NUTRITION SURVEY REPORT
BURDUBO DISTRICT
GEDO REGION
SOMALIA

UNICEF SOUTH/CENTRAL ZONE OF SOMALIA

BAIDOA OFFICE

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1. INTRODUCTION

This nutrition survey is the eleventh in a series of surveys agreed between UNICEF and FSAU throughout South and Central Somalia. UNICEF planned the surveys, conducted the fieldwork of data collection, trained enumerators, monitored survey activities, carried out data analysis and interpretation and paid the survey cost. UNICEF is grateful to the INGO MEMISA who facilitated the work in Burdubo District.

1.2. SURVEY JUSTIFICATION

UNICEF has supported an irregular supplementary feeding programme in Burdubo town during the past eight years through MEMISA. There continues to be evidence of high malnutrition rates amongst the population in Burdubo District, although the level of malnutrition is not well documented. There have been alarming reports of food insecurity and displacement throughout Gedo region, as was identified by the inter-agency mission in February 2000 and later confirmed by MEMISA. This resulted in the decision to conduct a nutrition survey in Burdubo District, including the displaced population, returnees and residents.

1.3 SURVEY OBJECTIVES

- To determine the level of malnutrition and oedema in Burdubo District by screening the Weight for Height measurement of children between 6-59 months or 65-110cm.

- To measure the determinant factors causing/contributing to existence of malnutrition by recording the occurrence of diarrhoea and ARI diseases in the two weeks prior to the survey.

- To measure measles vaccination and Vitamin A supplementation coverage in Burdubo District and monitor performance in the past 6 months.

- To measure the extent of household movements during the changes in Burdubo District, which has impacted on aid service deliveries.

- To record and document the number of female-headed households to know the extent of families with no support and care to children from fathers.

- To make comparison between families living in Burdubo town, those living adjacent to the river and others who are mainly pastoralists.

2. BACKGROUND

2.1 General background:

With an estimated population of around 14,500, Burdubo District is situated along the Jubba river, with Beled-Hawo to the West, Luuk to the North, Garboharey to the Southwest, Bardera to the south and Kansadere in Bay region to the East.

Political environment: Burdubo District has experienced periodic unrest during the past two years, with regular inter-clan fighting exacerbated by recent changes of control between the Al-

Itihad, Massale and Burale groups of the SNF, with Ethiopian involvement. However, recently there have been signs of improvement in the security situation with negotiations among the two sides of SNF in spite of lack of recognised local administration.

The 1997 floods hit Gedo region, and Burdubo town in particular, very hard, resulting in a collapse of the fledgling economic infrastructure and destruction of the productive capacity in Burdubo district. Furthermore, two years of consecutive drought and lack of sufficient rains deteriorated the already fragile situation in the district.

Recent history of humanitarian assistance: Since 1993 UNICEF has supported MEMISA in delivery of health services in Burdubo District and integrated a supplementary feeding programme in the MCH centre since mid-1999. NCA has distributed 26mt of maize, cowpeas and rice. ICRC has distributed emergency food twice in this year.

2.2 Food Security Context:

Around 50% of the population of Burdubo District live in the town, 37% are pastoral and agro-pastoral and 23% along the river. Urban families are considered the most vulnerable, primarily due to the cumulative effect of drought, high asset depletion, and minimal humanitarian and other assistance in the district, which was further deteriorated by a poor harvest in the last Gu' season and displacements in the region. Until the recent Gu harvest there were large numbers of IDPs living around Burdubo town.

Extracts from the regular FSAU Monthly Highlights, June – August 2000	
June	No rainfall was reported this month. With a few exceptions, pasture and water are in normal conditions and generally accessible. Livestock are healthy, production is normal and milk is cheaply available. Rain-fed crops are facing serious moisture stress, greatly reducing prospects for a normal harvest. Irrigated crops are doing well. Cereal supplies are low and prices are high, thus access to food by poor households and IDPs is poor and worrisome in almost all the districts. Jubba and Dawa river levels are abnormally low.
July	Many rain-fed farms were abandoned after crop establishment due to the unexpected dry spell. Water was available in the region this month as the two main rivers are currently running. However, in the rangelands, water catchments started drying up and there is concern of water shortages in the near future. Household food stocks in the irrigated farmers increased throughout the region due to the maize harvests during this period. Nutrition status of the most of the IDPs in Burdubo and the destitute groups in Garboharey are the cause of concern.
August	Irrigated production in the region is expected to be normal, but areas of rainfed crop failure are expected. Cattle condition is of concern throughout the region with hand feeding having started in many places. Livestock condition are particularly poor in El-wak and Garboharey district and migration to Luuk and Bardera districts as well as to Middle Jubba and Bay are taking place. As the harvest is ongoing cereal accessibility is currently good, though this situation may deteriorate. Imported food prices are currently normal.

2.3 External assistance related to food security:

General food distribution: No accurate information is available on ICRC emergency food assistance in the first half of this year.

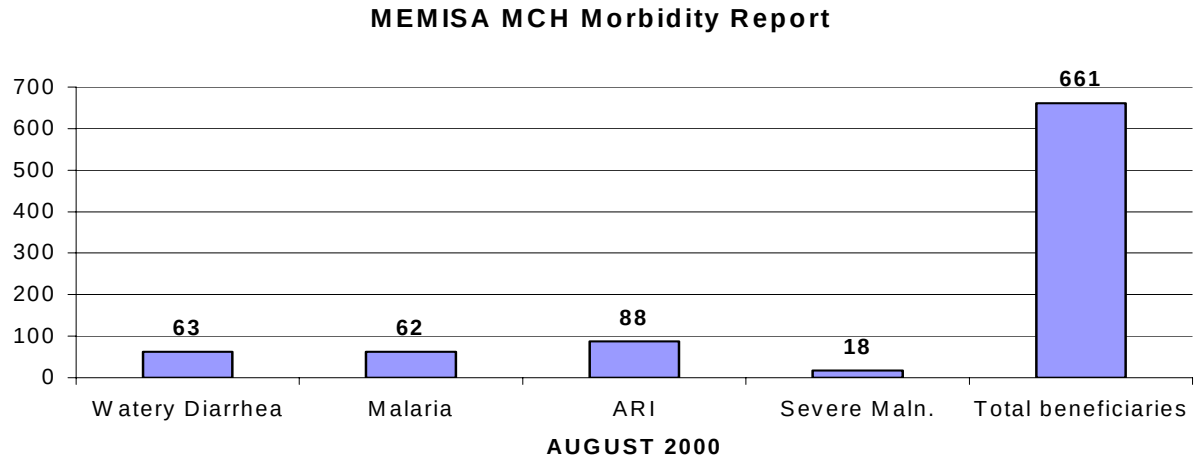
2.4 Health context:

Burdubo District is located near the Jubba river, with Beled-Hawo to the West, Luuk to the North, Garboharey to the Southwest, Bardera to the south and Kansadere in Bay region to the East. The population suffered a lot from internal displacement resulting from consecutive

droughts and inter-clan conflicts and a ban on non emergency programming in the area. During 2000 a new disease has been confirmed in the district, Kala Azar, which so far has been confirmed in 18 cases.

UNICEF supports one MCH in Burdubo and outreach EPI activities undertaken by MEMISA to boost the level of EPI coverage.

The graph below indicates that in August, out of 661 children seen in MEMISA Burdubo MCH, 10% suffered from diarrhoea, 9% suffered from Malaria, 13% from ARI and 3% were severely malnourished.



2.5 Water and environmental sanitation:

Water was available in the region this month as the two main rivers are currently running. However, in the rangelands, water catchments started drying up and there is concern of water shortages in the near future. People use river water most and there is no household chlorination to reduce the incidence of water related diseases.

3. METHODOLOGY

Cluster sampling methodology was used to select 30 clusters randomly from six sectors in Burdubo town and rural villages in Burdubo districts. A total of 15 clusters were from Burdubo town and 15 clusters were from rural villages in Burdubo district. A total of 901 children between the heights of 65 – 110cm were screened during the survey.

Weight for height measurements were undertaken using UNICEF electronic scales which shows 0.1 kg or 100g while height measurement was done using Copenhagen measuring boards and not locally made boards. Measurement taken was to the closest 0.5cm.

Two days training and one day field practice for refreshment was given to enumerators on how to do weight for height measurement, use of questionnaire and its proper administration, selection of first household and subsequent household in pre-identified cluster in Burdubo District as in the sampling frame.

Second stage of sampling was carried out in the cluster to select the first household and its subsequent households. Each team went to the middle of the cluster guided by survey guides who are from the local community or in charge of the cluster area and are familiar

with the cluster borders. Each team threw a pencil to determine the direction and all the households to the end of the cluster were counted. Each number was written on a piece of paper and the numbers mixed. The survey guide was requested to pick randomly one of the pieces of the papers and that was the first household. The subsequent was selected next door. The team visited again until a child was found. If caretaker or child was absent a appointment was made and team visited again during the day.

Age was measured with mothers recall and estimation of the month the child born since there is no birth registration. However, the team supervisors used the local calendar of events.

Diarrhoea is a watery stool passing through three times per day, using mother's recall of two weeks prior to the survey period. Acute Respiratory Infections (ARI) to the proportion of children with a previous history of pneumonia, estimated through inquiring from the mother whether the child had "oof wareen or wareento" *(*local term of pneumonia) two weeks prior to the survey. This term was validated by further asking if the child had cough, fever and rapid breathing.

Measles immunisation was recorded with mother history and some times confirming with the card. This was validated by counting the number and times of vaccinations given to the child and the site of vaccination. Such results also serve to monitor the performance of UNICEF partners in the area but does not indicate immunisation coverage accurately. This can only be determined in EPI coverage surveys, which UNICEF has been involved in as well.

3.1 STUDY POPULATION AND SURVEY DESIGN

An accurate census could not be undertaken prior to the survey due to the time limit and lack of resources. Most of the populations currently residing in Burdubo are long term residents.

3.2 DATA COLLECTION

The nutrition survey was conducted between 27 August and 06 September 2000. A total of 901 children were interviewed and screened for weight for height. Their caretakers were interviewed as to whether children had received Vitamin A or Measles vaccination in the past 6 months, or had suffered from diarrhoea or ARI diseases in the two weeks prior to the survey.

3.3 ACTIVITIES

The survey was carried out by ten enumerators and five supervisors assisted by survey guides. UNICEF Programme Survey Consultants who participated in previous nutrition surveys conducted three days training for enumerators and co-ordinated the field work. The SCZ M&E Officer made the data analysis of the nutrition survey results. Interviewers were selected based on their experience with previous nutrition surveys and the multi-indicator cluster surveys in Gedo region. MEMISA assisted in the identification of qualified persons.

4. SURVEY RESULTS

The table below shows the names of the areas of Burdubo town as well as the rural villages in the district, the estimated populations and total clusters identified. This was based on the population estimate used during the 1999 NID campaign and was provided by the MEMISA PHC Co-ordinator.

Burdubo Town and Villages
Estimated and cumulative population, number of identified clusters

Name	*Population*	*Cumulative*	*Clusters*
Burdubo town	***7,500***	***7,500***	***1-15***
Washaqbar	***200***	***7,700***	***16***
Weelden	***300***	***8,000***	***0***
Farjanno	***100***	***8,100***	***17***
Ajow	***150***	***8,250***	***0***
Ali Abdi	***500***	***8,750***	***18***
Teesow	***500***	***9,250***	***19***
Suuriyo	***700***	***9,950***	***20***
Hilo Marer	***400***	***10,350***	***21***
Hufey	***500***	***10,850***	***22***
Dida Bulla	***250***	***11,100***	***23***
Mashruca	***200***	***11,300***	***0***
Malkahida	***400***	***11,700***	***24***
Sarsaare	***200***	***11,900***	***0***
Irridda	***200***	***12,100***	***25***
Calanka	***100***	***12,200***	***0***
Dhuroole	***100***	***12,300***	***0***
Fanweyne	***500***	***12,800***	***26***
Saabley	***200***	***13,000***	***27***
Guraa	***150***	***13,150***	***0***
Dheenle	***250***	***13,400***	***0***
Burkurun	***200***	***13,600***	***28***
Godwaraabe	***150***	***13,750***	***0***
Dhubaa	***500***	***14,250***	***29***
Qeylo	***250***	***14,500***	***30***
Total	***14,500***		

Random selection 343
Sampling interval 483

The table below indicates some of the different characteristics of those interviewed, as well as the number and the percentage of children assessed who had suffered diarrhoea or ARI in the previous two weeks and the percentage of malnutrition amongst urban, riverine and pastoral/agro-pastoral populations.

Characteristics	Urban	Riverine	Agro-pastoral	Total	%
Female headed households	22	9	9	40	7
Male headed households	256	120	148	524	93
Resident households	106	53	114	273	48

Characteristics	Urban	Riverine	Agro-pastoral	Total	%
Returnees	120	67	43	230	41
Displaced	52	9	0	61	11
Total households	278	129	157	564	100
Global malnutrition	86	25	41	152	16.9
Moderate malnutrition	72	22	33	127	14.1
Severe malnutrition with Oedema	14	3	8	25	2.8
Assessed children with ARI in past two weeks	119	8	52	179	20
Assessed children with diarrhoea in past two weeks	145	68	67	280	31
Vitamin A supplementation in past 6 months	272	0	35	307	34
Measles immunisation coverage	317	14	14	345	38
Measles immunisation in past 6 months	249	0	0	249	28

The table below indicates that 33% of children measured were aged between 6 – 23 months while 67% were aged between 24 – 59 months. Some 50% were urban residents, 23% from riverine areas and 27% from pastoral and agro-pastoral families.

Age group	Urban	%	Riverine	%	Agro-pastoral	%	Total	%
6 – 23 months	179	40	70	33	82	34	331	33
24– 59 months	273	60	140	67	157	66	570	67
Total	452	50	210	23	239	27	901	100

The table below indicates that 2% of the children assessed were severely malnourished, 14% were moderately malnourished and 1% were with Oedema. Eighty three percent were not malnourished. The global malnutrition rate varies amongst the different groups in Burdubo district. *Children of urban families in Burdubo town are the worst off, with global rates of 19% including 3% severe malnutrition. The pastoral and agro-pastoral children follow this, with 17% including 3% severe malnutrition and then the riverine with 12% including 1.4% severely malnourished children*.

Characteristics	>=-2 Z-Score	-3 Z-Score & <-2 Z-Score	<-3 Z-Score	Oedema	Total
Urban	366 (81%)	72 (16%)	11(2%)	3 (1%)	452
Agro-pastoral	198 (83%)	33 (14%)	6 (2%)	2 (1%)	239

Riverine	185 (88.1%)	22 (10.5%)	3 (1.4%)	0	210
Total	749 (83%)	127 (14%)	20 (2%)	5 (1%)	901 (100%)

The table below indicates that 17% of assessed children less than 2 years of age were malnourished including 4% with severe malnutrition while 17% of the children age 24-59 months were malnourished with 2% severe malnutrition. This could be related to poor feeding practices to children under two years of age and that they are susceptible to diseases.

Characteristics	>=-2 Z-Score	-3 Z-Score & <-2 Z-Score	<-3 Z-Score	Oedema	Total
6-23 months	275 (83%)	43 (13%)	12 (4%)	1 (0%)	331
24-59 months	474 (83%)	84 (15%)	8 (1%)	4 (1%)	570
Total	749 (83%)	127 (14%)	20 (2%)	5 (1%)	901 (100%)

The table below indicates that 49% of the malnourished children were female and 51% male.

Characteristics	Male	Female	Total	%
>=-2 Z-Score	391	358	749	83
-3 Z-Score & <-2 Z-Score	64	63	127	14
<-3 Z-Score	11	9	20	2
Oedema	2	3	5	1
Total	468	433	901	100

7. CONCLUSION

The result of this nutrition survey undertaken in Burdubo District depicts that 17% out of 901 assessed children were moderately or severely malnourished with Oedema. The global malnutrition rate in Burdubo is 4.5% less the Beled-Hawo nutrition survey results in May 2000 and 6% less than the Bardera nutrition survey conducted in early January 2000. However the timing of the survey will certainly have had an impact and reduces the usefulness of comparison. The nutrition survey results still indicate unacceptable levels of malnutrition, which needs an intervention in household food security, as there was inadequate harvest in the area this year.

The result of measles immunisation indicated that 28% of assessed children were vaccinated against measles in the past 6 months, 10% were vaccinated against measles before 6 months and 62% were not vaccinated against measles. The results also vary between different groups (riverine with 7%, agro-pastoral with 6% and Urban with 56%). The results of the immunisation indicate very low coverage in Burdubo district although in Burdubo town immunisation is good. To improve coverage there is a need for continuation of static immunisation as well as accelerated EPI campaigns.

The result of vitamin A supplementation indicates that 34% of the children were provided with Vitamin A during the past six months. The coverage in the different groups indicated (riverine with 0%, Agro-pastoral with 15% and 48% in Urban).

Diarrhoea and ARI continue to be two of the main contributory factors to the existence of malnutrition in Burdubo District, with 31% of children suffering from diarrhoea and 20% ARI in

the two weeks prior to the survey. The survey results also indicate that 7% of the 564 households visited were female headed, 11% were displaced, 41% were returnees originally displaced from Burdubo district and 48% were original residents. There were also 18 confirmed cases of Kala Azar in Burdubo District by MEMISA.

MEMISA Burdubo MCH morbidity report indicated in August that out of 661 children seen, 10% suffered from diarrhoea, 9% suffered from Malaria, 13% from ARI and 3% were severely malnourished.

8. RECOMMENDATIONS

To reduce the infant and maternal morbidity and mortality caused by malnutrition and diseases, it is recommended that UNICEF and other humanitarian agencies focus on the following:

- Continuation of general food distribution until there is very good harvest in Burdubo district and its surrounding district to avoid further displacement in the region.

- Continuation of the current supplementary food distribution through MEMISA and expansion of targeted nutritional supplements (UNIMIX) to malnourished children through organised teams in villages that cannot be covered from the MCH centre with emphasis on drought affected pastoral and agro-pastoral areas.

- Continuation of immunisation services in the MCH centre and mobile teams managed by MEMISA and undertake acceleration campaigns in Burdubo district focusing on the riverine and pastoral and agro-pastoral community.

- Improve the current level of Vitamin A coverage and in particular concentrate on providing Vitamin A to measles effected and dehydrated children and those suffering from nutritional anaemia.

- Improve the health service delivery in the MCH centre through timely provision of supplies and routine EPI service deliveries.

- Increase iron supplementation programme to improve disease resistance. Improve the system of testing pre-pregnancy nutritional status; provide supplementation during pregnancy and lactation to lead to higher birth-weight and better-nourished children through production of breast milk.

- Initiate water projects in Burdubo District focusing on pastoral villages to reduce diarrhoeal diseases through improved household and public water sources. Start effective household water source chlorination in Burdubo District and increase community awareness on control, prevention and home management of diarrhoeal diseases focusing on rural villages

- Develop emergency plan of action to respond to any possible crisis that may be caused by the displacements.