NUTRITION SURVEY REPORT

ADEN GOVERNORATE, YEMEN

8 to 20 September 2012

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EUROPEAN COMMISSION

Humanitarian Aid and Civil Protection

Ministry of Public Health and Population (MoPHP)
United Nations Children's Fund (UNICEF)

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The UNICEF Yemen Country Office provided technical support, employing SMART methodology. Survey supervisors were provided by GHOs of Aden and Lahj and CSSW, and survey enumerators and team leaders were recruited by Aden GHO. The data entry team recruited by Aden GHO and UNICEF Zone Office, the team who performed the daily data entry and enabled for the daily data quality verification.

The Aden Governorate Public Health and Population oversaw the political and logistical arrangements for the survey, ensuring its smooth operation. The Nutrition survey was supported financially by UNICEF under a grant from the European Commission for Humanitarian Aid and Civil Protection (ECHO); this support is greatly appreciated. The contribution of local authorities in ensuring the survey teams' security during fieldwork and in providing office facilities is gratefully appreciated.

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EXECUTIVE SUMMARY

Between 8 and 20 September 2012, MoPHP and Aden Governorate Public Health and Population Office supported by UNICEF conducted a nutrition and mortality survey in Aden Governorate using the Standardized Monitoring and Assessment for Relief and Transition (SMART) methodology mainly to assess the levels of acute malnutrition among children aged 6-59 months, to assess levels of stunting and underweight, to identify some of the factors associated with malnutrition, estimate the under-five and crude death rates, and inform on the appropriate responses.

Using a two-stage Probability Proportionate to Population Size (PPS) sampling methodology, 36 clusters were randomly selected for both anthropometric and mortality assessments. A minimum of 34 households per cluster were randomly selected and assessed. A total of 1221 households were surveyed, covering a total of 1126 children aged 6-59 months.

Results indicated that the nutrition situation is above the WHO 'critical' threshold (GAM 15 per cent) with **18.9 per cent global acute malnutrition**, 'serious' underweight with 24.4 per cent and 'normal' stunting with 16.7 per cent as shown in table (1) below. The severe acute malnutrition (SAM) rate recorded was 2.4 per cent, and oedema was only 0.1 per cent. The situation is markedly worse in the suburbs. While underweight and stunting rates were found significantly higher in girls than in boys, GAM was not significantly different between both genders.

The main source of drinking water in the Governorate is the house-connected piped water 89 per cent of households. **Over 95 per cent of households seek health services** from a public health facility or private clinic when sick. There is high prevalence of common disease, as recorded two weeks prior to the survey (**diarrhea, Acute Respiratory Infection (ARI) and fever prevalence)**. Vitamin A coverage is lower than the Sphere Standard's recommendation of 95 per cent coverage (**82.9 per cent**). About **¾ of children aged 6-24 months do not receive the recommended four meals a day**. Around **68 per cents of household were shown at least one parameter regarding food inaccessibility or/and coping strategies**. Almost **30 per cent of household use adequately iodized salt**

There is no statistically significant relationship between acute malnutrition and feeding patterns, with vitamin A supplementation, or with food inaccessibility, but fever has shown relation to GAM. The education level of the household caretaker has shown close relation with stunting, while food inaccessibility and coping have shown relation with both underweight and stunting.

The **crude death rate** found is **0.18 per 10000 per day**, while the **under-five (U5)** death rate is 0.16 per 10000 per day and both are within the acceptable levels of less than 1/10,000/day.

Specific recommendations include:

Immediate Interventions

- **Develop detailed integrated multi-sectoral micro-plan to address the high levels of acute malnutrition among U5 children as well as underweight.**

- **Involve Aden Radio and TV in a social mobilization campaign to deliver messages on the current situation and alert people to utilize the available services.**

Medium Term Interventions

- The nutrition package that includes the management of acute malnutrition, the growth monitoring and promotion (GMP), IYCF counselling, and supplementation with micronutrients for child and mother should be entered to the minimum official service list at the governorate level to assure provision of this package by all working health facilities. Promotion of breastfeeding at birth place **(BPBP**) should be added for facilities that are providing birth services.
- The Governorate Health Office should take the lead to prepare a weekly timetable for outreach activities and mobile clinics to all suburbs of Aden. Each fixed health facility should be part of these mobile clinics to assure reaching all suburbs every week. The package should be that mentioned above.
- **Capacity building for the government side to manage the nutrition information system**.
- Expand the MAM supplementary feeding programme to all fixed and outreach health service delivery sites. This should be given the priority.
- Develop a plan to involve Aden Radio and TV on continuous raising awareness campaigns on promotion of appropriate mother and child feeding practices and to increase the utilisation of health and nutrition services.

Other Recommendations

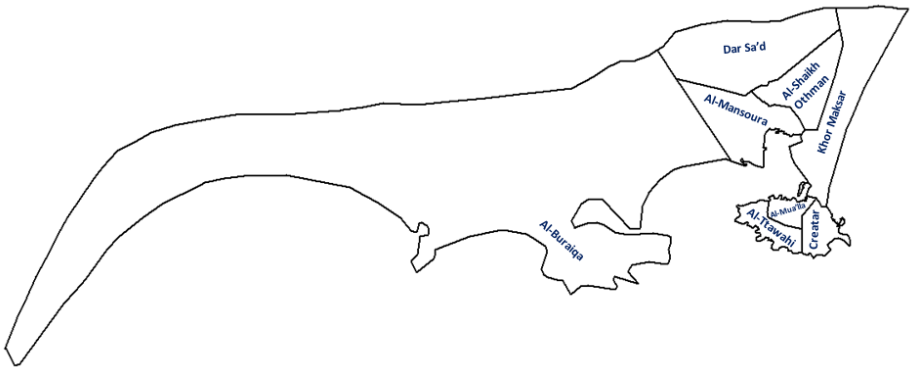
- Follow up SMART nutrition surveys next year at the same time to document progress of the response plan and lessons learnt.
- During the survey, Abyan IDPs were found in the majority of clusters. For the purpose of this survey, IDPs were excluded, however, there is a real need to have a clear map and frame for IDPs in both Aden and Lahj.

Table 1. Summary of Nutrition Survey in Aden Governorate, Sep 2012			
Indicator	**N**	**%**	**95% CI**
Child Malnutrition			
Total number of households assessed for children	1215/1221	99.5	
Mean household size	7.37		
Total number of children assessed	1117/1126	99.2	
Child sex: Males (boys)	572	50.8	
Females (girls)	554	49.2	
Global Acute Malnutrition (WHZ<-2 z-score or oedema)	207	18.9	16.7 - 21.4
Severe Acute Malnutrition (WHZ<-3 z score or oedema)	26	2.4	1.6 - 3.5
Oedema	1	0.1	0.0 - 0.6
Chronic Malnutrition (H/A<-2 z score)	181	16.7	14.5 - 19.0
Severe Chronic Malnutrition (H/A<-3 Z score)	28	2.6	1.8 - 3.8
Underweight prevalence (W/A<-2 Z score)	268	24.4	21.9 - 27.0
Severe Underweight (W/A<-3 z score)	50	4.5	3.4 - 6.0
Child Morbidity			
Children reported with suspected measles within one month prior to assessment	21	1.9	1.2 - 2.9
Children reported with diarrhoea in 2 weeks prior to assessment	353	31.8	29.1 - 34.7
Children reported with ARI within two weeks prior to assessment	355	32.0	29.3 - 34.8
Children reported with febrile illness in 2 weeks prior to assessment	406	36.6	33.8 - 39.5
Immunization and Supplementation Status			
Children aged 9 - 59 months immunised against measles	952	90.5	88.5 - 92.2
Children who have received the 3 routine doses of polio vaccine	1001	89.9	87.9 - 91.5
Children reported to have received vitamin A supplementation in last 6 months	922	82.9	80.5 - 85.1
Child Feeding			
Children (6-24 months) reported to be currently breastfeeding	240	67.2	62.1 - 72.1
Children (6-24 months) fed 4 times and above	51	14.5	11.1 - 18.7
Salt iodization			
Households consumes adequately iodized salt	317	26.3	23.9 - 28.9
Mortality			
0-5 Death Rate (U5DR) as deaths/10,000/ day	**0.16**		0.04 - 0.64
Crude Death Rate (CDR) as deaths/10,000/ day	**0.18**		0.11 - 0.31

1.0 INTRODUCTION / BACKGROUND

Historical Context

Figure (1): Map of Aden Governorate



Aden in history was the main natural seaport the Kingdom of Osan between the sixth and seventh century BC. Between January 19, 1839 and November 30, 1979, it was colonised by the Great Britain during which Aden was geographically expanded to include more districts. Before it was colonised, Aden was limited to areas of Crater, Al-Malla Al-Tawahi and part of Khormaksar, but during the colonization, Al-Mansoura was established, Al-Buraiqa was constructed mainly for the oil refinery and was given the name of Little Aden, while Al-Sheikh Othman and Dar Sa'd were rented from the Sultan of Lahj as a response to the enlarged population size due to internal and external migration to Aden. The population size of colony of Aden reached 138,441 in 1955. After the departure of the British colonial in November 1967, Aden was the political capital of the independent state of People's Democratic Republic of Yemen.

Recently, Aden is the economic and the commercial capital of the Republic of Yemen. It is located between latitudes of 12.39 and 12.55 in north to the equator, far with 170 km to the east of Bab el Mandeb Strait, and 363 kilometres away from the capital Sana'a, with approximate population 774,000, that represents 3% of the total country population. Aden is composed from 8 districts with total area of about 750 square kilometres.

Economic Activity

Aden people are practising a mixture of industrial, fisheries, commercial, tourism, and services activities. The most important industry component since 1950s is the petroleum refining. Fishery is a classical activity for natives those living borderline to the coast, while agriculture and animal breeding are not considered among main activities. It was declared in 1990 as a free trade zone.

Terrain

Aden is a coastal governorate overlooks the Gulf of Aden that opens up to the Arabian Sea and Indian Ocean. Geographically, Aden can be divided into two areas, Aden the Sea that is composed from peninsulas of Main Aden (Crater, Al-Malla, Tawahi, and Khormaksar) and Little Aden (Al-BuraiqA) and Aden the Land that is composed of Dar Sa'd, Al-Mansoura, and Al-Shaikh Othman. A median height volcanic altitudes are existed in Aden the Sea.

The Climate

Temperature and humidity: Aden is hot in summer and warm in winter. The average range of temperature in July is 24.5 degree Celsius minimum and 40.5 degree Celsius maximum, while the average range in January is 18.6 degree Celsius minimum and 31.6 degree Celsius maximum. The relative humidity in average is 73% in summer while it is 62% in winter. The lowest atmospheric pressure is in July (summer) while it is rising to its upper limit in January (winter)

Because of the island- like shape of a large part of the governorate area, there is an air exchange between the land and the see that takes place in both day and night to relatively mild the weather, however, the location of Aden within the hot orbital range makes it exposed to the vertical sunlight twice yearly at the end of Spring and at the second half of Summer. This is the reason of having Aden hot for the most if the year. Although there are medium height altitudes in Aden, they have no effect on the climate.

Rain: The rainfall in the Governorate is little and mostly restricted to the end of winter and beginning of spring while it is scarce in summer.

Health and Health Services Status:

In 2011, the Epidemiological Surveillance Programme reported 14 cases of flaccid paralysis, 4 cases of cholera, 198 cases of measles, 122 cases of TB, 130 cases of bloody diarrhoea, and 9114 cases of non-bloody diarrhoea. Malaria Programme reported 1536 diagnosed cases, 562 of them were children below 5 years of age. The Reproductive Health Programme reported 10520 births, 603 of them were home births. Among these births 360 were dead births and 21 were maternal deaths (200/100000, with about 165/100000 in AlWahda Hospital). Data from two maternities indicated that 6 per cent of deliveries were performed by Caesarean section.

According to the WFP-CFSS 2011, malnutrition levels among under-fives in the Governorate are 15 per cent wasting, 20.2 per cent stunting, and 22.6 per cent underweight. Malnutrition among women at childbearing age was found as 23.1 per cent using the cut-off of 22.2 cm.

Acute malnutrition by MUAC cut-off of 12.5 cm has been almost doubled between 2009 and 2011 as seen in results of two CFSS surveys. It was 4.8 per cent (0.8 per cent SAM + 4 per cent MAM) in 2009 which was increased to 8.3 per cent (1.7 per cent SAM + 6.6 per cent MAM) in 2011.

Primary health services are presented mainly through the governmental health system represented by 4 governorate hospitals, one district hospital, 20 health centres and 12 health complexes (polyclinics). There are about 28 registered private hospitals and clinics.

Based the 2011 reports of the Governorate Health and Population Office, the coverage of the third dose of the pentavalent vaccination was 86 per cent while it was 75 per cent for the coverage of the **first dose of measles vaccination** but the tetanus **vaccination for childbearing age women did not exceed 1 per cent.** Reproductive Health Programme reported a number of 76335 beneficiary's women in 2011 most of them are previously registered attendants. The majority are of age of 25 years and older. Family planning commodities distributed were 39491 strips of oral progestin pills,

50524 of oral combined bills, 10413 of contraceptive injections, 1338 of IUDs, 775 of implants, and 49741 of condoms. About 35 per cent of pregnant mothers received antenatal care while only 7 per cent received postnatal care.

Management of severe acute malnutrition is delivered with UNICEF support through one TFC and 10 OTPs. In 2011, a number of 1131 children were admitted by these sites, with death rate of 1.6 per cent but with 41 per cent default rate. IYCF corners started in 6 locations by the start of 2012 that have presented counselling to about 580 mothers up to June 2012.

Food Security Situation

The WFP-CFSS 2009 survey has shown a food insecurity level of 12.1 per cent for Aden which is the fourth best after Sana'a City, Hadhramout and AlMahra Governorates. In 2011 Aden became the third after AlMahra and Hadhramout but with food insecurity level of 23.4 per cent.

Unrest Consequences

The fighting in Abyan, the neighbour governorate, has displaced nearly 237,000 individuals (39,500 households) 71 per cent of them are displaced in Aden. The conflict as well as the civil unrest has had spill-over effects not only in conflict-affected communities but in the southern region as a whole.

The majority of IDPs in Aden are living with host families, while a smaller proportion have sought shelter in 69 schools, thus affecting access of students (local and IDP children alike) to regular education facilities. Unknown number of families has rented houses and apartments in Aden

The protracted internal displacement has added a great deal of burden on the host families. The host families, and as part of the Yemeni hospitality culture, have lost their coping mechanisms and have provided the first phase of the humanitarian assistance to IDPs. Since the life-span of the crisis prolonged more than anticipated, the assistance provided by the host families has become a social and moral commitment rather than "ability to provide".

The concentration of IDPs in Aden has created an unbearable additional constraint on the already weak infrastructure and services, including sanitation, education, water, health and electricity. This pressure on services, may pose a challenge to the fragile economic, social and security situation in the city, and thus have negative ramifications for the welfare of the host community.

Ja'ar and Zinjibar of Abyan have been recaptured back from hands of AQAP armed militias in June 2012, however, returning of IDPs to Abyan is not seen to happen in close future. Returning is determined by some factors including availability of basic services such as health and education, safety and security especially that related to landmines and UXOs, and existence of minimum infrastructures such as water and electricity.

Beside the displacement from Abyan, Aden with Lahj Governorate has received within more than 20 years tens of thousands of Somali refugees settled mainly at Al-Basateen zone of Dar Sa'd district.

The political movement opposed to the regime in Yemen had its beginning in Aden, which is the most governorate affected by the war in 1994, after which the so-called Southern Movement (Hirak) initiated calling for the right for self-determination of the South which in turn led to emerged crises and confrontations in many southern governorates, then in 2011 the crisis became more serious with the February Youth Revaluation that covered the whole country.

2.0 ASSESSMENT OBJECTIVES

The overall objective of the survey was to establish the nutrition situation in Aden Governorate, determine some of the factors influencing malnutrition, and identify some of the public health services accessible to the population.

Specific objectives were:

1. To estimate the level of acute malnutrition (wasting), stunting and underweight among children aged 6-59 months in Aden Governorate.
2. To identify factors influencing nutrition status of the children in Aden including disease prevalence and access to essential services.
3. To estimate the prevalence of some common diseases (measles, diarrhoea, fever and ARI) in the Governorate.
4. To estimate the measles and polio vaccination and Vitamin A supplementation coverage among children in the Governorate.
5. To determine the average households who did reduce meal size, lower number of meals, sleep hungry, use debts to buy food, and lower expenditures in health and education to buy food.
6. To estimate the prevalence of using adequately iodized salt in the Governorate.
7. To estimate the crude and under-five mortality rates in the Governorate.

3.0 METHODOLOGY

3.1: Sampling Design and Sample Size Determination

A cross-sectional survey was conducted between 8 and 20 September 2012 in Aden Governorate. Using a two-stage PPS sampling methodology, 36 clusters were randomly selected for the survey. The cluster sampling methodology was selected in view of lack of an exhaustive updated list of household details. The total estimated population was 773,247 (Ref: Annex 7: Sampling Frame: Source: CSO 2012 projections for Aden based on 2004 census data).

A sample size of 1224 households was calculated using ENA for SMART software based on the estimated parameters shown in Table 2. The calculation of sample size for mortality was different that that have been used in other governorates. The estimated death rate used was the one of Lahj Lowlands, 0.18 per 10000 per day, with precision of 0.15 per 10000 per day and with 90 days recall period to come with more confidence about the result[6]. The calculated sample size for mortality was 1217 households, hence the sample calculated for anthropometry was considered for mortality as well to come with a minimum 900 children and 7452 population size.

Table 2: Parameters used in the Sample Size Determination	
Parameters	
Estimated Acute Malnutrition Prevalence (%)[1]	15
Desired Precision (%)	3
Design Effect[2]	1.5
Average Household Size[3]	6.3
Under 5 year old (%)[4]	13.2
Non response household (%)[5]	3
Sample Size (N)	**1224**

The sample size was divided into 36 clusters with a minimum of 34 households per cluster for assessing the anthropometry and mortality. A total of 1221 households were reached but six of them refused to cooperate. The total 1215 households are less with a percentage of 0.7. The survey reached a total number of 1126 children aged 6-59 months.

3.2: Sampling Procedure

The ENA for SMART software was used in the random selection of the 36 clusters from the sampling frame, including identification of the reserve clusters. The sampling frame consisted of an exhaustive list of settlements and the estimated population size for each. In this case, all settlements were accessible and were included in the sampling frame, thus giving them an equal chance of being selected.

[1] WFP. The State of Food Security and Nutrition in Yemen, 2012. Based on Comprehensive Food Security Survey (CFSS) in Yemen, 2011.
[2] The default value of 1.5 was used and the number of cluster was increased to 36 to decrease the effect of heterogeneity.
[3] Calculated on basis of Central Statistics office data of population versus households
[4] Estimated on basis of MoH reports and immunization statistics
[5] Non-response rate of 3% was estimated in case the teams encounter refusal, security-related inaccessibility or absence.
[6] For calculation of mortality sample size, the prevalence 0.18 per 10,000 per day of Lahj Lowland was used.

All the 36 clusters randomly selected were accessible and assessed, hence the reserve clusters were not assessed in the survey. For each cluster, there was a map that indicates the borders of the cluster and landmarks to reach the cluster easily. Sample of these maps are provided in Annex 12. Routinely, survey teams were requesting the residents' permission to assess the areas. The purpose of the survey was explained and the process of random selection of a representative sample from the cluster was also elaborated.

The random picking of households was done in two different ways depending on the size of the cluster area and the arrangement of houses within the cluster. Because Aden is an urban area with buildings that each is contains more than one households, the second stage of sampling was to randomly draw the building, then one household from that building was picked randomly. Anthropometric data alongside other child data was collected from all children aged 6-59 months found in the randomly selected household.

For the majority of clusters, the Modified EPI Methodology was used to randomly pick the buildings/houses as in suburbs where unplanned haphazard building was taken place. This method was carried out by spinning the pen to randomly select the direction to take to the edge of the cluster, then spinning the pen at the cluster edge aiming at randomly get the direction to follow to the other extreme edge of the cluster, after that numbering all houses on or at the left or the right of that imaginary line, and finally to pick randomly from those numbered houses the one household to be considered the first sampled house for the survey in that cluster. The next nearest household on the right side is taken as the second sampled household. If the edge of the cluster is reached before completing the required number of households, the process explained above was repeated until the required number of households is reached.

In cluster where the number of buildings can be counted, all buildings were numbered then the required number of buildings for the survey sample was picked randomly (simple random selection).

In case of absence of the children during the interview time or absence of the members of the randomly selected households, an appointment was made by the survey team to return back before leaving the cluster.

3.3: Study Population and Data Collection Process

As defined in the sampling frame, the study population was the entire population of Aden Governorate.

The activities undertaken in the entire survey period are summarized in Table 3, below. Data collection preparation commenced with a four-day training of enumerators, team leaders and supervisors (Ref: Annex 3: Aden Nutrition Survey Team). The training conducted covered interview techniques, sampling procedures, field procedures (random household selection, introduction and systematic data collection), inclusion and exclusion criteria, sources and reduction of errors, taking of measurements (height, weight and MUAC) focusing on achieving high precision and accuracy, data collection standardization procedures to ensure data quality, diagnosis of oedema, measles, ARI, diarrhoea asking of questions that are related to water sources, latrine, hand washing, food accessibility, coping strategies, undertake the rapid test of iodine in salt, and the

technique of the collection of household details necessary to establish household members movement and/or death in order to compute mortality rates, handling of equipment and the general courtesy during the assessment. Six survey teams were involved in the data collection process. Every two teams were requested to undertake one cluster per day.

Quantitative data were collected by means of a household questionnaire for nutrition survey and a mortality survey question, adopted from the SMART Methodology guidelines (Ref: Annex 1: Aden Nutrition Survey Questionnaire and Annex 2: Aden Mortality Survey Questionnaire). Only children aged 6-59 months were included in the anthropometric assessment. The age for the majority of children was measured based on documented birth dates on birth certificate or immunization card, but when birthdate was not documentary available, recall technique is followed mainly using the *Hijri* Calendar that is converted to the Gregorian Calendar based on precise mathematical equation inserted into the electronic data entry database. For Aden, using of events calendar was not an important option. (Ref: Annexes 5 for Events Calendar).

Retrospective mortality data were collected from all randomly selected households, irrespective of presence or absence of children aged 6-59 months. A recall period of 90 days prior to the survey was used.

Table 3: Chronology of Activities in the survey

Action	Period
Preparation: Contacting local authority, survey team identification, training material preparation	25 – 31 August
Training of survey teams and pre-testing of questionnaire	1 – 6 September
Data collection and data entry	6 – 20 September
Data cleaning and analysis	21 – 25 September
Presentation of the findings	30 September
Report drafting and releasing	15 October
Finalizing the report	30 October

3.4: Measurement Standardization and Quality Control

Seven survey teams (one team as a reserve) underwent rigorous standardization test procedures using 10 children aged 6 - 59 months (Ref: Annex 4: Aden Nutrition Survey Standardization Test Report). This exercise was conducted at the training place in Aden City and it aimed at assessing the accuracy and precision of the survey teams for purposes of enhancing the survey data quality. During the training week one female trainee regretted to continue, one was excluded for inconvenience. The standardization report in Annex 4 shows team performance and how errors were rectified/ addressed). Further field testing of survey tools and exercise on data collection, including household selection and interview steps and familiarization of questions was conducted, and field level challenges and common mistakes identified and discussed. The field testing was conducted in Al-Shabat Zone in Khor Maksar District. This site was not one of the randomly selected clusters.

Among the rest 19 female enumerators, 18 were selected and divided to 6 teams to

conduct the survey

Beside training, which also included role playing and field testing, data quality was also ensured through (i) Monitoring of fieldwork by coordination team; (ii) Crosschecking of filled questionnaires on a daily basis, recording of observations and daily de-briefing and discussion; (iii) Confirmation of measles, severe malnutrition especially oedema cases and death cases by supervisors; (iv) Daily entry of anthropometric data, continuous data cleaning and plausibility checks, plus ensuring each team was given feedback on the quality of previous day's data before the start of a new day; (v) Equipment calibration/ monitoring accuracy of equipment (weighing scales) by regularly measuring objects of known weights to check for any differences, (vi) Additional check was done at the data entry level to enable entry only of relevant possible responses and measurements; (vii) Continuous reinforcement of good practices. During the field data collection, all measurements were loudly called by both the enumerators reading and recording them, to reduce errors during recording.

Clear job descriptions were provided to the teams as part of the training, to ensure appropriate guidance in delivering the assigned tasks (Annex 8: Survey Team Job Description). The supervisor had to review the questionnaire and verify the accuracy of the details before the teams leave a household, thus minimizing the possibility of incomplete data (missing variables) and outliers.

3.5: Data Entry and Analysis

The anthropometric data was entered and analysed using ENA for SMART software, while the remaining household variables and child-related variables (feeding practices and morbidity) were entered and analysed using Epi EPI info ENA version 3.5.3. Running and tabulation of all variable frequencies was carried out as part of data cleaning. The nutrition indices (z-scores) for Weight for Height (wasting), Height for Age (stunting) and Weight for Age (underweight) were generated and compared with WHO 2006 Growth Standards. Children/cases with extreme z-score values were flagged and investigated and appropriately excluded in the final analysis if deviating from the observed mean (SMART flags).

The classification used for wasting levels was a follows:

W/H < -3 Z-Scores or oedema = Severe acute malnutrition

W/H ≥ -3 Z-Scores to < -2 Z-Scores = Moderate acute malnutrition

W/H < -2 Z-score or oedema = Global/total acute malnutrition

W/H ≥ -2Z-Scores = Normal

The classification used for Stunting levels was a follows:

H/A < -3 Z-Scores = Severe stunting

H/A ≥ -3 Z-Scores to < -2 Z-Scores = Moderate stunting

H/A < -2 Z-score = Stunting Prevalence rates

H/A ≥ -2Z-Scores = Normal

The classification used for Underweight levels was a follows:

W/A < -3 Z-Scores = Severe Underweight

W/A ≥ -3 Z-Scores to < -2 Z-Scores = Moderate underweight

W/A < -2 Z-score = Underweight Prevalence Rates

W/A ≥ -2Z-Scores = Normal

Frequencies and cross-tabulations were used to give percentages, means and standard deviations in the descriptive analysis and presentation of general household and child characteristics.

Mortality data was entered and analysed using the ENA for SMART software.

3.6: Data Entry Verification and Cleaning

Four team members shared the work of data entry, and then each member would review the work done by another colleague before merging the data on a daily basis.

About 10 per cent of the entered questionnaires were randomly drawn using the Random Number Table of ENA software. These drawn questionnaires were revised for accuracy of entry in the electronic database. The quality of data entry was accepted if accuracy was not less than 95 per cent.

The uniqueness of IDs of both household questionnaire and mortality sheet was also reviewed for any repeating during data entry.

For anthropometry data, all flagged records were also reviewed by means of revisiting original questionnaires.

4.0 ASSESSMENT RESULTS

4.1: Household Characteristics of Study Population

As shown in Table 4 below, the gender of household head is largely male (87.6 per cent). Although the rate of female as a household head is low, it is higher that found in governorates of Taiz, Hajja, Rayma, and Lahj. Almost 81 per cent of household heads are married and living with partner, but 11.4 per cent of household heads are widowed which high widow rate in compare with rates found in other governorates. Around 40 per cent of household caretakers in the survey area are illiterate while the proportion of household caretakers with basic, secondary and higher education is collectively around 50 per cent. Although the rate of illiteracy shown above is lower than that found by SMART surveys in other governorates, it should be taken as alert since the illiteracy was eliminated in Aden by end 1980s.

The two main income sources for households are the fixed monthly waged work and the temporary work (casual labour)[7] with total percentage of about 85 per cent as shown in Table 4.

Regarding drinking water, the main sources for 89 per cent of households is the piped water. Among those who are not use bottled water for drinking, only 7.1 per cent do treat drinking water, mainly by ceramic filtration. About 96 per cent of the households store drinking water in clean containers (algae growth is not seen).

As shown in Table 4, about 99 per cent of households use flush or pour flush latrines. Defecation in open was not reported in this survey.

Although the majority 70.1 per cent of households in Aden are using iodized salt, around two thirds of these households are using inadequately iodized salt as shown in bottom of table 4 below. This indicates the household tendency to use iodized salt but on the other hand it indicates the weakness of the food inspection system on salt monitoring at the market level.

Three parameters to assess food accessibility and two parameters to assess coping strategies were used in this survey in which all were measuring the practice 30 days prior to the survey. As shown in the table 4 below, around fifth of households have members experienced to go to the bed hungry, while the buying the food on credit or using debts to buy food was practiced by about 57.3 per cent of the households. Almost one third (32.4 per cent) of households mentioned no of the above parameters, 28.2 per cent mentioned one parameter, 11.6 per cent mentioned two parameters, 9.8 per cent mentioned 10.3 per cent, and 7.7 per cent mentioned all of the five parameters.

Table 4: Household Characteristics		
	N	*%*
Total Households	1215/1221	99.5
Household size (Mean):	7.37	
Mean No of Under-fives	1.02	
Mean No of 6 – 59 months	0.93	
Sex of Household Head:		
Male	1064	87.6
Female	151	12.4
Marital status of household head		
1. Married and living with spouse	985	81.1
2. Married but living far from spouse for ≥ 6 months	38	3.1

[7] Temporary work is daily wage based work such as work in construction, on others' farms, etc.

Table 4: Household Characteristics		
	N	*%*
3. Widowed	139	11.4
4. Single	19	1.6
5. Recalcitrant	4	0.3
6. Divorced	30	2.5
Education level of household caretaker		
1. Illiterate	483	39.8
2. Read and write	126	10.4
3. Basic education	228	18.8
4. Secondary education	201	16.5
5. Higher education	177	14.6
Main Source of Income:		
1. Fixed monthly waged work	817	67.2
2. Temporary work/ Casual labour	218	17.9
3. Remittance (from immigrants)	58	4.8
4. Trade	31	2.6
5. craftsmanship	28	2.3
6. Donations from friends and relatives	25	2.1
7. Other	38	3.1
Main water source for drinking		
1. House-connected piped water	1081	89.0
2. Bottled Water	109	9.0
3. Other	25	2.1
Household latrine type		
1. Flush/pour flush latrine	1200	98.9
2. Open pit latrine	7	0.6
3. Simple covered pit latrine	6	0.5
Salt type used		
1. Non iodized salt	360	29.9
2. Inadequately iodized salt (below 15 ppm)	528	43.8
3. Adequately iodized salt (15 ppm and above)	317	26.3
Access to food and coping strategies		
1. Households reduced the meal size during the last 30 days	404	33.3
2. Households lowered number of meals during the last 30 days	335	27.6
3. Households with members slept hungry during the last 30 days	228	18.8
4. Households bought food on credit or using debts during the last 30 days	692	57.3
5. Households reduced expenditures of education and/or health to buy food during the last 30 days	303	24.9

4.2: Morbidity, Immunization Status and Health Seeking Behaviour

A high prevalence of common diseases was recorded as reflected in Table 5 below. During the two weeks prior to the survey, the recorded prevalence of diarrhoea among children was 31.8 per cent, the prevalence of ARI as described by coughing or breathing difficulty was 32 per cent and the prevalence of fever two weeks prior to the survey was 36.6 per cent. Suspected measles[8] during the last month was 1.9 per cent.

As shown in Table 5, the coverage for polio vaccination is low with a proportion of 89.9 per cent, while it is 90.5 per cent for measles immunization coverage. 84.6 per cent of children vaccinated for measles were confirmed by vaccination cards while the rest 15.4 per cent by recall). During the previous six months, 82.9 per cent of the children had received vitamin A supplements. The above immunization coverage and vitamin A supplementation coverage are lower than the Sphere Standards recommended 95 per

[8] The suspected measles is defined as having rash and fever in addition to at least one of: cough, sore throat, or conjunctivitis.

cent coverage.

Only 2.2 per cent of the surveyed children slept under a mosquito net the night before the survey.

Table 5: Health Seeking Behaviour		
	N	*%*
Where health service is sought		
Public health facility	785	64.7
Private clinic	383	31.5
Pharmacy	19	1.6
Personal medication	18	1.5
Do not seek medical assistance	7	0.6
Traditional medication	2	0.2
Morbidity		
Proportion of children with diarrhoea within 2 weeks prior to assessment	353	31.8
Proportion of children with ARI within two weeks prior to assessment	355	32.0
Proportion of children with fever within two weeks prior to assessment	406	36.6
Suspected measles within one month prior to assessment	21	1.9
Immunization		
Children (9-59 months) immunised against measles	952	90.5
Children who have ever received routine polio 3 vaccine	1001	89.9
Supplementation		
Children who received vitamin A supplementation in last 6 months	922	82.9
Sleeping under mosquito net		
Children slept under mosquito net last night	24	2.2

As shown in Table 5, more than 96 per cent of households seek health services from either public health facilities or private clinics.

4.3: Feeding Practices

Table 6: Feeding practices		
	N	*%*
Still breastfeeding	240	67.2
Number of feeds (other than breastfeeds)		
No feed	21	6.0
One feed	36	10.2
Two feeds	73	20.7
Three feeds	171	48.6
Feeding 4 times and above	51	14.5
Number of milk feeds (other than breast milk)		
No milk feed	103	30.5
One milk feed	34	10.1
More than one milk feed	201	59.5

As shown in Table 6, only 67.2 per cent of children aged 6 to 24 months are continuing breastfeeding. Additionally, only 14.5 per cent of this category of children had four and above feeds other than breastfeeding in the previous day. The inappropriate infant and young child feeding practice of giving milk (other than breast milk) to children over 6 months of age was recorded as common in Aden Governorate with percentages of 59.5 per cent of children in the previous day to the survey.

4.4: Characteristics of the children assessed

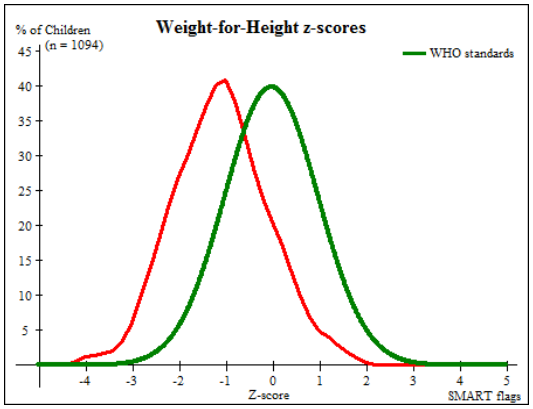
Table 7: Distribution of Age and Sex of the sample							
	Boys		*Girls*		*Total*		*Ratio*
AGE (mo)	*no.*	*%*	*no.*	*%*	*no.*	*%*	*Boy:girl*
6-17	140	54.5	117	45.5	257	22.9	1.20
18-29	127	52.9	113	47.1	240	21.4	1.12
30-41	126	46.0	148	54.0	274	24.4	0.85
42-53	141	52.2	129	47.8	270	24.1	1.09
54-59	35	43.2	46	56.8	81	7.2	0.76
Total	569	50.7	553	49.3	1122	100.0	1.03

Generally there were more boys than girls assessed in this survey, as shown in table 7, however, the difference is not statically high (p=0.633) as found by the plausibility check of the survey date (Annex 10: Assessment Quality Check). Further on the overall, the ratio of boys to girls was close to 1.03:1, implying sample representativeness of the study population. However, there was significance difference in overall age distribution between the smaller group aged 6 – 29 months and older group aged 30 – 59 months with ratio of 1:1.26

4.5: Nutrition Status

Below is a summary of the anthropometric results of the nutrition survey. Data quality was validated using the Plausibility check function of the SMART for ENA software. The overall scoring of the plausibility check of the survey data is 6 which is categorized as good (Ref: Annex 10 for the Assessment Quality Check), meaning quality and representative data was collected for the Aden Governorate.

4.5.1: Acute Malnutrition Rates



There is an overall shift to the left of the study population when compared with the reference population, as per the graphs shown (implying presence of malnutrition). The interpretation was made based on the 2006 WHO Growth Standards.

The level of wasting with oedema – also known as global acute malnutrition (GAM) – found is **18.9 per cent,** which classified as 'critical' as per the WHO categorization of the severity; details are shown in Tables 8 (including the confidence intervals). There was only one oedema case identified by the survey. The proportion of the acute malnourished boys (20.6 per cent) was higher than that of the girls (17.1 per cent).

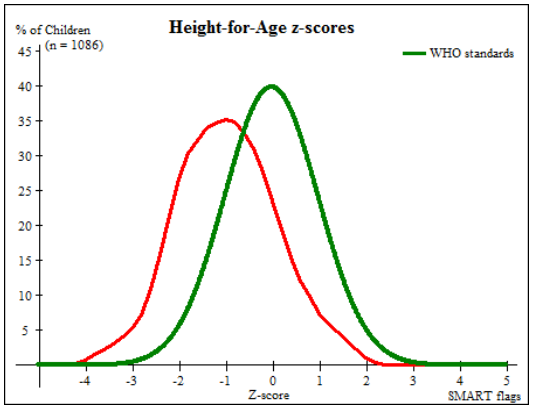
Table 8 : Acute Malnutrition (Wasting) Rate			
	All *n = 1095*	*Boys* *n = 558*	*Girls* *n = 537*
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(207) 18.9% (95% CI: 16.7 - 21.4)	(115) 20.6% (95% CI: 17.4 - 24.3)	(92) 17.1% (95% CI: 14.1 - 20.6)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score	(181) 16.5% (95% CI: 14.4 - 18.9)	(97) 17.4% (95% CI: 14.4 - 20.8)	(84) 15.6% (95% CI: 12.7 - 19.1)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(26) 2.4% (95% CI: 1.6 - 3.5)	(18) 3.2% (95% CI: 2.0 - 5.1)	(8) 1.5% (95% CI: 0.7 - 3.0)
Oedema	(1) 0.1% (95% CI: 0.0 - 0.6)	(1) 0.2% (95% CI: 0.0 - 1.2)	(0) 0.0% (95% CI: 0.0 - 0.0)

The prevalence of oedema is 0.1 per cent

The prevalence of acute malnutrition based on the NCHS reference is reflected the summary of Table 11, below.

4.5.2: Chronic Malnutrition Rates

Stunting prevalence as shown in Table 9 is 16.7 per cent. There is also an overall shift to the left of the study population deviating from the reference population. The prevalence of severe stunting is 2.6 per cent. The statistical details of the stunting rates are as shown in table 9 below.



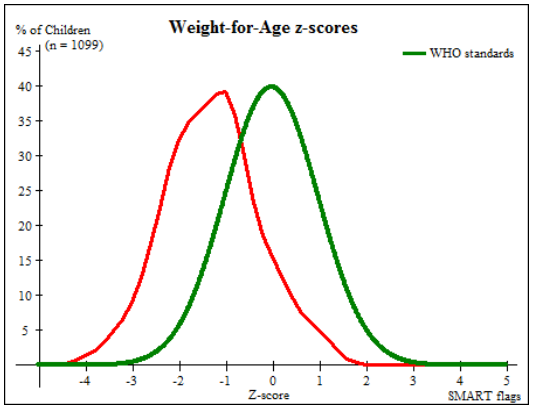
This stunting level is beneath 20 per cent which classified as 'normal' as per the WHO (2000) categorization of the severity. The proportion of the chronic malnourished girls (18.7 per cent) was higher than that of the boys (14.7 per cent).

Table 9: Chronic Malnutrition (Stunting) Rate

	All *n = 1086*	*Boys* *n = 546*	*Girls* *n = 540*
Prevalence of stunting (H/A<-2 z-score)	(181) 16.7% (95% CI: 14.5 - 19.0)	(80) 14.7% (95% CI: 11.8 - 18.0)	(101) 18.7% (95% CI: 15.6 - 22.3)
Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(153) 14.1% (95% CI: 12.1 - 16.3)	(66) 12.1% (95% CI: 9.5 - 15.2)	(87) 16.1% (95% CI: 13.2 - 19.5)
Prevalence of severe stunting (H/A<-3 z-score)	(28) 2.6% (95% CI: 1.8 - 3.8)	(14) 2.6% (95% CI: 1.5 - 4.4)	(14) 2.6% (95% CI: 1.5 - 4.4)

4.5.3: Underweight Rates

Underweight prevalence as per child gender is shown in Tables 10. The rate is 24.4 per cent with severe underweight of 4.5 per cent. The statistical details of the underweight prevalence are shown in the tables 10 below.



The above underweight rate is between 20 per cent and 29.9 per cent which is classified as 'serious' as per the WHO (2000) categorization. The proportion of the underweight girls (27.2 per cent) was higher than that of the boys (21.6 per cent).

Table 10: Underweight Rate

	All *n = 1100*	*Boys* *n = 560*	*Girls* *n = 540*
Prevalence of underweight (<-2 z-score)	(268) 24.4% (95% CI: 21.9 - 27.0)	(121) 21.6% (95% CI: 18.3 - 25.3)	(147) 27.2% (95% CI: 36.7 - 46.7)
Prevalence of moderate underweight (<-2 z-score and >=-3 z-score)	(218) 19.8% (95% CI: 17.5 - 22.3)	(98) 17.5% (95% CI: 14.5 - 21.0)	(120) 22.2% (95% CI: 18.8 - 26.0)
Prevalence of severe underweight (<-3 z-score)	(50) 4.5% (95% CI: 3.4 - 6.0)	(23) 4.1% (95% CI: 2.7 - 6.2)	(27) 5.0% (95% CI: 3.4 - 7.3)

Table 11: Summary of Malnutrition Rates

	N	*%*	*95% CI*
Global Acute Malnutrition (WHZ<-2 or oedema)	207	18.9	16.7 – 21.4
Severe Acute Malnutrition (WHZ<-3 or oedema)	26	2.4	1.6 – 3.5
Oedema	1	0.1	0.0 – 0.6
Global Acute Malnutrition (WHM<80% or oedema)*	119	10.7	9.0 – 12.7
Severe Acute Malnutrition (WHM<70% or oedema)*	10	0.9	0.5 – 1.7
Stunting rate (HAZ<-2 z score)	181	16.7	14.5 – 19.0
Severe stunting rate (HAZ <3 z score)	28	2.6	1.8 – 3.8
Underweight Rates (WAZ<-2 z score)	268	24.4	21.9 – 27.0
Underweight rate (WAZ_-3 z score)	50	4.5	3.4 – 6.0

* NCHS reference is used.

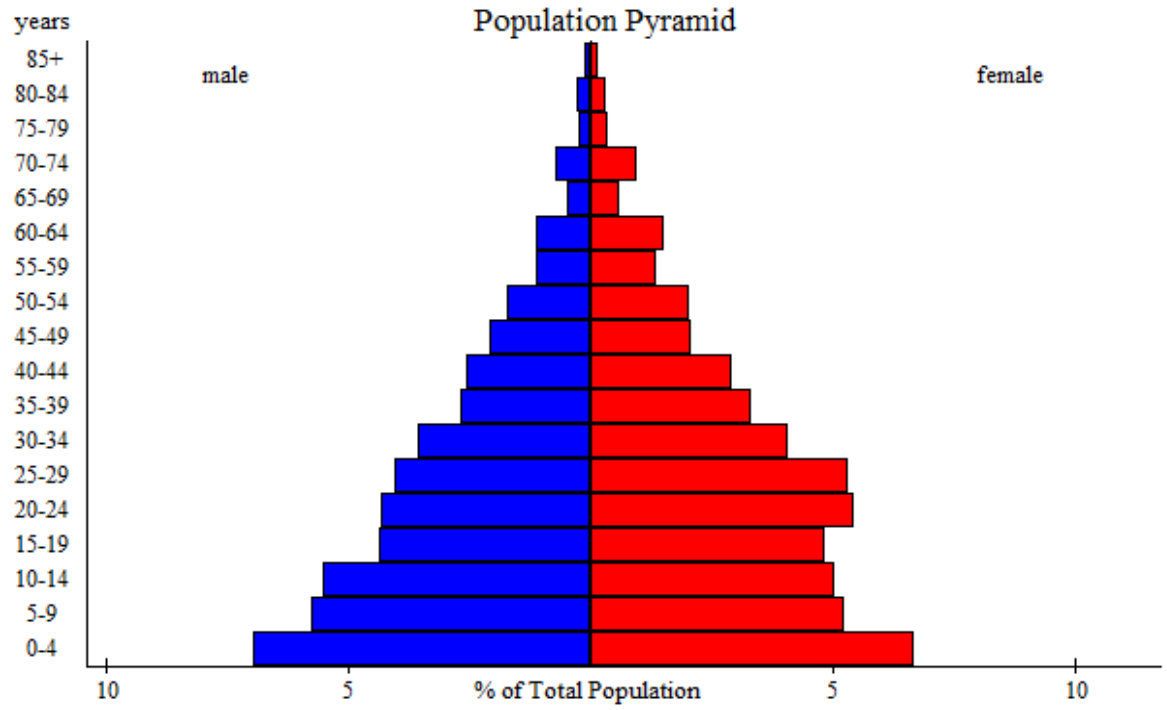
4.6: Mortality

Table 12: Mortality data		
	U5	*Total*
Total HHs surveyed	1221	1221
Total Population assessed in HHs	1423	10443
Number who joined the HHs	224	1701
Number who left the HHs	208	1630
Number of births	40	40
Number of deaths	2	17
Mortality rate (per 10,000 per day)		
Under-five	**0.16**	
Crude	**0.18**	

The crude death rate is 0.18 per 10,000 per day. The rate is higher among males than females (0.25 and 0.12 respectively). The under-five death rate is 0.16 per 10,000 per day, respectively. These rates are low and within acceptable levels according to WHO categorization, hence not raising concern. No death was found to be caused by violence.

4.6.1: Population Pyramid

Information about household members during the previous 90 days was collected. The resulting population pyramid for each zone is shown here. The population distribution by age shows almost equal number of the men and women throughout the age groups (0.9 man : 1 woman).



5.0 DISCUSSION AND VARIABLE ASSOCIATION

5.1 Levels of Malnutrition

Aden has different pattern of malnutrition than that seen in other governorates which is represented by 'normal' stunting, 'serious' underweight and 'critical' wasting.

Levels of acute malnutrition in Aden were found higher than those found in the survey done in December 2011 by WFP-CFSS (18.9 per cent in compare to 15 per cent respectively). Although both values are classified as 'critical', SAM in levels of 2.8 per cent was categorized as 'normal' indicating that MAM is the most priority to be addressed.

Underweight is acting as a composite indicator for GAM and chronic malnutrition. Underweight levels are high even it is lower than the national average by almost the half and lower than that found in Hodeidah, Taiz, Hajja, Rayma and Lahj Governorates.

Stunting levels are lower than the national average by almost two thirds, however it is not far away from the threshold of the 'alert' that is 20 per cent.

GAM is found higher in boys (20.6 per cent) than in girls (17.1 per cent) but the difference is no statistically significant. SAM in boys (3.2 per cent) is significantly higher than that in girls (1.5 per cent) (X^2: 3.6, P<0.05, df 1). However, the pattern is inverted for underweight and stunting. Underweight is found significantly higher in girls (27.2 per cent) than that in boys (21.6 per cent) (X^2: 4.7, P<0.05, df 1) but the difference was not significant for severe underweight (5 per cent and 4.1 per cent respectively). Similarly, stunting is found significantly higher in girls (18.7 per cent) than that in boys (14.7 per cent) (X^2: 3.2, P<0.05, df 1) but there was no difference between girls and boys for severe stunting (2.6 per cent in both genders).

Unlike findings in other governorate where GAM was significantly was found higher in younger groups GAM is higher, GAM in Aden was found higher among older group (children aged 24 to 59 months) but the difference is not significant. In Aden, stunting and underweight levels were found higher in older group, but the difference was found significant only for stunting (X^2: 5.0, P<0.05, df 1).

At the time stunting and underweight levels vary from district to district with highest rates in Al-Malla and AlTawahi and lowest in Crater (Stunting, (X^2: 22.3, P<0.01, df 7), and Underweight, (X^2: 29.8, P<0.001, df 7)), GAM was found evenly distributed among the eight districts. Pockets were found for both stunting and underweight, but there was no pockets found for GAM (P = 0.369). However, highest rates of GAM were found among marginalized groups live in the suburbs.

5.2: Child Feeding, Vitamin A Supplementation and Malnutrition Levels

Among children aged 6 to 24 months, the absence of underweight is significantly seen among the group that still breastfed (X^2: 9.7, P<0.01, df 1). No effect for sustained breastfeeding was seen on either chronic or acute malnutrition in this survey. The prevalence of still breastfeeding of 67.2 per cent of children aged 6 to 24 months is low that breastmilk continues support the child with important amounts of micronutrients up to the end of the second year, and can help to reduce GAM since the majority of GAM cases are children in this age category.

Only 14.5 per cent of children aged 6 to 24 months are given four or more of feeds other than breastfeeds per day. This percentage does not show in statistically

significant effect of malnutrition indicators; however it is low percentage and my effect on chronic malnutrition in the future.

Around 60 per cent of children aged 6 to 24 months are given more than one milk feed (other than breastmilk). Giving milk feeds (other than breast milk) is not a good practice as milk is considered to be a watery and non-caloric dense food during this age period. This is may suggest other reasons in addition to ceasing of breastfeeding for high GAM rates in this population. The factor make this more serious is giving the milk by bottle with teat.

It is notable that the vitamin A coverage (supplementation six months prior to the survey) was lower than the recommended 95 per cent coverage (Sphere Standards, 2011). There was no relationship identified between vitamin A supplementation and the levels of either stunting, underweight or wasting.

5.3: Morbidity and Malnutrition Levels

The notable prevalence of diarrhoea, ARI and fever two weeks prior to the survey are high but close the national levels. The effect of diarrhoea on malnutrition is seen only on severe underweight (X^2: 4.7, P<0.05, df 1) but has not been seen on GAM or SAM. This may be referred to the availability and the accessibility to health services in Aden. ARI was found to have effect on stunting (X^2: 4.1, P<0.05, df 1, while fever was found to have effect on GAM (X^2: 7.2, P<0.01, df 1). Morbidity rates found in this survey are high which calls for promotion of appropriate home based hygiene promotion and preventive measures.

5.4: Nutrition Status and Household Caretaker Education

The relation between education of the household caretaker and nutritional status is clearly seen in this survey. Stunting, severe stunting and underweight levels were higher among children of illiterate household caretaker while non-stunting normal weight levels were found higher among children of non-illiterate caretakers, (X^2: 6.5, P<0.01, df 1), (X^2: 3.8, P<0.05, df 1) and (X^2: 18.1, P<0.0001, df 1) respectively. There was not statistically significant relation between caretaker education level with proportion of children with GAM or SAM. Caretakers with higher education are more exposed to information, knowledge and awareness on appropriate child care, leading to better nutrition wellbeing for the children.

5.5: Nutrition Status and Household Access to Food and Coping Strategies

Among the five parameters used to assess food accessibility and coping strategies it was found that four of them have effect on the nutritional status of children. Reduction of meal size was found to have effect on levels on severe stunting (X^2: 9.0, P<0.01, df 1) and on levels of underweight (X^2: 3.6, P<0.05, df 1). Sleeping hungry is found to have effect on stunting (X^2: 7.6, P<0.01, df 1), on severe stunting (X^2: 8.0, P<0.01, df 1), and on underweight (X^2: 8.4, P<0.01, df 1). Buying food on credit or using debts to buy food was found to have effect on underweight (X^2: 3.2, P<0.05, df 1). The reduction of expenditures on education and/or health was found to have effect on underweight (X^2: 9.8, P<0.01, df 1) and on severe underweight (X^2: 8.6, P<0.01, df 1). All of the above were found to have no effect on GAM or SAM indicating that food insecurity has already

taken place as one of the determinant of the nutritional status but it is not yet showing a dramatic effect on the situation. However, it may have that effect in future.

5.6: WASH and Nutrition Situation

Recognizing that 89 per cent of households rely on piped water for drinking, there was no link found between the main source of drinking water and stunting, underweight, and wasting. Absence of stunting, underweight and severe underweight was seen significantly high in households with clean storage of drinking water, (X^2: 8.7, $P<0.01$, df 1), (X^2: 4.1, $P<0.05$, df 1) and (X^2: 5.6, $P<0.05$, df 1) respectively. There was no effect seen for latrine type on stunting, underweight and wasting since about 99 per cent of households in Aden have flush or pour flush toilets.

Although 71.9 per cent of households' caretakers mentioned hand washing with water and soap after toilet, 44.8 per cent before meal, 64.9 per cent after meal, and 45.9 per cent before cooking, there was no effect for hand washing was found in this survey on stunting, underweight and wasting.

6.0 RECOMMENDATIONS

The prevalence of acute malnutrition is found above the 'critical' threshold as per the WHO 2000 categorization. Underweight is above the 'serious' threshold while stunting is within the 'normal' range. However, this picture is extremely changed when dividing in suburbs and non-suburbs areas. In the suburbs, the 'normal' stunting becomes 'alert' near to the borderline of the 'serious' threshold, while the 'serious' underweight becomes 'critical' and the 'critical' GAM becomes 'Very critical'. The morbidity status is also worse in the suburbs. Reduction the GAM to below the critical threshold needs more attention on management of MAM since SAM in Aden is considered as normal.

Although the situation in Aden is better than that in other governorates, the situation can go worse with the existence of multi-sectoral aggravating factors like poor feeding practices, high prevalence of communicable diseases, illiteracy of four tenths of household caretakers, and essential number of food insecured households.

Below are the main immediate and medium-term recommended interventions:

Immediate Interventions

- **Develop detailed integrated multi-sectoral micro-plan to address the high levels of acute malnutrition among U5 children as well as underweight.**
- **Involve Aden Radio and TV in a social mobilization campaign to deliver messages on the current situation and alert people to utilize the available services.**

Medium Term Interventions

- The nutrition package that includes the management of acute malnutrition, the growth monitoring and promotion (GMP), IYCF counselling, and supplementation with micronutrients for child and mother should be entered to the minimum official service list at the governorate level to assure provision of this package by all working health facilities. Promotion of breastfeeding at birth place **(BPBP**) should be added for facilities that are providing birth services.
- The Governorate Health Office should take the lead to prepare a weekly timetable for outreach activities and mobile clinics to all suburbs of Aden. Each fixed health facility should be part of these mobile clinics to assure reaching all suburbs every week. The package should be that mentioned above.
- **Capacity building for the government side to manage the nutrition information system.**
- Expand the MAM supplementary feeding programme to all fixed and outreach health service delivery sites. This should be given the priority.
- Develop a plan to involve Aden Radio and TV on continuous raising awareness campaigns on promotion of appropriate mother and child feeding practices and to increase the utilisation of health and nutrition services.

Other Recommendations

- Follow up SMART nutrition surveys next year at the same time to document progress

of the response plan and lessons learnt.

- During the survey, Abyan IDPs were found in the majority of clusters. For the purpose of this survey, IDPs were excluded, however, there is a real need to have a clear map and frame for IDPs in both Aden and Lahj.

Annexes

Annex 1: Aden Nutrition Survey Questionnaire

رقم إستبيان الأسرة: **(821)**

الجمهورية اليمنية
وزارة الصحة العامة والسكان
مكتب الصحة العامة والسكان بمحافظة عدن

مسح الحالة التغذوية والوفيات في محافظة عدن – سبتمبر 2012

استبيان الأسرة (نموذج 1)

أولاً. يتم الشرح للساكنين في المسكن (البالغين منهم) عن المسح والتعريف بالجهة القائمة عليه والأشخاص العاملين فيه (أعضاء الفريق)، ثم بعد ذلك الحصول على الموافقة الشفهية منهم.

الموافقة	.1	نعم		
	.2	لا		انتقل إلى النهاية

تاريخ المقابلة	يوم		شهر		سنـــــة			
			Ø		2	Ø	1	2

المديرية	الحي	الحارة
الاسم	الاسم	الاسم

اسم رب الأسرة:	

فريق المسح رقم		الاسم	التوقيع
	الاسرة والأنثروبومتري		
	الوفيات		
	رئيس الفريق		

بين فيما إذا كان هناك:		
.1	غياب الأسرة عند الزيارة الأولى ويتطلب الأمر زيارة ثانية	
.2	غياب طفل عند الزيارة الأولى ويتطلب الأمر زيارة ثانية*	

* عند غياب الطفل، تستكمل كل بياناته عدا القياسات الإنثروبومترية والأوديما حيث تستكمل عند حضوره.

ملاحظة: البيانات في الغلاف هي للاستخدام الميداني والإداري من قبل أعضاء الفريق.

استبيان رقم: .....

يملئ من قبل رئيس الفريق (تستخدم لإدخال البيانات)

غياب الأسرة حتى بعد الزيارة الثانية (1 نعم ، 2 لا)	
الموافقة (1 نعم ، 2 لا)	

رقم الفريق	

رقم استبيان الأسرة	

تاريخ المقابلة	ي ي ش ش س س س س Ø 9 2 1 Ø 2

هل المنطقة حضرية (1) أم ريفية (2)	

رمز الحارة		رمز الحي		
رمز المديرية		رمز المحافظة	4	2
رقم طبقة المسح		رقم العنقود		

العمل المكتبي

	الاسم	اليوم	الشهر	السنة	التوقيع
إدخال البيانات					
المراجعة					
ترميز أخرى					

الملاحظات

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استبيان رقم: .....

س 001: بيانات عن الأسرة (الأحياء فقط والذين يعيشون حاليا في الأسرة)

H001a	عدد أفراد الأسرة (الأحياء فقط الذين يعيشون حاليا في الأسرة تاريخ المسح)	**العدد**	
H001b	عدد الأطفال أقل من 5 سنوات (الأحياء فقط الذين يعيشون حاليا في الأسرة تاريخ المسح)	**العدد**	
H001c	عدد الأطفال أقل من 6 أشهر (الأحياء فقط الذين يعيشون حاليا في الأسرة تاريخ المسح)	**العدد**	

س 002 – س 003: بيانات رب الأسرة

H002	مانوع رب الأسرة		
	1. ذكر		
	2. أنثى		
H003	الحالة الاجتماعية لرب الأسرة		
	1. متزوج ويعيش مع شريكه.		
	2. متزوج لكنه لا يعيش مع الشريك منذ ستة أشهر أو أكثر.		
	3. أرمل.		
	4. مطلق.		
	5. حانق		
	6. عازب.		

س 004: بيانات راعي الأسرة

H004	المستوى التعليمي لراعي الأسرة		
	1. أمي.		
	2. يقرأ ويكتب.		
	3. تعليم أساسي.		
	4. تعليم ثانوي.		
	5. تعليم عالي (جامعة أو كلية أو معهد).		

س 005: مصدر دخل الأسرة

H005	ماهو مصدر الدخل **الرئيسي** للأسرة؟			
	.1	منتجات زراعية غير القات.		
	.2	حيوانات ومنتجات الحيوانية.		
	.3	اسماك.		
	.4	تجارة.		
	.5	عمل مؤقت.		
	.6	وظيفة دائمة براتب شهري.		
	.7	حوالات (من المغتربين).		
	.8	أعمال حرفية.		
	.9	زراعة/ بيع/ نقل القات.		
	.10	هبات (من الأهل أو الأصدقاء).		
	.11	ضمان إجتماعي.		
	.12	أخرى: تذكر		

س 006 – س 012: بيانات عن الماء والإصحاح البيئي والنظافة

H006	ماهو المصدر الرئيسي **لمياه الشرب** في منزلكم؟ (خيار واحد فقط)			
	.1	أنابيب مياه موصلة إلى البيت.		
	.2	أنابيب مياه موصلة إلى فناء البيت.		
	.3	بئر مفتوحة غير محمية.		
	.4	بئر مفتوحة محمية.		
	.5	خزان مغطى لحصاد مياه الأمطار.		
	.6	خزان مفتوح لحصاد مياه الأمطار.		
	.7	سيارة نقل المياه (وايت ماء)		
	.8	مياه صحية معبأة (حدة، شملان، كوثر الخ)		
	.9	مياه سطحية غير محمية (وادي، عين ماء جاري، الخ)		
	.10	عين ماء محمية		
	.11	أخرى: تذكر		

				إنتقل إلى
H007a	هل تقومون بمعالجة الماء قبل **الشرب**؟			
	.1	نعم		
	.2	لا		H008 ←
	.3	لا أعرف		H008 ←

استبيان رقم: .....

H007b	ماهي طريقة المعالجة **الرئيسية** المستخدمة **لمياه الشرب** (خيار واحد فقط)			
	1.	غلي الماء قبل الشرب		
	2.	استخدام الكلور		
	3.	الترشيح عبر قماش نظيف		
	4.	استخدام مرشح سيراميك أو رمل أو ماشابه (فلتر أو قطارة)		
	5.	ترك الماء ساكنا قبل الشرب لترسيب الشوائب.		
	6.	استخدام الشب (شب الفؤاد)		
	7.	أخرى: تذكر		

H008	**للملاحظة**: **تحقق** من توفر نقاط تخزين المياه **لغرض الشرب**: هل الوعاء الحاوي لمياه الشرب نظيف؟ (عدم وجود طحالب يعني رقم 1 ووجود الطحالب يعني رقم 2)			
	1.	نعم.		
	2.	لا.		

H009	اين تتم عملية قضاء الحاجة (التبرز)؟ (اختر فقرة من التالي)- **تحقق** من توفر المرافق والممارسات			
	1.	مرحاض - يتوفر فيه صب الماء للتنظيف الذاتي (سيفون أو دلو).		
	2.	مرحاض - حفرة دون غطاء.		
	3.	مرحاض - حفرة مغطاة بطريقة بسيطة (الجاف).		
	4.	قضاء الحاجة في العراء (في الحقول مثلا، الخ.)		
	5.	أخرى: تذكر		

H010	متى تقومين بغسل اليدين باستخدام الصابون أو الرماد أو التراب أو أوراق الشجر أو ي مادة اخرى؟ (ضع علامة أمام أكثر من فقرة إذا قام الشخص بذكرها. **يرجى عدم طرح خيارات الإجابة على المستجيب**				
	a. بعد قضاء الحاجة	1. نعم			
		2. لا			
	b. قبل الأكل	1. نعم			
		2. لا			
	c. بعد الأكل	1. نعم			
		2. لا			
	d. قبل الطبخ	1. نعم			
		2. لا			
	e. قبل إطعام الطفل	1. نعم			
		2. لا			
	f. بعد التخلص من براز الطفل	1. نعم			
		2. لا			
	g. بعد التنظيف لمكان المواشي والدواجن	1. نعم			
		2. لا			
	h. اية إجابات أخرى: تذكر:				

H011	**للملاحظة**: في نقطة غسل اليدين، تحقق من وجود التالي				
	a. الماء	1. نعم			
		2. لا			
	b. الصابون	1. نعم			
		2. لا			
	c. الرماد/ التراب/ القضاض/ أوراق الشجر.	1. نعم			
		2. لا			

H012a	أين تحصلون بصورة رئيسية على الرعاية الصحية عندما يمرض أحد أفراد الأسرة؟			**إنتقل إلى**
	1.	لا أطلب مساعدة طبية		
	2.	تداوي شخصي		
	3.	معالج تقليدي/ شعبي		
	4.	شيخ/ القرآن		
	5.	صيدلية		
	6.	عيادة خاصة		C013 ←
	7.	مرفق صحي عام		C013 ←

H012b	في حالة عدم الحصول على الخدمة الصحية، ماهو السبب الذي يجعلكم لاتسعون للحصول على الخدمة في مرفق صحي أو عيادة عند المرض؟			
	.1	الكلفة عالية		
	.2	المرفق بعيد ولا تتوفر مواصلات		
	.3	لايوجد وقت كافي		
	.4	لا نثق في خدما ت المرافق القريبة		
	.5	أخرى: تذكر		

س 013 – س 017: خاص بحالة الأمن الغذائي (الإجابة على هذه الإسئلة يجب أن تكون وفقا للحالة خلال الـ 30 يوم الماضية)

H013	خلال الثلاثين اليوم الماضية، هل حدث أن لجأ (الاسم) أو أحد أفراد الأسرة إلى تصغير حجم الوجبات في اليوم بسبب شحة الموارد؟			
	.1	نعم		
	.2	لا		

H014	خلال الثلاثين اليوم الماضية، هل حدث أن لجأ (الاسم) أو أحد أفراد الأسرة إلى تقليل عدد الوجبات في اليوم بسبب شحة الموارد؟			
	.1	نعم		
	.2	لا		

H015	خلال الثلاثين اليوم الماضية، هل حدث أن ذهب (الاسم) أو أحد أفراد الأسرة إلى النوم في الليل وهو جائع بسبب عدم كفاية الغذاء؟			
	.1	نعم		
	.2	لا		

H016	خلال الثلاثين اليوم الماضية، هل حدث وأن قامت الأسرة باستلاف الغذاء، أو أقترضت نقودا من أجل شراء الغذاء أو قامت بشراء الغذاء بالآجل (الدين) أو الرهن **بسبب عدم توفر النقود؟**			
	.1	نعم		
	.2	لا		

H017	خلال الثلاثين اليوم الماضية، هل حدث أن قللت الأسرة الإنفاق على التعليم والصحة لشراء مواد غذائية؟			
	.1	نعم		
	.2	لا		

س 018: حالة تيويد ملح الأسرة

H018	قم بفحص الملح الذي استخدمته الأسرة يوم أمس بواسطة كاشف اليود السريع؟			
	.1	لايوجد اليود.		
	.2	يود أقل من 15 جزء في المليون		
	.3	يود بنسبة 15 جزء في المليون أو أكثر		
	.4	لم يعمل الفحص		

استبيان رقم: .....

س 019 – س 025: حالة الإطعام والتحصين للأطفال في سن 6-59 شهراً في الأسرة

		C019	C020a	C020b	C021	C022a
رقم الطفل	الاسم الأول للطفل	نوع الطفل 1= ذكر 2 = أنثى	تاريخ الميلاد (بالهجري أو الميلادي)	عمر الطفل (بالأشهر) (إذا كان الطفل أكبر من 24 شهر انتقل إلى السؤال C023)	للطفل الذي عمره 24 شهر أو أقل. هل مازال الطفل يرضع (رضع خلال الـ 12 ساعة الماضية)؟ 1= نعم 2 = لا	للطفل الذي عمره 24 شهر أو أقل. كم مرة قمتي بإطعام الطفل خلال 24 ساعة الماضية؟ (يرجى عدم حساب مرات الرضاعة الطبيعية)
.1			يوم شهر سنـــة			
.2			يوم شهر سنـــة			
.3			يوم شهر سنـــة			
.4			يوم شهر سنـــة			
.5			يوم شهر سنـــة			
.6			يوم شهر سنـــة			
.7			يوم شهر سنـــة			

استبيان رقم: .....

			C022b		C023	C024	C025
رقم الطفل (كما سبق أعلاه)	الاسم الأول للطفل		للطفل الذي عمره 24 شهر أو أقل. كم مرة قمتي بإعطاء الطفل حليب خلال 24 ساعة الماضية؟ (يرجى عدم حساب مرات الرضاعة الطبيعية)	عمر الطفل (بالأشهر)	هل تم إعطاء الطفل فيتامين (أ) خلال الستة أشهر الماضية؟ (إظهار عينة) 1 = نعم 2 = لا 3= لا أعرف	هل أخذ الطفل جرعة لقاح الخماسي3/ الشلل3؟ 1 = نعم 2 = لا	للأطفال بعمر تسعة أشهر فأكبر. هل تم تطعيم الطفل ضد الحصبة. (حقنة في اليد اليسرى)؟ 1 = نعم من البطاقة. 2 = نعم بالتذكر. 3 = لا أعرف 4 = لم يطعم
.1							
.2							
.3							
.4							
.5							
.6							
.7							

س 026 – س 035: القياسات الجسمانية ومراضة الأطفال بين سن 6-59 شهر في الأسرة

			C026	C027	C028	C029
رقم الطفل (كما سبق أعلاه)	الاسم الأول للطفل	عمر الطفل (بالأشهر)	الوزن (كيلو جرام) 88.8 = رافض 99.9 = غائب	الطول (سم) 888.8 = رافض 999.9 = غائب	التوذم (أوديما) في كلا القدمين. 1 = نعم 2 = لا 8 = رافض 9 = غائب	قياس محيط الذراع (سم) (الميواك) 88.8 = رافض 99.9 = غائب
.1			☐☐.☐	☐☐☐.☐		☐☐.☐
.2			☐☐.☐	☐☐☐.☐		☐☐.☐
.3			☐☐.☐	☐☐☐.☐		☐☐.☐
.4			☐☐.☐	☐☐☐.☐		☐☐.☐
.5			☐☐.☐	☐☐☐.☐		☐☐.☐
.6			☐☐.☐	☐☐☐.☐		☐☐.☐
.7			☐☐.☐	☐☐☐.☐		☐☐.☐

استبيان رقم: .....

			C030	C031	C032	C033	C034	C035
رقم الطفل (كما سبق أعلاه)		عمر الطفل (بالأشهر)	الإسهال خلال الأسبوعين الماضيين 1 = نعم 2 = لا	سعال أو صعوبة في التنفس خلال الأسبوعين الماضيين 1 = نعم 2 = لا	الحمى خلال الأسبوعين الماضيين 1 = نعم 2 = لا	الاشتباه بالحصبة خلال الشهر الماضي (طفح جلدي + حمى + (سعال أو إلتهاب حلق أو إلتهاب الملتحمة) 1 = نعم 2 = لا	هل نام الطفل تحت شبك الناموس الليلة الماضية؟ 1 = نعم 2 = لا	هل الطفل مسجل حالياً في أي مركز تغذية 1= SFP (تغذية تكميلية) 2= TFC (معالجة سوء التغذية في القسم الداخلي في المستشفى) 3= OTP (معالجة سوء التغذية في العيادة خارجية) 4= أخرى 5 = غير مسجل
.1								
.2								
.3								
.4								
.5								
.6								
.7								

Questionnaire Number: .....

Republic of Yemen
Ministry of Public Health and Population
Office of Public Health and Population, Aden Governorate

Nutritional Status and Mortality Survey – Aden Governorate, September 2012

Household Questionnaire (Form 1)

First: Explain to the residents of the household (adults) about the survey and inform them of the agency conducting the survey and survey staff (team members). Then request their verbal agreement to participate in the survey.

Consent	1.	Yes.		
	2.	No.		Go to the end.

Date of interview	day		month		year			
			Ø	9	2	Ø	1	2

District	Ozla (Sub-district)	Village/ Hara
Name	Name	Name

Name of head of household	

Survey team number		Name	Signature
	Household and anthropometric data		
	Mortality data		
	Team leader		

Indicate which situation applies:		
1.	Absence of household upon first visit which necessitated a second visit	
2.	Absence of child upon first visit which necessitated a second visit *	

* If the child is not present, all data should be filled in except anthropometric measurements and edema which should be completed only if the child is present.

Note: The data inside the cover is for field and administrative use by the team members.

To be filled by the Team Leader (for data input purposes)

Questionnaire Number: .....

Repeated absence of the household even after the second visit (1=yes, 2=no)	
Consent (1=yes, 2=no)	

Team Number		

Household Questionnaire Number				

Date of Interview	day		Month			year			
			Ø	9		2	Ø	1	2

Is the region urban (1) or rural (2)?	

Village or neighborhood code number			Sub-district code number		
District code			Governorate code number		
Survey zone (stratum) number			Cluster number		

Stratum number is (1) for Eastern Mountains Zone and (2) for Western Mountains

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Desk work

	Name	day		month		Year				Signature
Data entry										
Review										
Other encoding										

Remarks:

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Questionnaire Number: .....

Q001: Household data (only those who are alive and living together continuously)

H001a	Number of household members (only those who are alive and living with the household on the date of the survey)	Quantity	

H001b	Number of children under five (only those who are alive and living with the household on the date of the survey)	Quantity	

H001c	Number of children under six months (only those who are alive and living with the household on the date of the survey)	Quantity	

Q002 – Q003: Head of household data

H002	Gender of the head of household			
	1.	Male		
	2.	Female		

H003	Social status of the head of household			
	1.	Married and living with partner		
	2.	Married and not living with partner for at least six months or more.		
	3.	Widow/widower		
	4.	Divorced		
	5.	Angered and separated/ Recalcitrant		
	6.	Single		

Q004: Household caretaker data

H004	Education level of household caretaker			
	1.	Illiterate.		
	2.	Can read and write (literate).		
	3.	Basic education.		
	4.	Secondary education.		
	5.	Tertiary education (university, college, or institute).		

Q005: Household income source

Questionnaire Number: .....

H005	What is the **primary** source of income for the household?		
	1.	Non-qat agricultural products	
	2.	Livestock and livestock products	
	3.	Fishery	
	4.	Trading	
	5.	Temporary work (Casual work)	
	6.	Monthly salary	
	7.	Remittance (from emigrants)	
	8.	Craftsmanship	
	9.	Farming/sale/transport of qat	
	1Ø.	Donation (from friends and relatives)	
	11.	Social insurance	
	12.	Other: specify -	

Q006 – Q012: Water, environmental sanitation, and hygiene data

H006	What is the main source of **drinking water** in your home? (choose one only)		
	1.	Piped water connected to home.	
	2.	Piped water connected to yard.	
	3.	Open, unprotected well.	
	4.	Open, protected well.	
	5.	Covered rainwater collection tank.	
	6.	Open rainwater collection tank.	
	7.	Water delivery truck.	
	8.	Bottled water (Hadda, Shamlan, Kawthar, etc.)	
	9.	Unprotected surface water (valley, running spring, etc.)	
	1Ø.	Protected spring water.	
	11.	Other: specify -	

H007a	Do you treat the water before drinking?			Go to
	1.	Yes		
	2.	No		→H008
	3.	Don't know.		→H008

H007b	What is the **main** method used to treat **drinking water**? Choose only one.	

	1.	Boil water before drinking.		
	2.	Use chlorine substance.		
	3.	Filter through clean cloth.		
	4.	Use ceramic or sand filter or similar filter method.		
	5.	Let water settle before drinking.		
	6.	Use of alum crystal to disinfect.		
	7.	Other.		

H008	**Note**: **Investigate** availability of storage for **drinking water**. Is the water container clean (no algae seen)?			
	1.	Yes.		
	2.	No.		

H009	What is used for defecation? Choose one of the following. **Verify** existence of facilities and practices.			
	1.	Toilet – equipped with flush mechanism to wash water down.		
	2.	Toilet – uncovered pit.		
	3.	Toilet – simple dry covered pit.		
	4.	Outdoors in the open air (in fields, for example).		
	5.	Other: specify -		

Questionnaire Number: .....

H010	When do you clean your hands with soap, ashes, dust, tree leaves, or any other material? Place a check mark for each answer said by the respondent. **Do not give the respondent any choices for the answer.**					
	a.	After using the toilet.	1.	Yes		
			2.	No		
	b.	Before eating.	1.	Yes		
			2.	No		
	c.	After eating.	1.	Yes		
			2.	No		
	d.	Before cooking.	1.	Yes		
			2.	No		
	e.	Before feeding the child.	1.	Yes		
			2.	No		
	f.	After disposing of child's waste.	1.	Yes		
			2.	No		
	g.	After cleaning the livestock or poultry areas.	1.	Yes		
			2.	No		
	h.	Any other answers: Specify -				

H011	Note: With regard to hand-washing, confirm the use of the following:					
	a.	Water.	1.	Yes		
			2.	No		
	b.	Soap.	1.	Yes		
			2.	No		
	c.	Ashes, dust, limestone powder, tree leaves.	1.	Yes		
			2.	No		

H012a	Where do you obtain health care if someone in the household gets sick?			Go to
	1.	No medical help is sought.		
	2.	Personal medicines.		
	3.	Traditional healer.		
	4.	Shaykh.		
	5.	Pharmacy.		
	6.	Private clinic.		→ C013
	7.	Public health facility.		→ C013

H012b	Why don't you seek health services at a health facility or clinic when someone gets sick?			
	1.	High cost.		
	2.	Facility is distant and transportation is not available.		
	3.	Not enough time.		
	4.	We do not have confidence in the nearby services.		
	5.	Other: specify -		

Q013 – Q017: The food security situation part (to be answered for the situation in the past 30 days)

H013	Over the past 30 days, did you or any HH member use to reduce the size of meals because of the scarcity of resources?			
	1.	Yes		
	2.	No		

H014	Over the past 30 days, did you or any HH member use to reduce the number of meals because of the scarcity of resources?			
	1.	Yes		
	2.	No		

H015	Over the past 30 days, did you or any HH member go the bed in night hungry because of not enough food?			
	1.	Yes		
	2.	No		

H016	Over the past 30 days, did the HH borrow food, borrow money to purchase food or purchase food in credit or mortgage **only if the reason that HH has not money**?			
	1.	Yes		
	2.	No		

H017	Over the past 30 days, did the HH reduce the expenditure on education or food to save money to purchase food?			
	1.	Yes		
	2.	No		

Questionnaire Number: .....

Q018: Situation of salt iodisation

H018	Use the rapid test reagent to check the iodisation status of the salt HH was used yesterday?			
	1.	Not iodised.		
	2.	Below 15 ppm.		
	3.	15 ppm and above.		
	4.	The test was not made.		

Questionnaire Number: ……

Q019 – Q025: Nutritional and Immunization Status of Children ages 6-59 months within the household

		C019	C020a	C020b	C021	C022a
Child no.	Child's first name	Child's gender 1 = male 2 = female	Date of birth. If the date is recorded, skip C020b)	Age of child in months. If the child is older than 24 months, go to question C023.	For children 24 months or less. Is the child still breastfeeding? 1 = yes 2 = no	For children 24 months or less. How many times have you fed the child in the past 24 hours? Do not include number of times breastfed.
1.			Day mo. Year			
2.			Day mo. Year			
3.			Day mo. Year			
4.			Day mo. Year			
5.			Day mo. year			
6.			Day mo. year			
7.			Day mo. year			

Questionnaire Number: .....

			C022b	C023	C024	C025
Child no. (as above)	Child's gender 1 = male 2 = female	Child's age (in months)	For children 24 months or less. How many times have you fed the child milk in the last 24 hours? Do not include number of times breastfed.	Has the child been given Vitamin A in the past six months? (Show sample.) 1 = yes 2 = no 3 = don't know	Has the child been given vaccinations for Pentavalent 3 and Polio 3? 1 = yes 2 = no	For children nine months and older. Has the child been immunized against measles (shot in left arm)? 1 = yes, shown on card 2 = yes, from memory 3 = don't know 4 = has not been immunized
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Questionnaire Number: ……

Q026 – Q035: Anthropometric measurements and childhood diseases of children aged 6 – 59 years in the household

			C026	C027	C028	C029
Child no. (as above)	Child's gender 1 = male 2 = female	Child's age (in months)	Weight (kg) 88.8 = refused 99.9 = not present	Height (cm) 888.8 = refused 999.9 = not present	Bilateral edema (in both legs). 1 = yes 2 = no 8 = refused 9 = not present	Middle upper arm circumference (cm) 88.8 = refused 99.9 = not present
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Questionnaire Number: .....

			C030	C031	C032	C033	C034	C035
Child no. (as above)	Child's gender 1 = male 2 = female	Child's age (in months)	Diarrhea within the past two weeks 1 = yes 2 = no	Cough or difficulty breathing in the past two weeks 1 = yes 2 = no	Fever in the past two weeks 1 = yes 2 = no	Symptoms similar to measles in past month (skin rash + fever + cough or throat infection or conjunctivitis) 1 = yes 2 = no	Did the child sleep under mosquito net last night? 1 = yes 2 = no	Is the child currently registered at a nutrition center? 1 = SFP 2 = TFC/SC 3 = OTP 4 = other 5 = not registered
1.								
2.								
3.								
4.								
5.								
6.								
7.								

Annex 2: Aden Mortality Survey Questionnaire

رقم إستبيان الأسرة: .....

مسح الحالة التغذوية والوفيات في محافظة عدن ، سبتمبر 2012م

استمارة رصد أفراد الأسرة خلال فترة 90 يوم من تاريخ المسح (نموذج 2)

مديرية المسح: _____ **الحي:** _____ **التاريخ:** _____ **رقم العنقود:** _____ **رقم الفريق:** _____

_____ **رقم إستبيان الأسرة:** _____ **طبقة المسح:** _____

م	الاسم (اختياري)	الجنس (ذكر أو أنثى)	العمر بالسنوات	التحق أثناء فترة 90 يوم	غادر أثناء فترة 90 يوم	ولد أثناء فترة 90 يوم	توفي أثناء فترة 90 يوم	سبب الوفاة	موقع الوفاة
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

هام: يتم تسجيل كل الأفراد الموجودين حاليا و كل من التحق بالأسرة أو غادرها أو توفى أو ولد خلال 90 يوم من تاريخ المسح

رموز أسباب الوفاة	
1 = الاسهال	**5** = سوء التغذية
2 = الحمى	**6**= العنف / بسبب الصراعات
3= الحصبة	**7**= أخرى (حدد)
4 = مشاكل في التنفس	
رموز مواقع الوفاة	
1 = في الموقع الحال	
2= أثناء الهجرة	
3= في آخر مكان سكن فيه	
4 = أخرى (حدد)	

Family Reference Number: .....

Nutritional Status and Mortality – Aden Governorate, September 2012

Individual household members monitoring form for the 90 days following survey commencement date (Form 2)

District surveyed: _____ Village/neighborhood: _____ Date: _____ Cluster number: _____

Team number: _____ Household questionnaire number: _____ Survey zone (stratum): _____

No.	Name (optional)	Sex (M, F)	Age in years	Joined within the 90 day period	Left within the 90 day period	Born within the 90 day period	Died within the 90 day period	Cause of death	Place of death
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

Important: All individuals present in the household should be recorded, whether joining or leaving the household, and whether born or died within the 90 day period from commencement of the survey.

Symbols for causes of death	
1 = diarrheal disease	5 = malnutrition
2 = fever	6 = violence / impacts of conflicts
3 = measles	7 = other (specify)
4 = respiration disorders	

Symbols for places of death
1 = at the current location
2 = during emigration
3 = at a different residence
4 = other (specify)

Annex 3: Aden Nutrition Survey Team, 8 – 20 Sep 2012

Team No.	Survey Team	Position	Duty Station
1	Dr. Omar Abdulqader Omar **(Team Leader)** Dr. Tammam Abdulateef	Doctor	Aden
	Faiza Ahmed Maqtari	Nurse	Aden
	Rena Mohammed Imamauddien	Statistician	Aden Health Office
	Noor Ali Rabie (the first week)/		Aden
	Dr. Huda Abdullah Saeed (the second week)	Pediatrician	Aden
2	Dr. Hasanain Naser Darweesh **(Team Leader)**	Medical Doctor	Aden
	Leena Ali Abdo	Community midwife	Aden
	Badria Abdo Salem Al-Khaleel	Volunteer	Aden
	Inas Mohammed Rajeh	Nurse	Aden
3	Dr. Nebras Saleh Za'bal **(Team Leader)**	Public Health Doctor	Aden
	Dr. Randa Naser Al-Wa'el	Pediatrician	Aden
	Mona Husain Al-Humaiqani	Senior Midwife	Aden
	Nasra Mohammed Ali Salem		Aden
4	Dr. Waddah salem Gharama **(Team Leader)**	Doctor	Aden
	Afrah Alawi Mohammed	Nurse	Aden
	Dr. Rasha Omar Mohammed	Pediatrician	Aden
	Tahani Abdo Mohammed Hasan	Community Midwife	Aden
5	Dr. Khalid Abdullah Ahmed Al-Asal **(Team Leader)**	Doctor	Aden
	Dina Mohammed Husain Rabie		Aden
	Nadia Ahmed Musa'd		Aden
	Dr. Hekmat Abdulhameed Diab	Doctor	Aden
6	Dr. Amr Mohammed Husain **(Team Leader)**	Doctor	Aden
	Afrah Obaid Saleh		Aden
	Ghalia Abdullah Al-Saiqal	Nurse	Aden
	Sahar Khaid Ahmed	Volunteer	Aden
	Data entry team / Survey operation room		
	Ghassan Abdulmalek Thabet	IT	Aden
	Awaad Abdulwali Hazza' Moqbel	IT	Aden
	Mohammed Saleh Ali	IT	Aden
	Samid Awadh Mohammed	IT	Aden
	Hana Mustafa Abdulla **(Training Workshop Secretariat)**		Aden Health Office
	Survey Coordinators/ Supervisors		
	Dr. Mohammed Mahfoodh Ba Yashoot Ali		Dr. Amin Nasher HI
	Dr. Latifa Mohammed Abbas	Pediatrician	AlWahda Hospital

Team No.	Survey Team	Position	Duty Station
	Dr. Insijam Mohammed Zain	Pediatrician	Lahj Health Office
	Awadh Ali Haidra Al-Awlaqi **(Plus Logistics)**	Nutrition Gov Officer	Aden Health Offcie
	Dr. Gamila Hibatullah Ali	UNICEF Health Officer	Aden Zonal Office
	Prof. Abdulwahid Al-Serouri **(Technical Observer)**		
	Nagib Abdulbaqi A. Ali **(Survey Manager)**	Nutrition Specialist	UNICEF Yemen

Annex 4: Aden Nutrition Survey Standardization Test Report for Evaluation of Enumerators

Weight:

	Precision: Sum of Square [W2-W1]	Accuracy: Sum of Square [Superv.(W1+W2)-Enum.(W1+W2]	No. +/- Precision	No. +/- Accuracy
Supervisor	0.00		0/0	
Enumerator 1	36.02 POOR	36.18 POOR	1/2	2/3
Enumerator 2	0.11 POOR	0.11 POOR	2/1	2/1
Enumerator 3	9.04 POOR	9.08 POOR	3/2	5/1
Enumerator 4	0.42 POOR	0.30 POOR	4/0	3/2
Enumerator 5	0.11 POOR	0.47 POOR	0/5	4/3
Enumerator 6	0.16 POOR	0.20 POOR	2/3	5/1
Enumerator 7	0.18 POOR	0.74 POOR	1/2	2/3

Height:

	Precision: Sum of Square [H2-H1]	Accuracy: Sum of Square [Superv.(H1+H2)-Enum.(H1+H2]	No. +/- Precision	No. +/- Accuracy
Supervisor	0.00		0/0	
Enumerator 1	5.27 POOR	4.31 POOR	7/2	6/3
Enumerator 2	0.58 POOR	10.02 POOR	1/3	6/3
Enumerator 3	25.55 POOR	29.87 POOR	5/3	7/2
Enumerator 4	1.07 POOR	22.47 POOR	1/3	6/3
Enumerator 5	4.80 POOR	4.60 POOR	2/5	3/6
Enumerator 6	0.95 POOR	13.75 POOR	7/1	7/2
Enumerator 7	6.44 POOR	10.40 POOR	5/3	5/4

MUAC:

	Precision: Sum of Square [MUAC2-MUAC1]	Accuracy: Sum of Square [Superv.(MUAC1+MUAC2)-Enum.(MUAC1+MUAC2]	No. +/- Precision	No. +/- Accuracy
Supervisor	0.00		0/0	
Enumerator 1	195.00 POOR	215.00 POOR	6/1	4/4
Enumerator 2	51.00 POOR	403.00 POOR	3/1	7/1
Enumerator 3	56.00 POOR	172.00 POOR	3/3	3/4
Enumerator 4	40.00 POOR	152.00 POOR	3/2	2/5
Enumerator 5	102.00 POOR	150.00 POOR	1/7	5/3

Enumerator 6	185.00 POOR	85.00 POOR	2/4	5/4
Enumerator 7	160.00 POOR	276.00 POOR	5/1	2/6

For evaluating the enumerators the precision and the accuracy of their measurements is calculated.
For precision the sum of the square of the differences for the double measurements is calculated. This value should be less than two times the precision value of the supervisor.
For the accuracy the sum of the square of the differences between the enumerator values (weight1+weight2) and the supervisor values (weight1+weight2) is calculated. This value should be less than three times the precision value of the supervisor.
To check for systematic errors of the enumerators the number of positive and negative deviations can be used.

Annex 5: Calendar of Events for Aden for Reference in Age Estimation

تواريخ المناسبات والأحداث

المناسبة	تاريخ المناسبة
خليجي 20	30 نوفمبر 2010
بداية الأزمة – قطع طريق المعلا والرويشان	16 فبراير 2011
جمعة الكرامة	18 مارس 2011
حادث النهدين في جمعة رجب 1432	3 يونيو 2011
الانتخابات الرئاسية الاخيرة	21 فبراير 2012
ذكرى 13 يناير 1986	13 يناير من كل عام
ذكرى الوحدة	22 مايو من كل عام
ذكرى الثورة ضد الاستعمار البريطاني	14 أكتوبر من كل عام
ذكرى جلاء المستعمر البريطاني	30 نوفمبر من كل عام
رياح الشمال - موسم الحبار (البنجيز)	يوليو وأغسطس من كل عام
رأس السنة الهجرية	1 محرم
عاشوراء	9 و 10 محرم
مولد النبي (ص)	12 ربيع أول
الإسراء والمعراج	27 رجب
شهر الصوم	شهر رمضان
عيد الفطر المبارك	1 شوال
العشر	العشر الأوائل من ذي الحجة
وقفة عرفة	9 ذي الحجة
عيد الأضحى المبارك	10 ذي الحجة

Dates of events

Event	Event date
Gulf Cup 20	30 November 2010
The start of the crisis	16 Feb 2011
Dignity Friday	18 Mar 2011
Al-Nahdain mosque bombing	3 June 2011
The last Presidential elections	21 Feb 2012
Anniversary of 13 January 1986	13 January very year
Unity anniversary	22 May every year
Anniversary of revolution against British colonialism	14 Oct every year
Anniversary of independence	30 Nov every year
Beginning of Hijrij Year	1 Muharram
A'ashora	9 and 19 Muharram
Anniversary of the birth of the Prophet (PUH)	12 Rabie Awal
Anniversary of Isra and Me'raj	27 Rajab
Fasting month	Ramadan
Eid Al-Fitr	1 Shawal
Al-Ashr (The ten days)	The first 10 days of Dhul-Hijjah
Day of Arafat	9 Dhul-Hijjah
Eid Al-Adha	10 Dhul-Hijjah

Annex 6: Cluster Sampling for Aden Governorate

Hara	Zone	District	Cluster No
AlBasateen	7 October	Dar Sa'd	1
AlOlofi	Awal Mayo - Dar Sa'd	Dar Sa'd	2
Ali Gahis	7 October	Dar Sa'd	3
Ibn AlBaseer	7 October	Dar Sa'd	4
Abdulbari	Awal Mayo - Dar Sa'd	Dar Sa'd	5
Omar AlMukhtar	AlWahda	Al-Shaikh Othman	6
Nageeb Abdulrab	AlWahda	Al-Shaikh Othman	7
Nagi	AlWahda	Al-Shaikh Othman	8
7 Yolio	Awal Mayo - AlShaikh	Al-Shaikh Othman	9
Mahdi Saleh - AlShaikh	Abbood	Al-Shaikh Othman	10
Ali Antar	Awal Mayo - AlShaikh	Al-Shaikh Othman	11
Jameel Qasem	Awal Mayo - AlShaikh	Al-Shaikh Othman	12
Ben Salman AlShamalia	AlThawra	Al-Mansoora	13
Wadei Hadda	AlThawra	Al-Mansoora	14
AlDoh AlGharbia	AlThawra	Al-Mansoora	15
27 November -AlMansora	AlThawra	Al-Mansoora	16
Ben Shalal	Telal Shamsan	Al-Mansoora	17
Khadeja	AlThawra	Al-Mansoora	18
Naser Mohammed Saleh	22 Yonio	Al-Mansoora	19
Abdulaziz Abdulwali	22 Yonio	Al-Mansoora	20
AlFaresi	AlFarsi	Al-Boraiqa	21
26 September	October - AlBoriqa	Al-Boraiqa	22
Laboza	Hai AlQadi	Al-Boraiqa	23
9 Yonio	October - AlTawahi	Al-Tawahi	24
BaSohaib	October - AlTawahi	Al-Tawahi	25
Iqbal AlSharqia	Hai AlRawdha	Al-Tawahi	26
AlShola	AlTabaqa AlAmela	Al-Malla	27
Mahdi Saleh - AlMolla	Madram	Al-Malla	28
Abdulraqeeb Abdulwahab	2 Mares	Crater	29
27 November - Crater	AlKebsi	Crater	30
Sanad	AlSalafi	Crater	31
20 Yonio	Altelal AlMultaheba	Crater	32
AlShagheela	2 Mares	Crater	33
Hasan Ali	Altelal AlMultaheba	Crater	34
8 Mares	AlNasr	Khor Maksar	35
AlGandoh AlJanobia	AlSaa'da	Khor Maksar	36

Hara	Zone	District	Cluster No
AlShaikh Ishaq	AlTabaqa AlAmela	Al-Malla	37 (RC)
Molham	AlNasr	Khor Maksar	38 (RC)
AlThulaia	Hai AlRawdha	Al-Tawahi	39 (RC)
AlZubairi	Hai Naji	Al-Boraiqa	40 (RC)

Annex 7: Sampling Frame of Aden Governorate

Geographical unit	Population size	Geographical unit	Population size	Geographical unit	Population size
البساتين	26187	11-Feb	3619	قاسم هلال	805
العلفي	11007	الصناعة	2625	الايام السبع	564
الفلاحين	5972	بن شلال	6716	عبدالحميد غالب	4197
دار منصور	385	الدوح الشرقية	8593	عباس	1715
البساتين الشرقية	6853	أنجيلاديفيز	5074	عيشة كرامه	3622
بئر فضل	243	خديجه	5806	إقبال الغربيه	2567
علي جاحص	6515	الشاعر	7178	عبود	1323
المدينه الخضراء	397	محمد عبد الولي	3238	وحدة فتح	1797
الرياش	7119	ماجد أبو شرار	1762	إقبال الشرقيه	3875
اليرموك	1565	لينين	2059	حسن عوض	1653
ابن البصير	8318	ناصر محمد صالح	4237	الدلالي	7849
عبد الباري	20499	نجوى مكاوي	3813	غسان كنفاني	3927
اللقية	8383	ريمي الغربية	3811	جبل هيل	1428
مصعبين	934	الاحمدي	765	الثلاياء	3396
الوحش	311	فضل عبدالله	4560	الساحل الذهبي	441
العماد	724	عبد العزيز عبد الولي	9274	محمد عبد الولي	2077
اللحوم	558	الدرين	4715	حارة وحدة الدفعي السكنية	321
عمر المختار	7232	الفلاحين\الحسوه	3578	طارش حيدر	1626
الشعبي	4144	وحدة 26 سبتمبر/القلوعه	1510	17-Apr	885
عبد القوي	9751	فقم	3237	14-Oct	1099
نجيب عبد الرب	11269	قعوه	245		173
بيوت الجيش	6462	الفارسي	2989	السلام -الدكه	965
الطاهري	4149	الزحف الاحمر	6358	رصيف ميناء عـدن	37
ناجي	3872	14اكتوبر-	8818	حارة 22 يـونـيو	2176
22-May	2417	قرو	726	الدهمشي	1981
محمد مساعد	2358	عباس	3231	الشيخ إسحاق	11015
امين فيصل	2964	26-Sep	5939	عسير	471
07-Jul	8881	الصيادين\الحسوه	1920	عسير ونجران	418
بدر	4573	وحدة 26 سبتمبر /بير احمد	3143	حارة الصمود(الكهرباء)	1462
عيشه كرامه	4181	عمران	2494	الشرارة	1858
ملقاط الشماليه	1209	الشاعر	2454	حارة فيدول كاسترو	3721
غسان كنفاني	2429	الزبيري	4673	نجران	1253
ملقاط	4253	الغدير	281	بن دحمان	1843
مهدي صالح	6307	الفلاحين\ابو حربه	2841	سيناء- حافون	2150
ملقاط الجنوبيه	4034	وحدة 26 سبتمبر /المعازيب	1868	بن شلال	422
صالح أحمد ناصر	6759	راس عمران	636	الشعله	2490
احمد ناصر	3312	وحدة الشاعر	1678	جيزان	1721
علي عنتر	5564	عاتق	6322	خديجه	2981
الشعله	3520	لبوزه	8064	الجولان حافون	1928
محمود	4191	الدبلماسيين	6106	الشباب	774
السيله	4080	الوحده السكنيه عمال الكهرباء	2355	حارة أول مايو	1041
جميل قاسم	4526	الارسال الاذاعي	109	مصلحة الميناء	135
المحاريق	10536	الكيبل	238	حارة 30 نوفمبر	1134
محمد هيثم	2875	الدوح	2298	شعبان/ الغزالي-السواعي	941
الحفر	4471		725	لبوزه	3682
بن سلمان الشمالية	3642		648	حارة مهدي صالح	3241
بن سلمان	8519	أول مايو	2460	21اكتوبر-الوحش	2461
القاهره الجديده	2856	09-Jun	2277	العلفي	846
وديع حداد	7456	14-May	1296	قاسم سيف	1358
علي قاسم سيف	2356	صالح حسين	1414	السلام	1675
السنافر	3501	جبل الساعة	406	سرحان الغربية(مطابع الهمداني)	154
بير فضل	2251	حجيف	341	الوديعه	831
حارة فيص هيتادي	3063	11-Feb	978	عبد الباري عبد الحبيب	784
علي حسين علي	4737	امين فيصل	2134	الانسي	911
الدوح الغربية	5671	27-Nov	1152	سيف الضالعي	2554
الوحيشي	3881	ناصر صداح	1766	عمر علي	711
05-Aug	5439	الوحش	1193	جيفارا	1702
نوفمبر 27	5180	جسار	4503	سرحان الشرقية	481
لبوزه	3573	المرزوقي	1139	الرياضي-المشروع السعودي	1117
حسين عوض	3296	باصهيب	3404	الشهيد علي سالم	1893

Geographical unit	Population size	Geographical unit	Population size	Geographical unit	Population size
عبد الرقيب عبد الوهاب	2765				
24-Sep	2750				
الشهيد بدر	3102				
14-Oct	3694				
لبوزه	2152				
لطفي امان	565				
العولقي	2562				
أنجيلا ديفيز	2831				
27-Nov	3137				
لطفي امان	2657				
الثوره الفلسطينيه	1554				
الوديعه	3677				
السلفادور	3467				
صرواح	1557				
مدرم	1126				
لطفي	1071				
سند	1962				
بن شلال	2287				
فيصل مشعبه	4447				
خالد هندي	2479				
عبد الرب	898				
الشهيد نجيب	1816				
عبد الرحمن قحطان	1555				
09-Jun	3361				
20-Jun	3048				
فرحان	3587				
الحبيشي	1843				
عبد الخالق محجوب	1635				
البلق	1290				
حارة الانسي	929				
بن هامل	613				
شفيع	867				
نجران	3099				
الفقيه سعد	1983				
الشغيله	6810				
التقدم	2040				
الوحش	1090				
غسان كنفاني	2064				
أول مايو	1887				
العمال	4869				
شمسان	1687				
حسن علي	2746				
	664				
وحدة غازي علوان	171				
محمد ناجي	3254				
عبود	1051				
حي جمال	1110				
الدوبيلاين	922				
الدوح	2859				
08-Mar	9622				
الجندوح الشمالية	5774				
ابي ذر الغفاري	3986				
اليمن السعيد	835				
عبد الكافي	5810				
ملهم	1575				
الاحمدي	2883				
العولقي	6221				
علي حسين عبدالنبي	4097				
باصهيب	823				
الجندوح الجنوبية	5321				
الشابات	595				
السلفادور	3955				

Annex 8: Job Descriptions for Survey Teams (Extracted from SMART Training Materials

Each survey team should be composed of at least 3 people. Including women in survey teams is highly recommended since they are usually more comfortable interacting with children. Generally, two surveyors are involved in anthropometric measurements while another one, the team leader, records the data on the forms. However, it is strongly suggested that each team member knows how to accomplish the tasks of his teammates, because unexpected events can happen and a change in the staff may be required.

All team members must have the following qualifications:

- They should be able to write and read English or French (depending on the country where the survey takes place) and speak the local languages of the areas where the survey will be conducted.
- They should have sufficient level of education, as they will need to read and write fluently and count accurately.
- They should be physically fit to walk long distances and carry the measuring equipment.
- They do not (necessarily) have to be health professionals. In fact, anyone from the community can be selected and trained as long as he meets the above criteria.

1. Survey Manager (or supervisor)
The manager guarantees the respect of the survey methodology; he has the responsibility for:

1- Gathering available information on the context and survey planning,

2- Selecting team members,

3- Training team members,

4- Supervision of the survey: Taking necessary actions to enhance the accuracy of data collected:

4.1 Visiting teams in the field and making sure that before leaving the field, each team leader reviews and signs all forms to ensure that no pieces of data have been left out; making sure that the team returns to visit the absent people in the household at least once before leaving the area.

4.2 It is particularly important to check cases of oedema, as there are often no cases of oedema seen during the training and some team members may therefore be prone to mistaking a fat child for one with oedema (particularly with younger children). The supervisor should note teams that report a lot of oedema, confirm measles and death cases, and visit some of these children to verify their status.

4.3 Ensuring that households are selected properly and, that the equipment is checked and calibrated each morning during the survey, and that measurements are taken and recorded accurately.

4.4 Deciding on how to overcome the problems encountered during the survey. Each problem encountered and decision made must be promptly recorded and included in the final report, if this has caused a change in the planned methodology.

4.5 Organizing data entry into ENA and checking any suspect data every evening, by using the appropriate sections of the plausibility report.

4.6 Organizing an evening "wrap up" session with all the teams together to discuss any problems that have arisen during the day[9].

4.7 Ensuring that the teams have enough time to take appropriate rest periods and has refreshments with them. It is very important not to overwork survey teams since there is a lot of walking involved in carrying out a survey, and when people are tired, they may make mistakes or fail to include more distant houses selected for the survey.

5- Analyse and write the report.

2. Team Leader

Skills and required abilities:

To be able to read, write and count; know the area to survey; be reliable and friendly.

Tasks:

1. Ensures all forms and questionnaires are ready at start of day;
2. Ensures all equipment is ready at start of day;
3. Calibrates measurement instruments on daily basis;
4. Ensures all food/refreshments are ready at start of day;
5. Organises briefing meeting with his team before departure in morning;
6. Speaks with chief of village to explain the survey and its objectives,
7. Draws a map of the area to survey and use a random table;
8. Manages the households selection procedure;
9. Uses a local events calendar to estimate the age;
10. Calculates the Weight-for-Height ratio after taking anthropometric measurements;
11. Checks if the child is malnourished (checks for the presence of oedema);
12. Fills the anthropometric form;
13. Fills survey questionnaires when needed;
14. Fills the referral form if necessary;
15. Ensures that houses with missing data are revisited before leaving the field the same day;

[9] This may not be possible if the survey area is large since the teams might be widely separated and remain in the field for several days. In that case, communication with teams in the field might often be very difficult; hence, each team leader must be sufficiently trained to be able to take decisions independently.

16. Checks that all forms are properly filled out before leaving the field.
17. Ensures that all the equipment is maintained in a good state;
18. Manages time allocated to measurements, breaks and lunch,
19. Ensures security of team members,
20. Note and report the problems encountered.

3. Measurers

Skills and required abilities:

To be able to read, write and count; know the area to survey; be reliable and friendly.

Tasks:

1. Measures the height, weight and arm circumference (if included in the survey);
2. Assesses the presence of edema;
3. Uses a local events calendar to estimate the age;
4. Respects the time required for measurements, breaks and meals;
5. Takes care of the equipment;
6. Follows security measures.

The measurers must acquire some special skills and knowledge although they don't have the primary responsibility for tasks that are related:

1. Know how to calculate the weight-for-height ratio;
2. Know how to select households for the survey;
3. Know how to check if a child is malnourished;
4. Learn how to make a reference for a malnourished child.

Annex 9: Referral Form for the Malnourished Children

مسح الحالة التغذوية للأطفال تحت سن الخامسة في محافظة عدن، سبتمبر 2012

استمارة إحالة طفل مصاب بسوء تغذية حاد وخيم

الأخوة/ المرفق الصحي : .....

نود إحاطتكم أن الطفل/ الطفلة : ..... كان/ كانت
ضمن عينة المسح المشار إليه أعلاه ووجد أنه مصاب بسوء تغذية حاد من خلال القياسات التالية:

محيط ذراع الطفل بالسنتيمتر (ØØ. Ø)	سنتيمتر .	
طول / ارتفاع الطفل بالسنتيمتر (ØØØ. Ø)	سنتيمتر .	
وزن الطفل بالكيلوجرام (ØØ. Ø)	كيلوجرام .	

وجود التوذم: (نعم / لا)

تاريخ القياس	يوم	شهر	سنـــــة
		9 Ø	2 1 Ø 2

يرجى تعاونكم معه/ معها

وتقبلوا تحيات فريق المسح

اسم المشرف الميداني .....

توقيعه

Annex 10: Aden Assessment Quality Checks

Plausibility check for: Aden092012

Standard/Reference used for z-score calculation: WHO standards 2006
(If it is not mentioned, flagged data is included in the evaluation. Some parts of this plausibility report are more for advanced users and can be skipped for a standard evaluation)

Overall data quality

Criteria	Flags*	Unit	Excel.	Good	Accept.	Problematic	Score
Missing/Flagged data	Incl	%	0-2.5	>2.5-5.0	>5.0-10	>10	
(% of in-range subjects)			0	5	10	20	0 (1.5 %)
Overall Sex ratio	Incl	p	>0.1	>0.05	>0.001	<0.000	
(Significant chi square)			0	2	4	10	0 (p=0.633)
Overall Age distrib	Incl	p	>0.1	>0.05	>0.001	<0.000	
(Significant chi square)			0	2	4	10	4 (p=0.001)
Dig pref score - weight	Incl	#	0-5	5-10	10-20	> 20	
			0	2	4	10	0 (2)
Dig pref score - height	Incl	#	0-5	5-10	10-20	> 20	
			0	2	4	10	2 (7)
Standard Dev WHZ	Excl	SD	<1.1	<1.15	<1.20	>1.20	
			0	2	6	20	0 (1.01)
Skewness WHZ	Excl	#	<±1.0	<±2.0	<±3.0	>±3.0	
			0	1	3	5	0 (0.09)
Kurtosis WHZ	Excl	#	<±1.0	<±2.0	<±3.0	>±3.0	
			0	1	3	5	0 (-0.01)
Poisson dist WHZ-2	Excl	p	>0.05	>0.01	>0.001	<0.000	
			0	1	3	5	0 (p=0.121)
Timing	Excl	Not determined yet					
			0	1	3	5	
OVERALL SCORE WHZ =			0-5	5-10	10-15	>15	6 %

At the moment the overall score of this survey is 6 %, this is good.

Annex 11: Summary Tables of Finding of Nutritional Status

1: Stunting among children distributed per gender, and age category

Stunting		N	%	95% Conf Limits	
				Lower	Upper
Girls (n = 540)	moderate	87	16.1%	13.2%	19.5%
	severe	14	2.6%	1.5%	4.4%
	Moderate and severe	101	18.7%	15.6%	22.3%
Boys (n = 546)	moderate	66	12.1%	9.5%	15.2%
	severe	14	2.6%	1.5%	4.4%
	Moderate and severe	80	14.7%	11.8%	18.0%
6 - <12 months (n = 127)	moderate	12	9.4%	5.0%	15.9%
	severe	4	3.1%	0.9%	7.9%
	Moderate and severe	16	12.6%	7.4%	19.7%
12 - <24 months (n = 226	moderate	26	11.5%	7.7%	16.4%
	severe	4	1.8%	0.5%	4.5%
	Moderate and severe	30	13.3%	9.1%	18.4%
24 - <36 months (n = 261	moderate	34	13.0%	9.2%	17.7%
	severe	10	3.8%	1.9%	6.9%
	Moderate and severe	44	16.9%	12.5%	22.0%
36 - <48 months (n = 272)	moderate	49	18.0%	13.6%	23.1%
	severe	5	1.8%	0.6%	4.2%
	Moderate and severe	54	19.9%	15.3%	25.1%
48 - <60 months (n = 200)	moderate	32	16.0%	11.2%	21.8%
	severe	5	2.5%	0.8%	5.7%
	Moderate and severe	37	18.5%	13.4%	24.6%
Aden (n = 1086)	***moderate***	***153***	***14.1%***	***12.1%***	***16.3%***
	severe	***28***	***2.6%***	***1.8%***	***3.8%***
	Moderate and severe	***181***	***16.7%***	***14.5%***	***19.0%***

2: Underweight among children distributed per gender, and age category

Underweight		N	%	95% Conf Limits	
				Lower	Upper
Girls (n = 540)	moderate	120	22.2%	18.8%	26.0%
	severe	27	5.0%	3.4%	7.3%
	Moderate and severe	147	27.2%	23.6%	31.2%
Boys (n = 560)	moderate	98	17.5%	14.5%	21.0%
	severe	23	4.1%	2.7%	6.2%
	Moderate and severe	121	21.6%	18.3%	25.3%

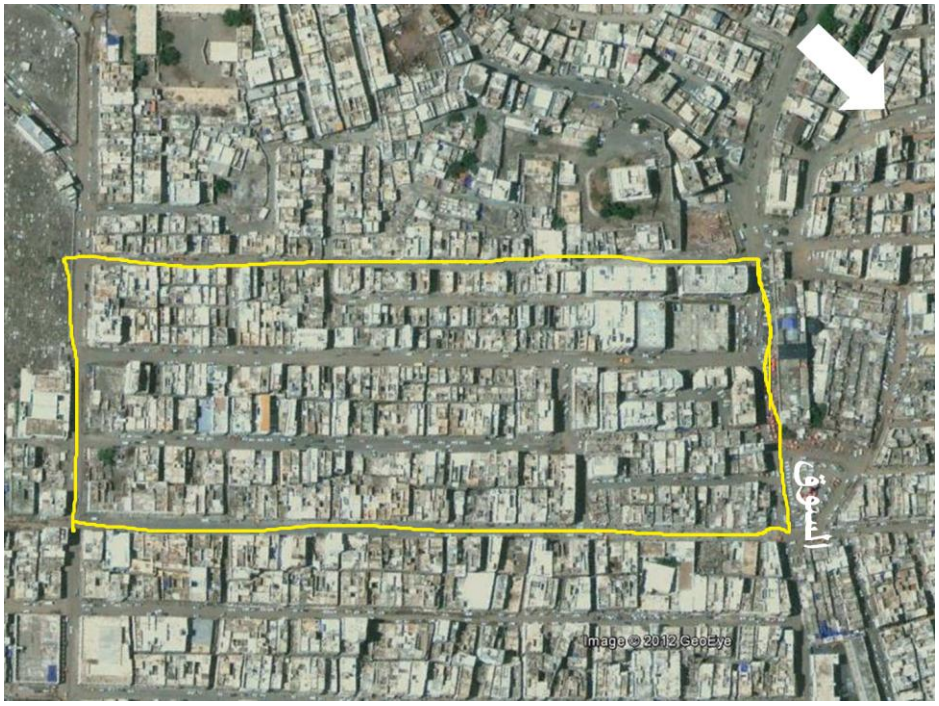
Underweight		N	%	95% Conf Limits	
				Lower	Upper
6 - <12 months (n = 133)	moderate	21	15.8%	10.0%	23.1%
	severe	7	5.3%	2.1%	10.5%
	Moderate and severe	28	21.1%	14.5%	29.0%
12 - <24 months (n = 234)	moderate	40	17.1%	12.5%	22.5%
	severe	11	4.7%	2.4%	8.3%
	Moderate and severe	51	21.8%	16.7%	27.6%
24 - <36 months (n = 260)	moderate	43	16.5%	12.2%	21.6%
	severe	10	3.8%	1.9%	7.0%
	Moderate and severe	53	20.4%	15.7%	25.8%
36 - <48 months (n = 273)	moderate	69	25.3%	20.2%	30.9%
	severe	14	5.1%	2.8%	8.5%
	Moderate and severe	83	30.4%	25.0%	36.2%
48 - <60 months (n = 200)	moderate	45	22.5%	16.9%	28.9%
	severe	8	4.0%	1.7%	7.7%
	Moderate and severe	53	26.5%	20.5%	33.2%
Aden (n = 1100)	***moderate***	***218***	***19.8%***	***17.5%***	***22.3%***
	severe	***50***	***4.5%***	***3.4%***	***6.0%***
	Moderate and severe	***268***	***24.4%***	***21.9%***	***27.0%***

3: Wasting among children distributed per gender, and age category

Wasting		N	%	95% Conf Limits	
				Lower	Upper
Girls (n = 537)	moderate	84	15.6%	12.7%	19.1%
	severe	8	1.5%	0.7%	3.0%
	Moderate and severe	92	17.1%	14.1%	20.6%
Boys (n = 558)	moderate	97	17.4%	14.4%	20.8%
	severe	18	3.2%	2.0%	5.1%
	Moderate and severe	115	20.6%	17.4%	24.3%
6 - <12 months (n = 133)	moderate	21	15.8%	10.0%	23.1%
	severe	5	3.8%	1.2%	8.6%
	Moderate and severe	26	19.5%	13.2%	27.3%
12 - <24 months (n = 232)	moderate	41	17.7%	13.0%	23.2%
	severe	7	3.0%	1.2%	6.1%
	Moderate and severe	48	20.7%	15.7%	26.5%
24 - <36 months (n = 259)	moderate	45	17.4%	13.0%	22.5%
	severe	3	1.2%	0.2%	3.3%
	Moderate and severe	48	18.5%	14.0%	23.8%

Wasting		N	%	95% Conf Limits	
				Lower	Upper
36 - <48 months (n = 272)	moderate	45	16.5%	12.3%	21.5%
	severe	8	2.9%	1.3%	5.7%
	Moderate and severe	53	19.5%	14.9%	24.7%
48 - <60 months (n = 199)	moderate	29	14.6%	10.0%	20.3%
	severe	3	1.5%	0.3%	4.3%
	Moderate and severe	32	16.1%	11.3%	21.9%
Aden (n = 1095)	***moderate***	***181***	***16.5%***	***14.4%***	***18.9%***
	severe	***26***	***2.4%***	***1.6%***	***3.5%***
	Moderate and severe	***207***	***18.9%***	***16.7%***	***21.4%***

Annex 12: Samples of cluster maps



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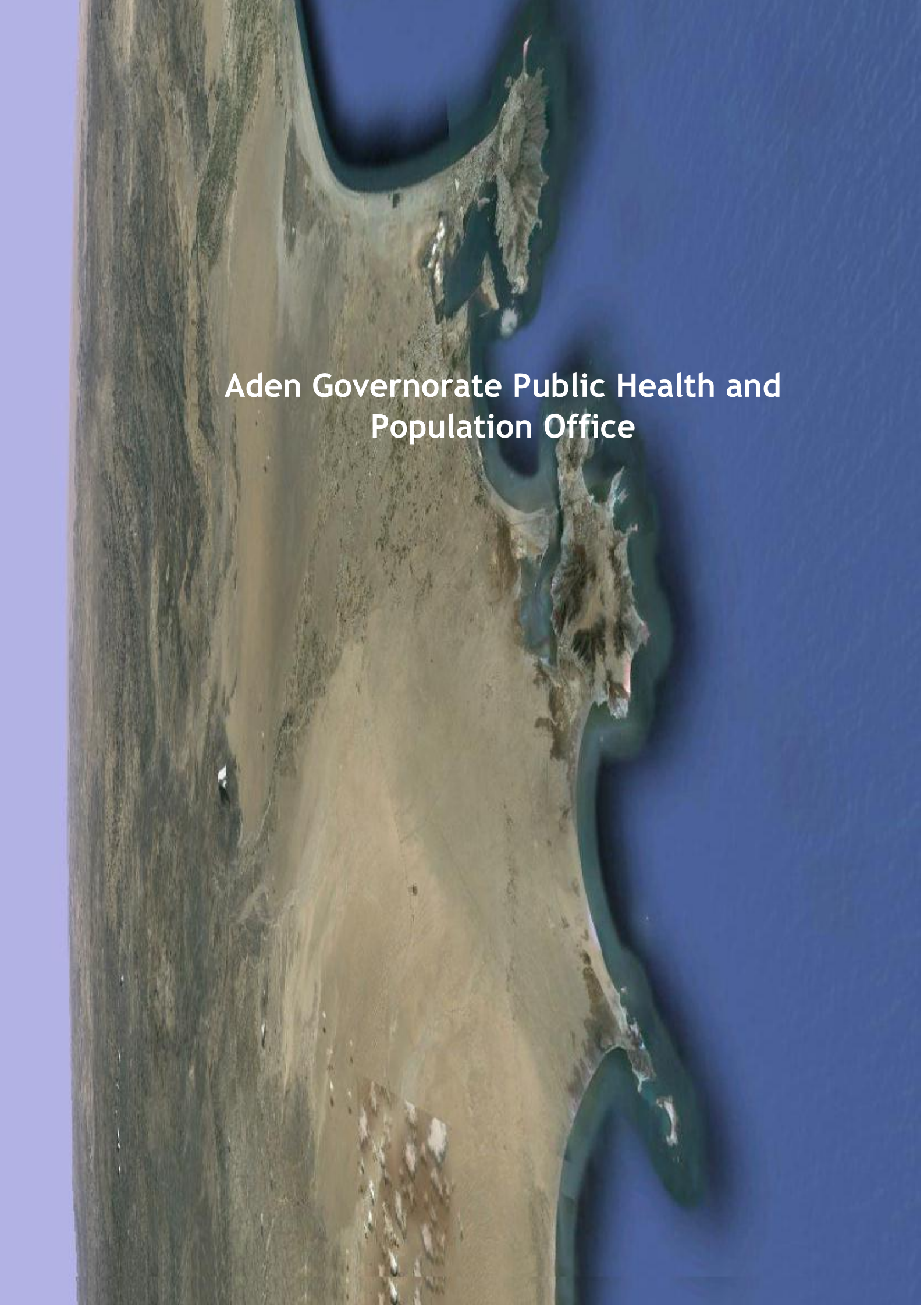

Aden Governorate Public Health and Population Office