition based on % of the median (14.3% and 1.3% based on Z scores). Anemia was noted as a significant problem as 61.3% of the children were found to be anemic. The overall conclusion was that there had been a slight but steady improvement since 1999 but that the situation was still of concern.

The 2002 JAM report found that only 57% of moderately malnourished children were enrolled in the supplementary feeding programme in Kakuma while only 16% of severely malnourished children were enrolled in the therapeutic feeding programme.
4. OBJECTIVES

4.1 General Objective

Assess and understand food habits and use of WFP food items at the household level in the refugee camps in relation to the other factors that contribute to the high malnutrition and micronutrient deficiencies in the camps with a view to determine importance of CSB as a source of essential minerals and vitamins and recommend viability of its continuation in the general food distribution.

4.2 Specific Objectives

- Appraise the unique circumstances under which the refugees live, their coping mechanisms and their ability to access adequate vitamins and minerals. Review the findings of the previous household economy assessments, Joint Assessment Mission reports, and the health and nutrition status of the refugees in Dadaab and Kakuma camps.

- Examine adequacy of food distribution to the refugees in the past five years and assess the shortfalls in terms of Kcalories, proteins and minerals and its relation with acute and chronic malnutrition and anemia in the camps. Assess reasons why UNHCR was unable to provide complimentary food in the camps and the importance of it to the food basket, including the practicality of procuring, transporting and distributing the items.

- Assess the utilization of food at the household level (who benefits from which food items in the general ration, how is food stored at the household level and methods used for its preparation);

- Evaluate the role of the CSB as a source of essential micronutrients in the food basket and determine the impact of its omission completely from the general food distribution or its reduction from 40 to 20 gms/per/day on the capacity of the program to meet the minimum required daily allowances and on the ability of the selective feeding activities to reduce the current high acute malnutrition and anemia in the camps.

- Determine possible alternative solutions, including modification of the food basket, with which the program could meet the micronutrient, protein and Kcal shortfalls in the food basket if the CSB is reduced and how practically it could achieve these under the current circumstances in which the refugees live and in relation to the financial limitations of the program.

- Identify additional measures, other than food intake, which need to be taken to improve the nutrition situation in the camps (particularly with regards to sanitary conditions and access to water). Identify how these measures can be implemented in a timely and efficient manner;

- Review the supplementary feeding programme, its relationship to the general food distribution and reflect reasons behind the recommendations of the JAM (2002) to expand the selective feeding program. Make recommendations to improve its implementation in terms of: information shared with caretakers on the storage and preparation of blended food; basic hygiene at the household level; and also in terms of expanding community outreach in order to increase the number of beneficiaries in the programme.
• Provide recommendations on the most efficient method of using blended food and other commodities in the basket as a means to meet required daily allowances and to address malnutrition and micronutrient deficiencies (review the options: blanket distribution for all refugees, blanket distribution for children under five, targeted through supplementary feeding and school-feeding only or a combination of options);

5. REQUIREMENTS

This exercise requires a nutritionist who also has expertise in conducting household interviews and familiarity with feeding programmes for children under five and pregnant and lactating women.

The exercise requires time in the field, at least five days in Kakuma and five days in Dadaab.

5. OUTPUT

• A written report that addresses the overall and specific objectives and provides recommendations. The report should outline the information used as baseline, areas in which assessment is undertaken, process and methodology of information gathering, analysis of the data, and the findings/conclusion of the study. The report should also clearly state reasons behind the recommendations made by the study and how practical it is for the refugee program to achieve them. The report should be issued two weeks following the fieldwork.

6. TIMEFRAME

The exercise should ideally be undertaken in October/November, 2003.
## Annex 2: Itinerary and People Met

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Activity</th>
<th>People Met</th>
</tr>
</thead>
<tbody>
<tr>
<td>30th December 2003</td>
<td>WFP NRB</td>
<td>Briefing on the ToR</td>
<td>WFP Refugee Advisor</td>
</tr>
<tr>
<td>5th January 2004</td>
<td>UNHCR NRB</td>
<td>Briefing on the ToR</td>
<td>UNHCR Senior Medical Officer</td>
</tr>
<tr>
<td>9th January</td>
<td>WFP NRB</td>
<td>• Discussion of the ToR</td>
<td>• UNHCR Senior Medical Officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>•</td>
<td>• WFP Refugee Advisor</td>
</tr>
<tr>
<td>13th January</td>
<td>WFP NRB</td>
<td>Attended Food Coordination meeting</td>
<td>Heads UNHCR and WFP Sub-Offices</td>
</tr>
<tr>
<td>14th January</td>
<td>Kakuma</td>
<td>• Travel from NRB to Kakuma</td>
<td>IRC Senior Health Officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discussions of the UNHCR and WFP activities</td>
<td>Visits to SFP AND TFC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• FGD</td>
<td>GTZ Agriculture Officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Household Interviews</td>
<td>Acting officer in-charge, Community Services Sector</td>
</tr>
<tr>
<td>15th January</td>
<td>Kakuma</td>
<td>• Discussions</td>
<td>LWF Senior Water officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Household Interviews</td>
<td>LWF Water Quality Technician</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discussions</td>
<td>CHWs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• FGD</td>
<td>IRC Sanitation Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Household Interviews</td>
<td>UNHCR &amp; WFP Heads of Sub-Offices</td>
</tr>
<tr>
<td>16th January</td>
<td>Kakuma</td>
<td>• Visits to IGAs</td>
<td>UNHCR, WFP, CARE and GTZ officials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Visits to Schools</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• De-Briefing</td>
<td></td>
</tr>
<tr>
<td>17th January</td>
<td>Kakuma</td>
<td>• FGD</td>
<td></td>
</tr>
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ANNEX 3: UNICEF’s Framework of the Causes of Malnutrition

IMMEDIATE CAUSES affecting the individual

- Inadequate Food Intake
- Disease

UNDERLYING CAUSES at the community or household level

- Inadequate Household Food Security
- Inadequate Maternal and Child Care
- Inadequate Health Services and Unhealthy Environment

BASIC CAUSES

- Education
- Resources and Control: Human, Economic and Organizational
- Political and Ideological Superstructure
- Potential Resources: Technology, Environment, People

Adopted from UNICEF: 1990
Annex 4: Recommended Complimentary Foods and their nutritive value

i) Tomato Paste has been recommended for the following reasons:

- To improve the palatability of the food ration and cut down on money spent by some households in buying fresh tomatoes;
- To provide vitamin C of which the current food basket only provides 43% of the requirement and to enhance the absorption of iron in the food basket;
- It is convenient to handle in transportation, and quality control will not be an issue;
- UNHCR could enter into a contract with one of the local manufacturing companies to ensure adequate quantities are available and also to negotiate for prices lower than the market rate.

Spinach:
It is a rich source of micronutrients (see nutritive value below). It is particularly rich in carotene (pro-vitamin A), calcium and vitamin C. The main challenges are procuring adequate quantities and quality control to ensure that it is fresh at the time of distribution.

Onions: To improve the palatability of the food ration and will not present any problems in handling and quality control. Onions are also relatively cheaper compared to the other suggested foods.

Dried vegetables: The nutritive value will depend on the type of vegetable. Handling and quality control will not be an issue. However, the main limitation may be that eating of dried vegetables is not a common practice among some communities. Secondly, the vegetables may have lower quantities of the heat-labile vitamins (such as vitamin C) compared to the fresh variety.

It is suggested that UNHCR considers providing more than one of the recommended foods in an effort to compensate for the shortfall of micronutrients in the food basket. The amounts of complimentary foods to be provided per person per day should be worked out on the basis of the nutritive value of the selected foods in relation to the shortfall of micronutrients in the food basket.

Micronutrient Content of Recommended Complimentary Foods (per 100 gm edible portion)

1. Onions (Red)
   Calcium      18 mg
   Phosphorous  73 mg
   Iron         1.5 mg
   Magnesium    13 mg
   Sodium       6 mg
   Potassium    195 mg
   Carotene     0
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<thead>
<tr>
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<tr>
<td>Vitamin B₁</td>
<td>0.02mg</td>
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<tr>
<td>Vitamin B₂</td>
<td>0.04mg</td>
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<tr>
<td>Niacin</td>
<td>0.2 mg</td>
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<tr>
<td>Vitamin C</td>
<td>11mg</td>
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<td>Folic acid</td>
<td>14 UG</td>
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### 2. Onions (White)
- Calcium: 39 mg
- Phosphorous: 39 mg
- Iron: 1.3 mg
- Magnesium: 18 mg
- Sodium: 5 mg
- Potassium: 156mg

### 3. Spinach
- Calcium: 130 mg
- Phosphorous: 18 mg
- Iron: 2.7 mg
- Magnesium: 96 mg
- Sodium: 58 mg
- Potassium: 206mg
- Carotene: 580 UG
- Vitamin B₁: 0.03mg
- Vitamin B₂: 0.27 mg
- Niacin: 0.5 mg
- Vitamin C: 46mg

ANNEX 5: THE SEVENTEEN FAMILY CARE PRACTICES

1. Take children as scheduled to complete a full course of immunizations (BCG, DPT, OPV and measles) before their first birthday;
2. Breastfeed infants exclusively for up to 6 months;
3. Starting at about six months of age, feed children freshly prepared energy and nutrient rich complementary foods, while continuing to breastfeed for up two years or longer;
4. Ensure that children receive adequate amount of micronutrients (vitamin A and iron in particular) either in their diet or through supplementation;
5. Dispose faeces, including children’s faeces, safely; and wash hands after defaecation, before preparing meals and before feeding children;
6. Protect children in malaria endemic areas, by ensuring that they sleep under insecticide-treated bed nets;
7. Recognize when sick children need treatment outside the home and seek care from appropriate providers;
8. Follow the health worker’s advice about treatment, follow-up and referral;
9. Continue to feed and offer more fluids, including breast milk, to children when they are sick;
10. Give children appropriate home treatment for infections;
11. Promote mental and social development by providing a stimulation environment;
12. Ensure at least 4 ante-natal clinic visits and appropriate delivery care;
13. Prevent and act against child abuse and violence;
14. Adopt and maintain HIV prevention behaviours, care of the sick as well as orphaned children;
15. Ensure participation of men in child care and reproductive health;
16. Prevent and provide appropriate care for child injuries.

- Initial health staff sensitization on Care Practices (with emphasis on breastfeeding and complementary feeding) to take place by May 2004;
- Sensitization of CHWs on Care Practices to take place by June 2004;
- Promotion of Care messages at the community level to begin by July 2004 and is a continuous process.