Wajir County Smart Survey Report
July 2016

Wajir County Department of Medical Services, Public Health and Sanitation 2016

Participating Partners

ACKNOWLEDGEMENT

This survey was successfully carried out with the support and participation of our various partners. The department of health is grateful to Unicef Kenya Country Office and Save the Children for their financial and technical support.

The participation and contributions of various nutrition partners namely, Global Alliance for improved Nutrition (GAIN), Kenya Red Cross Society (KRCS) and National Drought Management Authority (NDMA) is highly appreciated.

Special gratitude goes to survey manager, supervisors, team leaders, measurers and recorders for carrying out data collection with diligence, which was evidenced by the quality of data collected.

Many thanks go to Wajir community members especially the households who participated in the survey. The local administrators are also acknowledged for their role in mobilizing the community and acting as guides to the enumerators during the exercise.

Table of Contents

Acronyms

ANC	-	Antenatal care
CHW	-	Community Health Worker

CI	-	Confidence Interval
CSB	-	Corn Soya Blend
DHIS	-	District health information system
ENA	-	Emergency Nutrition Assessment
GAM	-	Global Acute Malnutrition
HAZ	-	Height-for-Age Z-score
HSSP	-	Health strategic sector plan
L/HAZ	-	Length/ Height for Age –Z-score
MNP-	-	Micronutrient powder
MOH	-	Ministry of Health
MUAC	-	Mid-Upper Arm Circumference
NDMA	-	National Drought Management Authority
NIWG	-	Nutrition Information Working Group.
PLW	-	Pregnant and lactating women
OPV	-	Oral Polio Vaccine
OTP	-	Out-patient Therapeutic Program
SAM	-	Severe Acute Malnutrition
SC	-	Stabilization Centre
SCI	-	Save the Children international
SD	-	Standard Deviation
SFP	-	Supplementary Feeding Programme
SMART	-	Standardized Monitoring and Assessment of Relief and Transitions
UNICEF	-	United Nations Children's Fund
URTI	-	Upper Respiratory Tract Infection
WAZ	-	Weight-for-Age Z-score
WASH	-	Water sanitation and hygiene
WFP	-	World Food Programme
WHM	-	Weight for Height Median
WHO	-	World Health Organization
WHZ	-	Weight-for-Height/length Z-scores
RUSF	-	Ready to use supplementary feeding.
RUTF	-	Ready to use therapeutic food

EXECUTIVE SUMMARY

Wajir County department of medical services, public health and sanitation in collaboration with nutrition partners (UNICEF, Save the Children, KRCS, NDMA and GAIN) successfully conducted two SMART Surveys. The surveys were carried in two livelihood zones; Pastoral livelihood (Wajir East, Wajir West, Wajir South, Tarbaj and Eldas sub-counties) Agro-pastoral zones (Wajir north sub-county).

The overall objective was to estimate the prevalence of malnutrition among children 6 – 59 months and women of reproductive age. The survey applied a two stage stratified cluster sampling using the SMART methodology with the clusters being selected using the probability proportional to population size (PPS). The total sample size was 367 and 480 children aged between 6 and 59 months for pastoral and agro-pastoral livelihood zone respectively. Data was collected by 11 Teams (5 and 6 teams for the pastoral and agro-pastoral livelihood zones respectively). Data was collected using smart phones with Open Data Kit (ODK) software. 6 villages were excluded from sampling due to insecurity. 574 and 665 children 6 – 59 months were reached in the pastoral and agro pastoral zones respectively.

Table 1: Summary of Findings

Indicator	Pastoral Livelihood	Agro-pastoral Livelihood	Wajir County
Nutritional Status (6-59 Months) Weight for Height Z-Scores (Wasting) WHO 2006			
Global Acute Malnutrition (GAM)	13.4 % (10.0 - 17.7 95% C.I.)	9.4 % (7.4 - 11.9 95% C.I.)	13.00% (10.1 - 16.5 95% CI)
Severe Acute Malnutrition (SAM)	2.1 % (1.2 - 3.6 95% C.I.)	1.7 % (0.9 - 3.1 95% C.I.)	2.20% (1.3 - 3.7% CI)
Nutritional Status (6-59 Months) Weight for Age Z-Scores (Underweight) WHO 2006			
Prevalence of global underweight	14.9 % (11.9 - 18.6 95% C.I.)	9.5 % (7.0 - 12.8 95% C.I.)	11.90% (9.7 - 14.5 95% C.I.)
Prevalence of severe underweight	3.2 % (2.1 - 4.8 95% C.I.)	0.5 % (0.1 - 1.4 95% C.I.)	1.70% (1.2 - 2.5 95% C.I)
Nutritional Status (6-59 Months) Height for Age Z-Scores (Stunting) WHO 2006			
Prevalence of global Stunting	11.8 % (9.3 - 14.8 95% C.I.)	7.9 % (5.4 - 11.5 95% C.I.)	11.30% (9.4 - 13.4 95% C.I.)
Prevalence of severe underweight	0.8 % (0.3 - 1.8 95% C.I.)	1.8 % (1.0 - 3.1 95% C.I.)	1.90% (1.3 - 2.8 95% C.I.)

Nutritional Status (6-59 Months) by MUAC			
Global Acute Malnutrition (<125MM)	3.1 % (2.0 - 4.9 95% C.I.)	1.5 % (0.7 - 3.2 95% C.I.)	
Severe (<115MM)	) 0.9 % (0.4 - 2.0 95% C.I.)	0.5 % (0.1 - 1.9 95% C.I.)	

Table 1: Summary of the Survey Findings and results of Nutrition outcomes

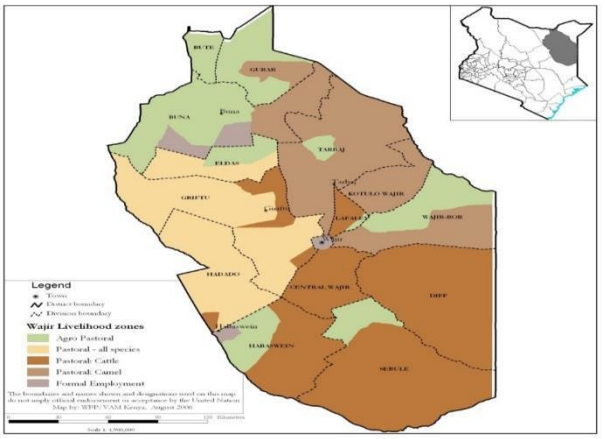
Indicator	Pastoral Livelihood	Agro-pastoral Livelihood	Wajir County
Maternal Nutrition			
MUAC (>21 - <23 cm)	19.1%	13.0%	16.2%
MUAC <21 CM	7.5%	7.6%	7.6%
IFAS <90 days	99.6%	99.4%	99.5%
IFAS > 90days	0.4%	0.6%	0.5%
Vitamin A Supplementation and Deworming			
Children 12-59 months supplemented with vitamin A	83.0%	55.8%	68.0%
Children 12-59 months de-wormed	60.7%	50.3%	55.1%
Children 6 -12 months supplemented with vitamin A	80.4%	46.8%	62.0%

Table 2:Performance of HINI indicators

Chapter One

1.0 Background

Wajir County is one of the 47 counties created under the Kenya constitution 2010. It borders Somalia to the East, Ethiopia to the North, Mandera County to the North East, Isiolo County to the South West, Marsabit County to the West and Garissa County to the South. It covers an approximate area of 56,685.9 square kilometers with a total population of 661,941 people (KNBS, 2009) and a population growth rate of 3.22 percent per annum. The County comprises of six sub-counties namely Wajir East, Tarbaj, Wajir West, Eldas, Wajir North and Wajir South. The County receives an average of 240mm precipitation annually and an average temperature is 27.9°C. The residents are majorly Somali speaking.



1.1 Livelihood

Majority of the population (about 70%) depend on livestock for their livelihood. The main form of land use is nomadic pastoralism which is seen as the most efficient method of exploiting the range lands hence pastoral activities are practiced in all the sub counties expect Wajir north where agro-pastoral activities are carried out.

The pastoralist population in the-county continues to operate in fragile and precarious environments characterized by long dry spells, interspersed with low erratic rainfall. Persistent and sporadic inter-clan conflicts, often resulting from disputes over limited resources and spill-over of the insecurity in Somalia, has together with poor infrastructure, limiting the mobility in the area. In addition, these communities continue to suffer from structural deficits in the provision of health care, education, water and sanitation infrastructure. Despite many years of humanitarian and relief interventions and improved government assistance, Wajir is still food insecure.

High levels of malnutrition have been precipitated by a number of factors including: poor Infant and young child feeding practices, poor dietary diversity, lack of adequate water together with poor sanitation and hygiene and high illiteracy levels (78.4% for women), and cultural practices which have a negative effect on the uptake of health and nutrition services.

Table 1: Seasonal Timeline

Short Dry Spell (Jilaal)			Long Rainy Reason (Gu')			Long Dry Spell (Hagai)				Short Rainy Season (Deyr)	
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Migration, Conflicts, Watering of Livestock, Pressure on boreholes			Pasture Surveys, mating season, Planting			Livestock diseases, Labour Demand			Calving, Kidding Period	Migration, Conflict	

1.2: Humanitarian interventions in Wajir

The department of health is supported by partners to deliver maternal, neonatal and child health and nutrition interventions. In the past three years the focus has shifted to health system strengthening, advocacy and community resilience. The current programs are maternal child and nutrition program implemented by Save the Children with support from UNICEF, maternal and new born health Signature program, Enabling sustainable health equity, mHealth, ECD (pre-school) implemented by County government. UNICEF and WFP support in procurement and supply of nutrition commodities (F100, F75, Resomal, RUSF, RUTF, CSB+ and vegetable oil). The Ministry of internal security and coordination of national government through the County Commissioner's office occasionally supplies food to the county.

2.0 Overall objective

To estimate the prevalence of malnutrition among children 6 – 59 months and women of reproductive age in Pastoral livelihood zone (Wajir East, Wajir South, Tarbaj, Wajir West, and Eldas Sub-counties) and Agro-pastoral livelihood zone (Wajir north sub-county).

2.1 Specific Objectives were:

1. To determine the prevalence of acute and chronic malnutrition in children aged 6-59 months
2. To determine the immunization coverage for Measles, Oral Polio Vaccines (OPV 1 and 3), MNP, and vitamin A Supplementation in children aged 6-59 months;
3. To establish coverage of iron folic acid supplementation during pregnancy among pregnant and lactating women
4. To determine the nutritional status of women of reproductive age (15-49 years)
5. To collect contextual information on possible causes of malnutrition such as household food security, water, sanitation, and hygiene (WASH) practices and Morbidity

CHAPTER TWO

2.0 METHODOLOGY

2.2 Geographic target area and population group

Two separate surveys were conducted in two livelihood zones: - Pastoral livelihood and Agro-pastoral livelihood zones. The sub-counties in the pastoral livelihood zone are Tarbaj, Wajir West, Wajir South, Eldas and Wajir East. Wajir North is the agro-pastoral zone.

Primary respondents for the survey were mothers and or care takers of children for both household and child questionnaire. Data was collected on the following variables; anthropometry, morbidity, vaccination and de-worming status, zinc, vitamin A and iron folate supplementation, hygiene and sanitation practices. Other indicators assessed were household food security and livelihood and nutritional status of both children aged 6 – 59 months and women of reproductive age (15 – 49 years).

2.1 Survey Design

The survey applied a two stage cluster sampling with the clusters being selected using the probability proportional to population size (PPS) with villages constituting the sampling frame.

2.2 Study Population

The target populations for the survey were children aged 6 – 59 months for the anthropometric component and women of reproductive age between 15 – 49 years for the maternal health indicators.

2.3 Anthropometric Sample Size

The anthropometric survey sample size was calculated using the SMART survey calculator. The parameters of interest were captured in the ENA July 9th 2015 version software and the respective number of children and households required for the survey (table 3). The sampling frame for this survey was the updated list of villages from the survey area.

Table 3: Anthropometric sample size calculation

	Pastoral livelihood zone	Agro-Pastoral livelihood zone	Rationale
Estimated prevalence of GAM (%)	17.8%	14.3%	Based on contextual data (DHIS, NDMA EWS) the situation has not changed, and food security situation is showing improving trends. Thus used point prevalence for 2015 SMART survey.
±Desired precision (%)	5.0%	4.0	Limits of CI do not influence decision making/control quality hence reduce bias and previous survey values.
Design effect	1.5	1.5	SMART rule of thumb.
Average HH size	7	7	From previous survey
% under five children	12.94%	12.94%	DHIS/ HSSP
% non-respondent	3.0%	3.0%	Based on previous assessments,
No of HH	**464**	**608**	
No of children	**367**	**480**	

2.4 Cluster and Household Selection

All villages were included in the initial sample selection with each village considered a cluster which was sampled with probability proportional to size. At stage two each team used the simple random sampling method in household selection. Within the selected household all children 6-59 months meeting the inclusion criteria were measured.

A household was defined as a group of people who lived together and shared a common cooking pot. In polygamous families with several structures within the same compound but with different wives having their own cooking pots, the structures were considered as separate households and assessed separately.

In cases where there was no eligible child, a household was still considered part of the sample. If a respondent was absent during the time of household visit, the teams left a message and re-visited later to collect data for the missing person, with no substitution of household allowed.

2.5 Variables Collected

Age: the age of the child was recorded based on a combination of child health cards, the mothers'/caretakers' knowledge of the birth date and use of a calendar of events for the County that was developed in collaboration with the survey team.

Sex: The gender of the child whether a male or female was recorded

Bilateral Edema*:* normal thumb pressure was applied on the top part of both feet for 3 seconds. If pitting occurred on both feet upon release of the thumb, nutritional oedema was indicated.

Weight: Children were weighed when wearing minimal or light clothing. Weight was taken using Bathroom scales (child mother scale, SECA digital model).

Length/Height: children were measured bareheaded and barefooted using wooden UNICEF height boards with a precision of 0.1cm. Children under the age of two years were measured while lying down/ supine position (length, < 87cm) and those over two years while standing upright ((≥87cm height).

Mid Upper Arm Circumference (MUAC): MUAC of children were taken at the midpoint of the upper left arm using a MUAC tape and recorded to the nearest 0.1cm.

Retrospective Morbidity of Children: A 2-week morbidity recall was conducted for all children (6-59 months) to assess the prevalence of common diseases (e.g. malaria, diarrhea, upper respiratory infection (URTI).

Vaccination Status and Coverage:

For all children 6-59 months, information on BCG, Oral polio Vaccine (OPV) 1, OPV 3 and measles vaccination was collected using health cards and recall from caregivers. The vaccination coverage was calculated as the proportion of children immunized based on card and recall.

Vitamin A supplementation status: For all children aged 6-59 months, information on Vitamin A supplementation was collected using the child welfare cards and recall from caregivers. Information on whether the child had received supplementation in the last 6 months was collected. Vitamin A capsules were also shown to the mothers to aid in recall.

De-worming status: Information was solicited from the care takers as to whether their child/children 6-59 months had been de-wormed in the last 6 months.

Household food diversity: Dietary diversity is a qualitative measure of food consumption that reflects household access to a wide variety of foods, and is also a proxy of the nutrient intake adequacy of the diet for individuals. Dietary diversity scores were created by summing the number of food groups consumed over a 7- days period to aid in understanding if and how the diets are diversified.

Household water consumption and utilization: The indicators used were main source of drinking and household water, time taken to water source and back, cost of water per 20-litre jerry-can and treatment given to drinking water.

Sanitation: Information on household accessibility to a toilet/latrine, disposal of children's feaces and occasions when the respondents wash their hands was obtained.

2.6 Organization of the survey

Coordination/collaboration: Resource mobilization meeting were held to solicit on budget deficit from partners. Planning meetings led by the department of health were held to plan on recruitment, training, methodology presentation at the national information working group, pilot and data collection. These meetings brought together partners in health and nutrition.

Recruiting the survey team: Recruitment was carried out by the County department of health in collaboration with Save the Children International (SCI)-Wajir

Training of the survey teams: Teams were trained for three days prior to data collection, including a standardization test to ensure standardization of measurement and recording practice. Teams were trained on anthropometric measurements, completion of, sampling methodology and mobile data collection. The data collection was pilot tested in a cluster not selected for the survey, to ensure that the interviewers and respondents understand the questions and those interviewers follow correct protocols. The pretest data was uploaded in the server for the supervisors to know how to upload and data presentation. Three facilitators one from MOH (NIWG), CNC, SCI and UNICEF-NSO conducted the training.

Data collection: Survey team comprising of three members (measurer, recorder//interviewer and team leader). There were a total of 11 teams (6 Agro-pastoral and 5 pastoral) and one supervisor per livelihood zone. In addition to the survey manager who was the county nutritionist, there were support supervisors from SCI, UNICEF and NIWG team.

2.7 Data uploading, analysis and report writing

Data Uploading: Data was uploaded on daily basis, downloaded on excel format and analysis was done using ENA for SMART and SPSS Statistical software. SCI were responsible for the downloading data. A team met each day to the morning to analyze and provide feedback to all the teams before they start off.

Preliminary results and final report: Preliminary findings were submitted for validation to Nutrition Information Working Group (NIWG) at County and National levels after completion of the survey data collection.

CHAPTER THREE

3.0 SURVEY RESULTS AND DISCUSSION

3.1 Household Demographic Characteristics

3.1.1 Marital Status and Residency

All the respondents interviewed were residents of Wajir County. Majority (90%) are married while 6% of the respondents are widowed.

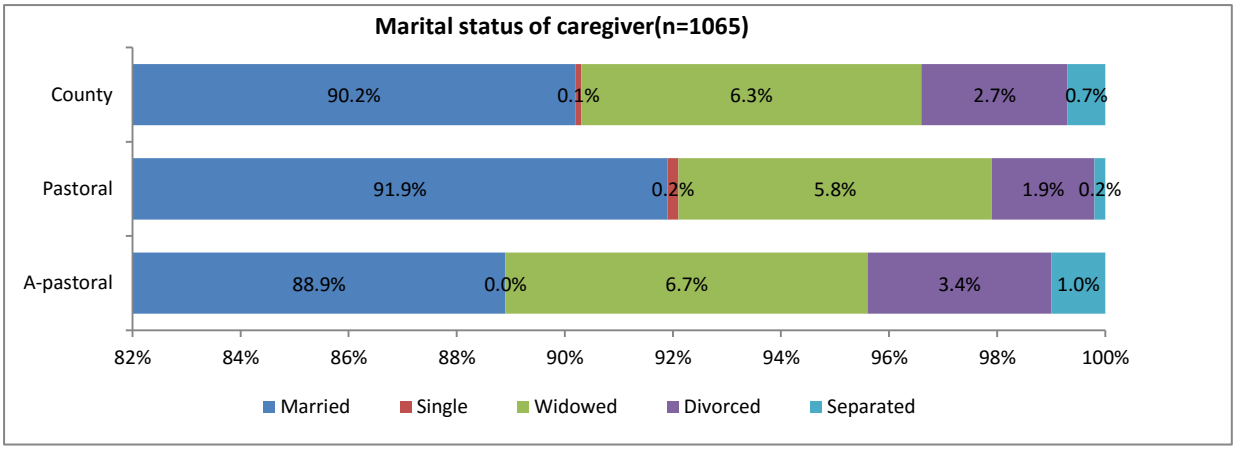


Figure 1: Marital Status of caregivers n =1065

3.1.2 Highest Education Level Attained

From the survey, 80.9% of the household head lacked any form of formal education, with pastoral livelihood zone reporting the highest at 83.1% and agro-pastoral was 79.2%, 2.1%, 2.9% and 3.3% had acquired tertiary, secondary and pre-primary education respectively while 10% of the respondents reported to have acquired primary education, (figure 2). Literacy levels in Wajir are quite low, according to the county integrated development plan 2013 – 2017 literacy level was reported at 23.6%.

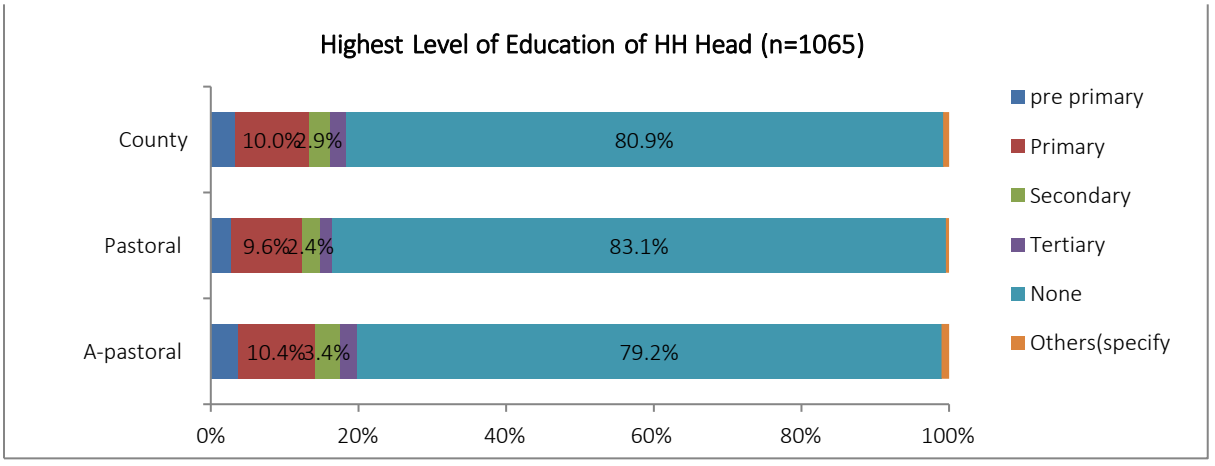


Figure 2: Highest level of education attained

3.2 Distribution of Children by Age and Sex

The survey attained a sex ratio of 1.1 and 1.0 for Agro-pastoral and Pastoral respectively, table 3 and 4 below which is within the estimated range of 0.8 – 1.2 representing unbiased sampling. In both livelihood zones children aged between 54 – 59 months were approximately 5%.

Table 3: Agro-Pastoral livelihood distribution of age and sex

	Boys		Girls		Total		Ratio
AGE (mo)	no.	%	no.	%	no.	%	Boy: girl
6-17	78	47.9	85	52.1	163	24.5	0.9
18-29	86	53.4	75	46.6	161	24.2	1.1
30-41	91	51.7	85	48.3	176	26.5	1.1
42-53	72	55.0	59	45.0	131	19.7	1.2
54-59	18	52.9	16	47.1	34	5.1	1.1
Total	345	51.9	320	48.1	665	100.0	1.1

Table 4: Pastoral livelihood and sex of sample zone distribution of age

	Boys		Girls		Total		Ratio
AGE (mo)	no.	%	no.	%	no.	%	Boy: girl
6-17	70	54.7	58	45.3	128	22.3	1.2
18-29	82	53.9	70	46.1	152	26.5	1.2
30-41	62	42.5	84	57.5	146	25.4	0.7
42-53	57	49.1	59	50.9	116	20.2	1.0
54-59	22	68.8	10	31.3	32	5.6	2.2
Total	293	51.0	281	49.0	574	100.0	1.0

3.3 Main Sources of Income

The finding of the survey revealed that sale of livestock is the dominant income generating endeavor at 61.3%. At a distant second was engagement in casual labour at 19% (Figure, 3)

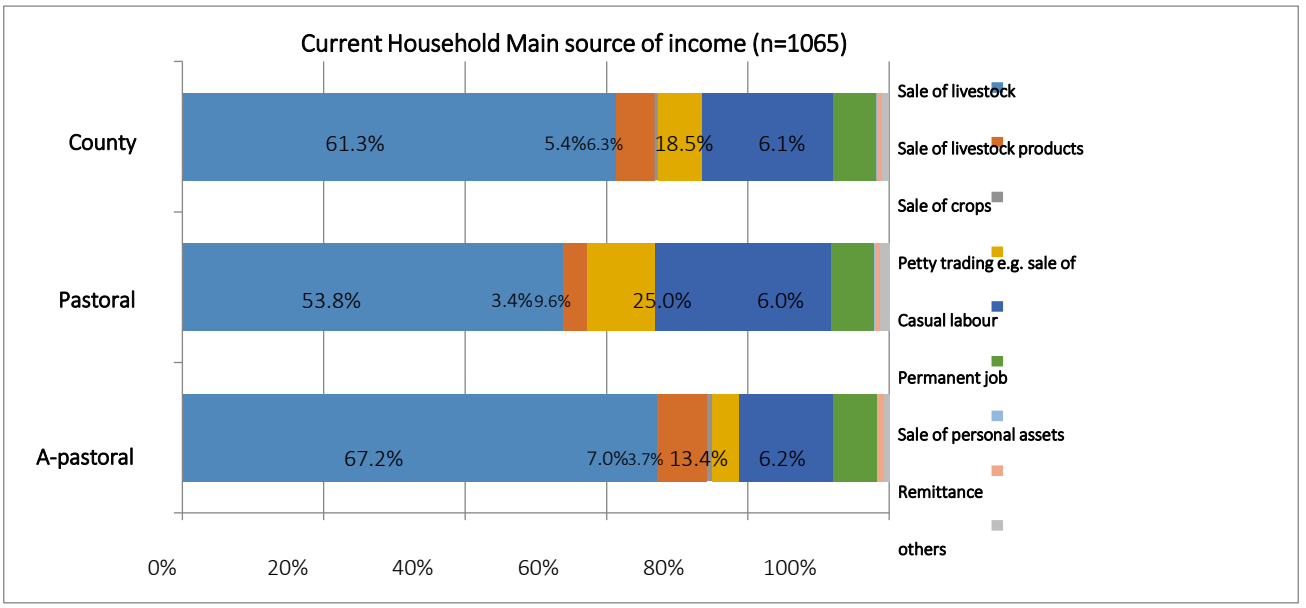


Figure 3: Sources of Income

3.4 Main Occupation

In line with sale of livestock as the main source of income, livestock herding emerged as the leading occupation with 66.6% of respondents. Casual labour and petty trade were second and third respectively as is demonstrated in figure 4 below.

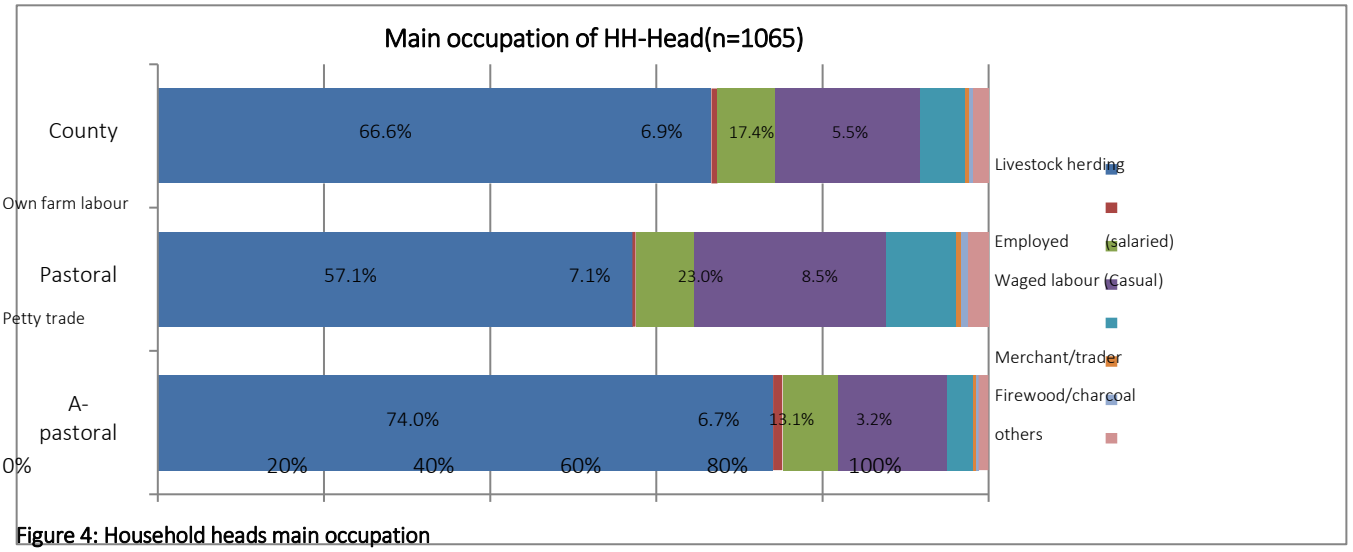


Figure 4: Household heads main occupation

3.5 Child Health & Immunization

3.5.1 Immunization Coverage

Immunization is an important and a powerful, cost-effective preventive health measure to improve on child survival. Most of the recommended vaccinations should be given before children reach their first birthday.

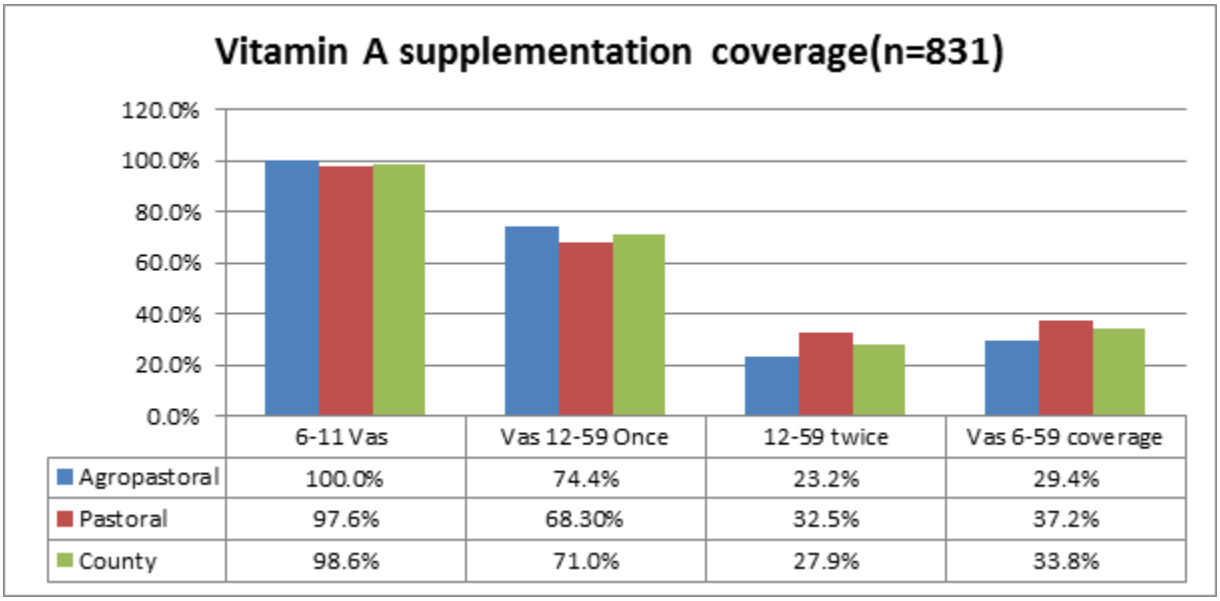
The survey used three antigens as a proxy for immunization coverage. These were; BCG, Oral Polio vaccination (1 and

3) and measles vaccine (1 and 2). The second measles vaccine given at 18 months was introduced two years ago.

Child immunization was corroborated either by recall or confirmed with mother-child booklet. BCG, OPV 1, OPV 3, Measles at 9 months and Measles at 18 months vaccines coverage were observed to be 98%, 95%, 93%, 85% and 16% respectively. The low coverage is attributed to low awareness and supply of vaccines, staff turnover and breakdown of EPI fridges

3.5.2 Zinc & Vitamin A Supplementation and Deworming Coverage

Vitamin A supplementation among children below the age of five years offers protection against common childhood infections and substantially reduces mortality hence improving the child's survival. Vitamin A supplementation coverage was determined both for over the last six months and one year period.



	6-11 Vas	Vas 12-59 Once	12-59 twice	Vas 6-59 coverage
Agropastoral	100.0%	74.4%	23.2%	29.4%
Pastoral	97.6%	68.30%	32.5%	37.2%
County	98.6%	71.0%	27.9%	33.8%

Figure 5: Vitamin A Supplementation (6-11Months) and 12 – 59 months

The survey findings in the figure 5 above showed that while supplementation for children less than one year old was high at 98% for the county, the supplementation for children who are older was very poor with children between 12-59 months who had been supplemented twice at 28% for the County, with the agro-pastoral fairing worse than the pastoral areas. The Vitamin A supplementation coverage is way below the national target of 80% and calls for more innovative approaches to improve the supplementation coverage.

Deworming, a vital practice in the promotion of child health, had a coverage of deworming for children 12-59 months was 55%, which is way below the national target coverage of 80%. The findings also show that the pastoral zones had better deworming coverage at 60.5% compared to the agro-pastoral at 50.3%.

Zinc supplementation during diarrheal episodes is highly recommended to reduce severity and longevity of the disease as well as the prevention of subsequent episodes, and reduce child mortality in relation to diarrheal diseases. From the survey, it emerged that 71% of diarrheal cases were supplemented with Zinc.

3.6 Child Morbidity

Child morbidity was assessed based on a two weeks' recall period prior to the survey date from a sample size of 295 children. The illness prevalence was at 24%. However, a closer look at the livelihood zones shows that the prevalence of illness was comparatively higher in the pastoral zones (32.8%) compared to the agro pastoral zones (at 16.1%). The Leading causes of morbidity were ARI-Acute Respiratory Infections, Malaria, watery diarrhoea, and other ailments at 64%, 25%, 6% and 4% respectively as illustrated in the figure 6 below.

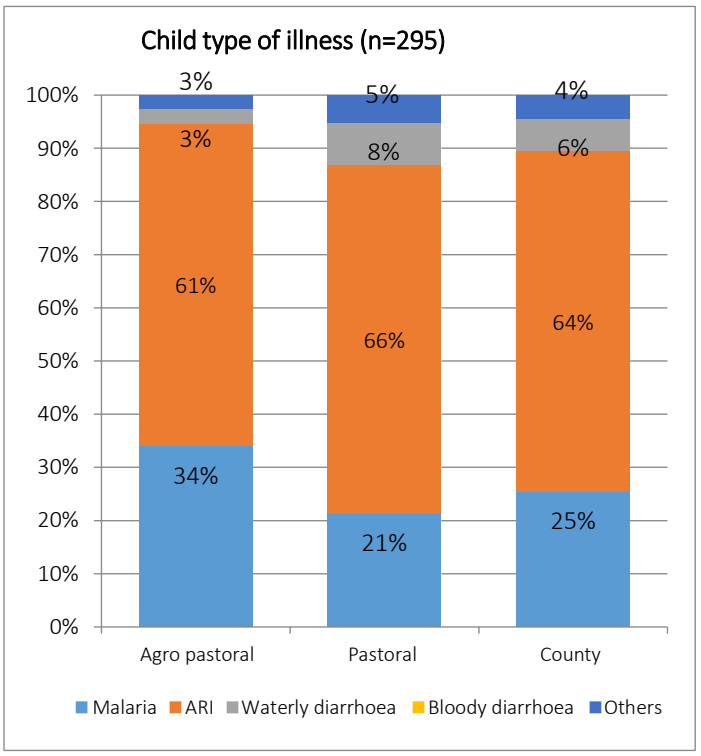


Figure 6: Child morbidity indices

Most of the respondents (85%) sought medical care from public clinics, 9% from private clinics, 4% from CHWs and a paltry 1% from traditional healers. This augments the fact that a great proportion of the community appreciates and is aware of services offered by qualified health personnel. It also highlights a relatively good access to health services in the county. In the last three years the county government has invested a lot in infrastructure and human resource to bring services closer to the populace.

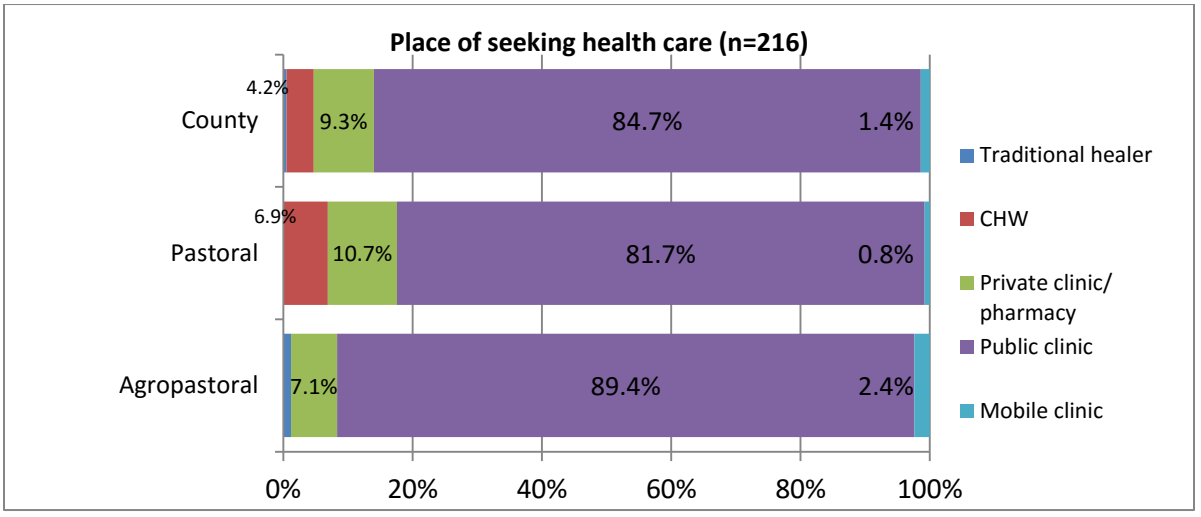


Figure 7: Health seeking trends

3.7 Mosquito Net Ownership and Usage

Wajir County mosquito net ownership stood at 61% for the county which was not significantly different in the livelihood zones. Usage by under-5 year of age was at 47%, nearly twice the proportion of pregnant and lactating mothers at 25%. (Figure 8)

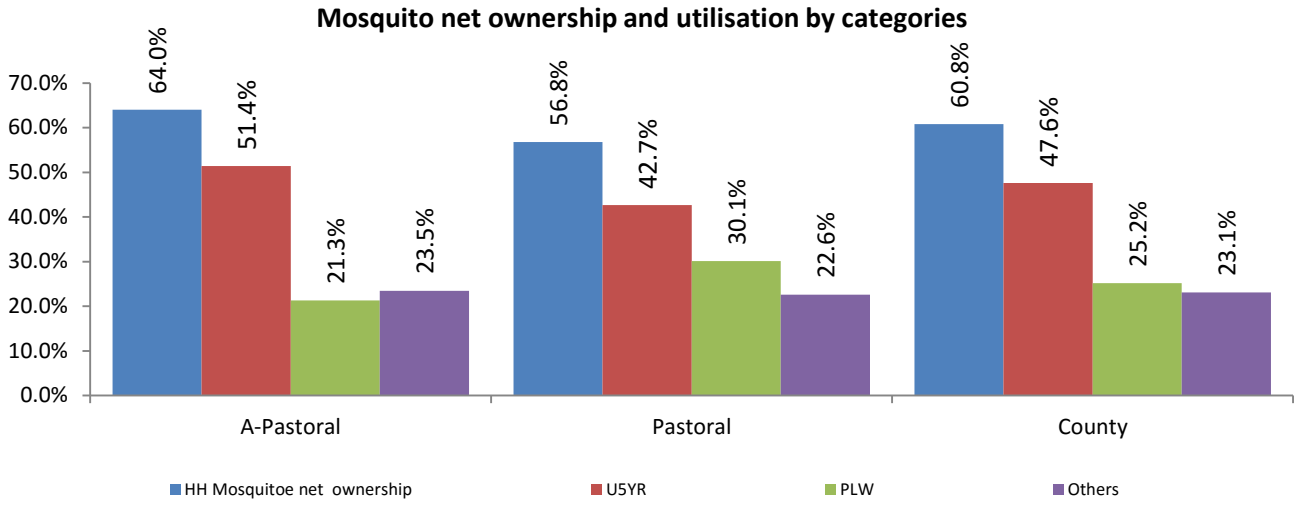


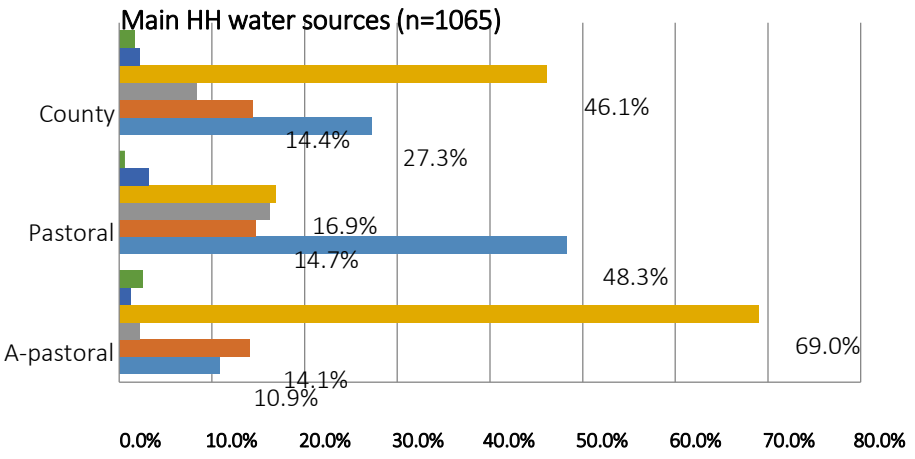
Figure 8: Mosquito net ownership and utilization

3.8 Water Sanitation & Hygiene Practices

3.8.1 Main Water Sources

The survey indicated that the main water sources included Earth pans/dams at 46% and piped water systems from boreholes and protected wells/springs at 27% as depicted in (figure 9) below.

Piped water system is considered safer than other sources of water eg open water sources. A look at the livelihoods shows that access to piped water was much lower in the Agro-pastoral at only 10.9% in comparison with the pastoral zones at 48.3%.



	A-pastoral	Pastoral	County
others	2.5%	0.6%	1.7%
Water trucking /Water vendor	1.3%	3.2%	2.2%
Earth pan/dam	69.0%	16.9%	46.1%
Unprotected dug well/ laga	2.2%	16.2%	8.4%
Unprotected shallow well	14.1%	14.7%	14.4%
Piped water system/ borehole/ protected spring/protected shallow wells	10.9%	48.3%	27.3%

Figure 9: **Main Water Sources**

3.8.2 Distance to the water sources and Queuing time

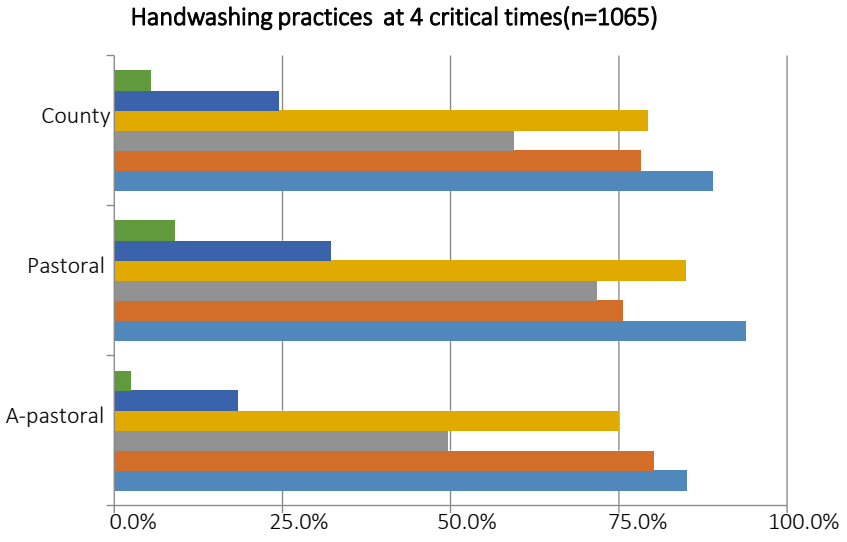
The survey revealed that, 48% of respondents live within less than 500m to water sources while 52% of the population lives more than 500m away from water sources. Further, 90% of respondents do not queue for water. Among those who queue, 57% do so for less than 30 minutes, 37% do so between 30m-60mins and the remaining 6% queue for more than an hour. This is within the SPHERE standards for WASH; the maximum distance from any household to the nearest water point should be 500 meters. The maximum queuing time at a water source should not exceed 15 minutes and it should not take more than three minutes to fill a 20-litre container.

3.8.3 Water Treatment

Majority, 84% of respondents do not treat the water before drinking. This provides a direct causality of high prevalence of diarrheal diseases in the county. Among the 16% of respondents who treat their water, chemical treatment is the most preferred, against the myth that chemical reagents yield unpleasant smell in treated water. The two most common ways of treatment entail use of chemical reagents (PUR and Water-Guard) at 58% and boiling at 38%. Most of the households have not embraced boiling as a water treatment option.

3.8.4 Hand Washing

From the survey, the most prevalent moments of handwashing included before eating at 79%, after visiting the toilet at 78%, and before cooking at 59%. Further, only 15% of the sample population washed their hands at the four critical times; highlighting a major knowledge gap in this vital practice-(figure 10). The Agro-pastoral zone fairs much worse in handwashing at critical times (at only 7.8%) compared to the pastoral zones at 23%. This coupled with a large proportion of respondents (84%) not treating their water may be major causes of the high prevalence of diarrheal diseases in the county. A low proportion of the population (28%) practiced handwashing with soap, traditional herbs or ash.



	A-pastoral	Pastoral	County
other times	2.5%	9.0%	5.4%
After changing child diaper	18.40%	32.10%	24.40%
Before eating	74.90%	85.00%	79.30%
Before cooking	49.60%	71.80%	59.30%
After visiting the toilet	80.20%	75.60%	78.20%
Handwashing done	85.1%	93.8%	88.9%

Figure 10: Hand washing trends

3.8.5 Latrine Ownership and Utilization

From the survey, latrine coverage in Wajir is at 54%; with 8 percent of respondents owning a traditional/VIP latrine while 26% share a traditional/VIP latrine. However, 46% of the sampled population practice open defecation which predisposes the population to disease outbreaks and the contamination of water sources with faecal coliforms.

3.9 Household Dietary Diversity and Food Consumption Score

3.9.1 Household Dietary Diversity

In assessing the nutritional quality and quantity of the food consumed by the survey population, a week retrospective household dietary diversity questionnaire was administered that would also help to determine the households' economic capacity to consume various foods in the county. 2 main food groups were consistently consumed within the last 7 days by more than 65% of the sampled population namely; Vitamin A rich foods at 67% and Protein rich foods at 99%. Iron rich foods consumption performed poorly as 8% of the population in the same time frame, as highlighted below.

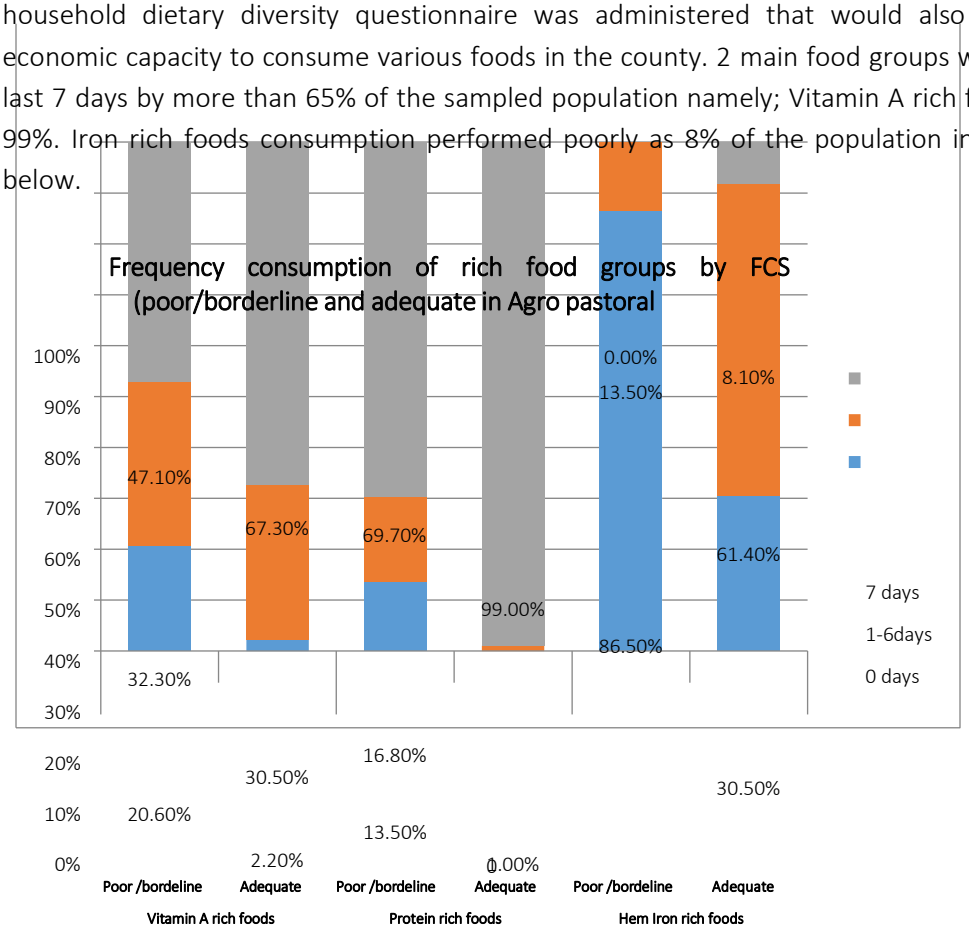


Figure 11: Diet diversity scores

3.9.2 Food Consumption Score and Coping Strategy Index

The food consumption score is an acceptable proxy indicator to measure calorific intake and diet quality at household level, giving an indication of food security status of the household. It's a composite score based on dietary diversity, food frequency and relative nutritional importance of different food groups. A high proportion (65%) of the sampled households had acceptable FCS, 25% were in the borderline region and only 10% had poor FCS score. On average, the County had a Coping Strategy Index of 15.1; a respectful marker of resilience.

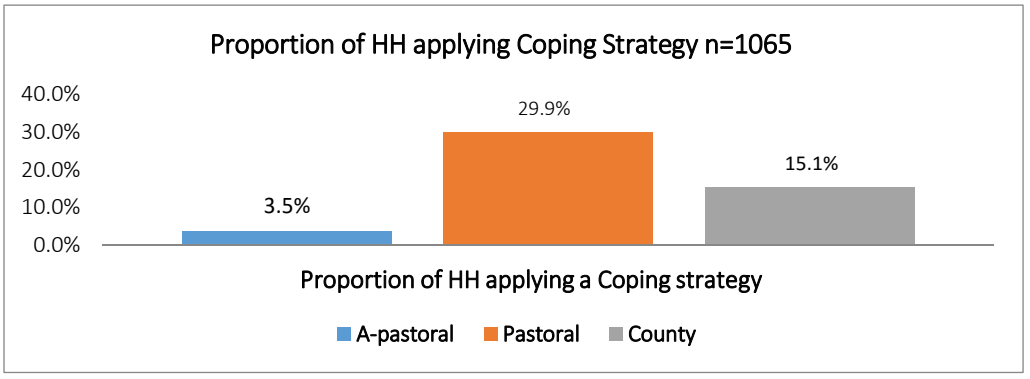


Figure 12 Coping strategy indices

3.4 Maternal Nutrition Status

The maternal malnutrition was defined as women whose MUAC measurements were < 21.0cm while women whose MUAC measurements were between 21.0 <23.0cm were classified as at risk of malnutrition. Maternal malnutrition is usually associated with high risk of low birth weights and it is recommended that before, during and after birth, the maternal nutrition status should be adequate. MUAC is used to determine the level of undernutrition among pregnant and lactating women using a cut-off point of < 21cms.

The survey reached a total of 1006 women of reproductive age; 79.9 %, 14.0% and 6.1% had healthy (MUAC >23cm), moderately malnourished (MUAC >21.5cm - <23cm) and severely malnourished (MUAC <21cm) respectively. Among the pregnant and lactating mothers, 76.2%, 16.2% and 7.6 percent were healthy (MUAC >23cm), moderately malnourished and severely malnourished respectively, (figure 13). Women of the reproductive age in the pastoral livelihood were more malnourished than those in the agro-pastoral zone but not significantly different. (DHIS data)

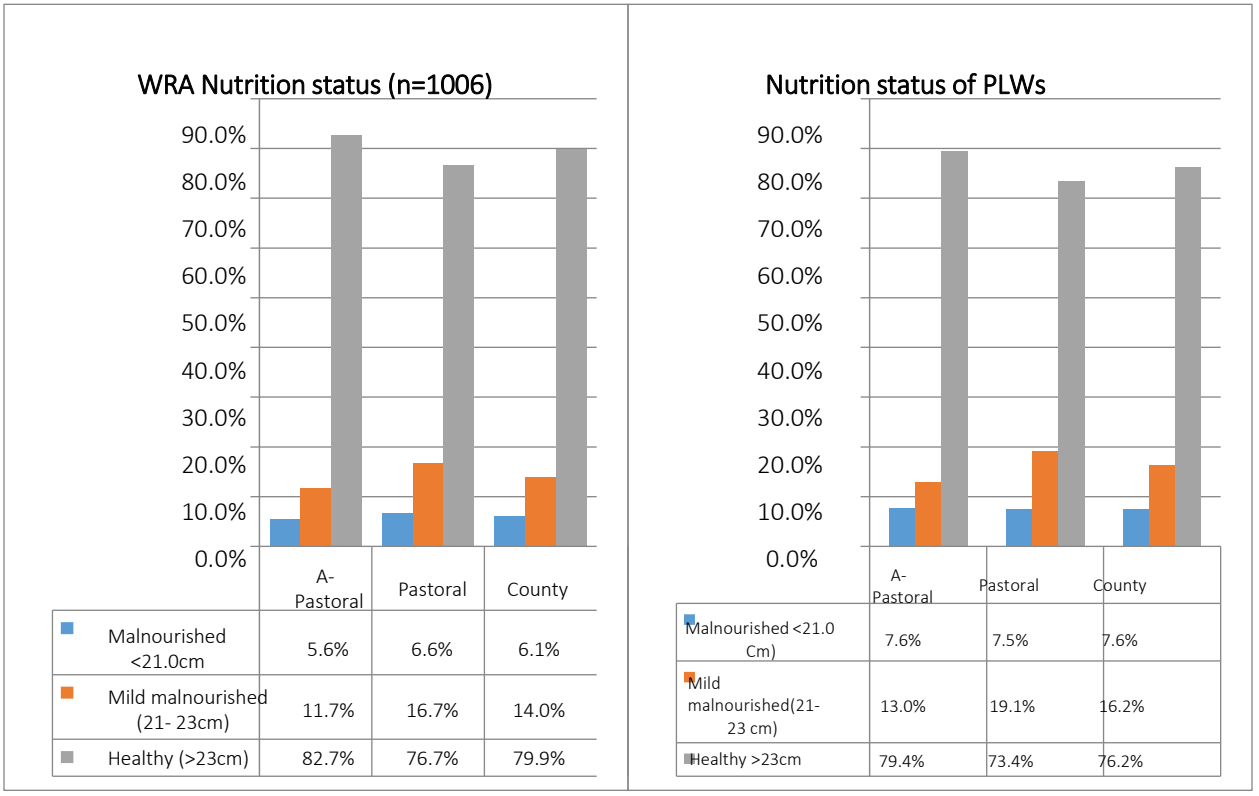
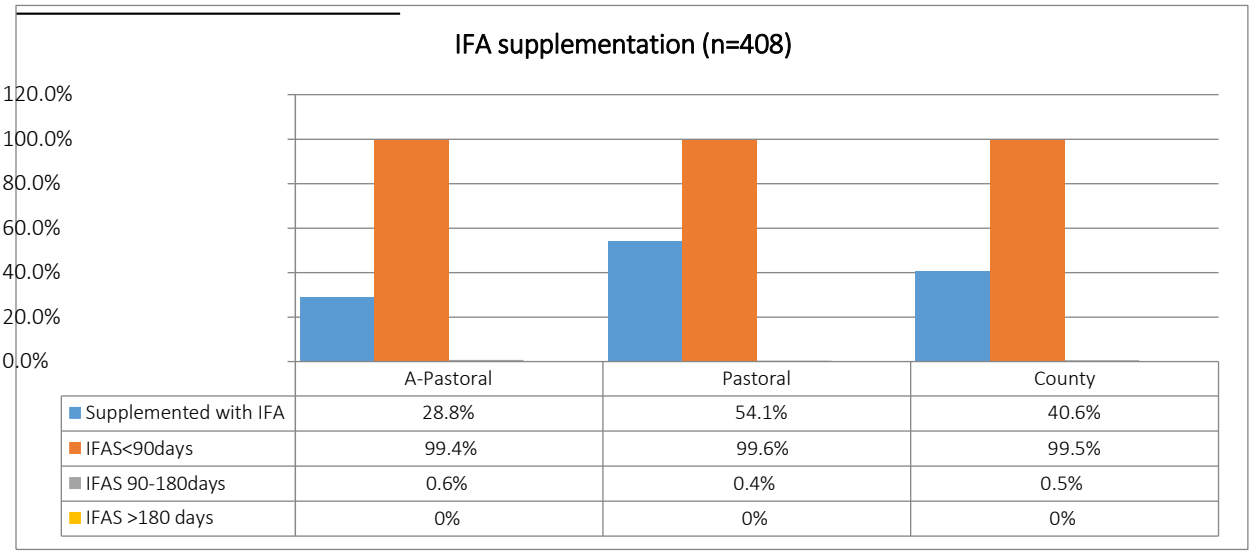


Figure 13: Maternal nutrition status

Iron and folic acid supplementation (IFAS) for pregnant women stood at 40.6% of the sampled population, (figure 14) which is significantly low in comparison with the national average of 80%. Majority of the women who had taken the IFAS,(99.5%) were observed to have taken for less than 90 days with none taking the IFAs for the recommended 270 days and less than 1% having taken the supplements (>90-270 days).) as illustrated in figure 14. This could be attributed to the poor, health seeking behaviour in the county with only 36.8% of pregnant women having attended 4 or more antenatal visits[1], hence most of the women supplemented are only those who visit health facilities. Most women complain of its metallic taste leading to low compliance of IFAS uptake. Majority of the pregnant mothers attend first ANC during the third trimester thus not taking for the recommended period.



	A-Pastoral	Pastoral	County
Supplemented with IFA	28.8%	54.1%	40.6%
IFAS<90days	99.4%	99.6%	99.5%
IFAS 90-180days	0.6%	0.4%	0.5%
IFAS >180 days	0%	0%	0%

Figure 14: IFAs supplementation

3.5 Nutritional Status of Children Under Five Years

Global acute malnutrition (GAM) is defined as **<-2SD Z** scores weight-for-height and/or oedema. GAM is a combination of Moderate Acute Malnutrition and Severe Acute Malnutrition. Moderate Acute Malnutrition is defined as **Z** Scores of **<-2SD - >-3SD** while Severe Acute Malnutrition is defined as **<-3SD Z** scores weight-for-height and/or oedema.

The Weight for Height index is the most appropriate index to quantify wasting in a population and reflects the current nutrition/health status of the community. The weight for height index measures body mass in relation to height or length and describes the current nutritional status. Children below standard deviations of below the mean indicate wasting and represent failure to receive adequate nutrition in a period immediately preceding the survey.

3.5.1 Prevalence of acute malnutrition (weight-for-height z-score –WHO Standards 2006)

The Global Acute Malnutrition rates were at 9.4% (95% CI) and 13.4% (95% CI) for Agro-pastoral and Pastoral livelihoods respectively, table 5. WHO classification indicates a **Poor and Serious** nutrition situation for Agro-pastoral and Pastoral livelihood respectively. The overall County weighted GAM was 11.3% (95% CI) and SAM of 1.9% (95% C.I.). No oedema case was detected. More boys were observed to be more malnourished in Pastoral livelihood zone, in the agro-pastoral livelihood however, there was no significant difference among the boys and girls. KDHS 2014 reported a GAM and SAM of 14.2 and 3.1 respectively for Wajir County.

The nutrition situation compared to the same season in 201 improved from critical to serious in the pastoral livelihood zone and serious to poor in the agro-pastoral livelihood zone which can be attributed to improved food security status as reported in the NDMA early warning bulletin of July 2016 as most of the indicators were reported as being within normal. Milk consumption in the month of July declined from 30 litres to 38 litres reported in May 2016[2] per day, it was still higher than the long term average mean of 16. The decline is attributed to deteriorating pasture and outbreak of diseases affecting the overall milk availability. Although milk consumption declined by approximately 12%, this will not be manifested in the current nutrition status. Milk consumption is critical in the nutrition status of children under 5 years.

[2] Early Warning drought bulletin, NDMA July 2016

Table 5: Prevalence of acute malnutrition based on WHZ (and/or oedema)

	Agro-Pastoral			Pastoral		
	All n = 657	Boys n = 343	Girls n = 314	All n = 568	Boys n = 289	Girls n = 279
Prevalence of global malnutrition (<-2 z-score and/or oedema)	(62) 9.4 % (7.4 - 11.9 95% C.I.)	(32) 9.3 % (6.7 - 12.8 95% C.I.)	(30) 9.6 % (6.5 - 13.8 95% C.I.)	(76) 13.4 % (10.0 - 17.7 95% C.I.)	(50) 17.3 % (12.4 - 23.6 95% C.I.)	(26) 9.3 % (6.2 - 13.8 95% C.I.)
Prevalence of moderate malnutrition (<-2 z-score and >=-3 z-score, no oedema)	(51) 7.8 % (5.9 - 10.2 95% C.I.)	(26) 7.6 % (5.5 - 10.4 95% C.I.)	(25) 8.0 % (5.2 - 12.0 95% C.I.)	(64) 11.3 % (8.0 - 15.6 95% C.I.)	(42) 14.5 % (10.0 - 20.7 95% C.I.)	(22) 7.9 % (5.0 - 12.2 95% C.I.)
Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(11) 1.7 % (0.9 - 3.1 95% C.I.)	(6) 1.7 % (0.7 - 4.3 95% C.I.)	(5) 1.6 % (0.6 - 4.4 95% C.I.)	(12) 2.1 % (1.2 - 3.6 95% C.I.)	(8) 2.8 % (1.4 - 5.2 95% C.I.)	(4) 1.4 % (0.5 - 3.7 95% C.I.)

3.5.2 Prevalence of underweight based on weight-for-age z-scores by sex

Underweight is measured by weight for age and reflects combination of acute and chronic malnutrition. The global underweight rate observed during the survey for the pastoral livelihood zone and agro-pastoral was 14.9% and 9.5% respectively, boys were more underweight in both livelihood zones compared to girls, (table 6). The County average (weighted) is 9.9 % which is compares with the national rate of 11%. Boys were observed to be more underweight than girls. The overall prevalence of underweight as compared to 2015 showed no significant change.

Table 6: Prevalence of underweight based on weight-for-age z-scores by sex

	Agro-Pastoral				Pastoral			
Indicator	Total N	All	Boys	Girls	Total N	All	Boys	Girls
Underweight Weight for Age (WAZ) <-2 Z Score	663	(63) **9.5 %** (7.0 - 12.8 95% C.I.)	(40) **11.6 %** (8.3 - 15.9 95% C.I.)	(23) **7.2 %** (4.6 - 11.2 95% C.I.)	569	(85) **14.9 %** (11.9 - 18.6 95% C.I.)	(51) **17.6 %** (12.6 - 24.0 95% C.I.)	(34)**12.2 %** (8.7 - 16.8 95% C.I.)

Underweight Weight for Age (WAZ) <-3 Z Score	663	(3) **0.5 %**	(0) **0.0 %**	(3) **0.9 %**	569	(18) **3.2 %**	(11) **3.8 %**	(7) **2.5 %** (1.2 - 5.0 95% C.I.)
		(0.1 - 1.4 95% C.I.)	(0.0 - 0.0 95% C.I.)	(0.3 - 2.9 95% C.I.)		(2.1 - 4.8 95% C.I.)	(2.2 - 6.5 95% C.I.)	

3.5.3 Prevalence of stunting based on height-for-age z-scores and by sex

Stunting is measured by the index of height for age and reflects failure to receive adequate nutrition over a long period of time and is also affected by recurrent and chronic illness. The stunting rate in Wajir County is at an average (weighted) of 9.9% percent. Stunting in pastoral and agro-pastoral were 11.8 and 7.9 percent respectively, table 7. This according to WHO classification indicates low levels of malnutrition. The boys seem to be more stunted than the girls. Stunting levels observed during the survey were lower than County figure of 26.4 percent reported in the Kenya demographic health survey of 2014.

Table 7: Prevalence of stunting based on height-for-age z-scores and by sex

	Agro-Pastoral				Pastoral			
Indicator	Total N	All	Boys	Girls	Total N	All	Boys	Girls
Stunting Height for Age (HAZ) <-2 Z Score	657	(52) **7.9 %** (5.4 - 11.5 95% C.I.)	(37) **10.8 %** (7.1 - 16.2 95% C.I.)	(15) **4.8 %** (2.8 - 7.9 95% C.I.)	559	(66) **11.8 %** (9.3 - 14.8 95% C.I.)	(38) **13.3 %** (9.1 - 19.0 95% C.I.)	(28) **10.3 %** (7.4 - 14.1 95% C.I.)
Severe Stunting Height for Age (HAZ) <-3 Z Score	657	(5) **0.8 %** (0.3 - 1.8 95% C.I.)	(4) **1.2 %** (0.4 - 3.1 95% C.I.)	(1) **0.3 %** (0.0 - 2.4 95% C.I.)	559	(10) **1.8 %** (1.0 - 3.1 95% C.I.)	(5) **1.7 %** (0.7 - 4.0 95% C.I.)	(5) **1.8 %** (0.8 - 4.2 95% C.I.)

Although overall the nutrition status of children has improved from what it was last year and in the KDHS 2014, there is need to step up efforts to prevent deteriorations for the nutrition situation. Despite the relative improvement in access to health services in Wajir County, the performance of all the HINI indicators is below the national average eg VAS, Zinc supplementation during diarrhea, deworming, IFAS etc., highlighting the need to scale up these interventions.

Generally, access to basic and health service seems poorer in the agro pastoral zones compared to the pastoral areas as already captured in the report e.g. of piped water was at 10.9% compared to 48.3% in the pastoral zones. The coverage for deworming, Zinc supplementation was much poorer in the agro-pastoral zone s compared to the pastoral zones. In addition, there were more sick children in the agro-pastoral zones compared to the pastoral areas. In addition, handwashing at critical times was much lower in the agro-pastoral compared to the pastoral areas at 7.8% and 23% respectively while immunization for measles at 18 months was at a mere 5.9% in the agro pastoral compared to 23% for pastoral. This implies that the agro-pastoral areas will need more focus by county and other actors to ensure equity in access to services and interventions.

CHAPTER 4

4.1 CONCLUSIONS AND RECOMMENDATIONS

The nutrition situation showed a slight improvement as per the results of this survey compared to 2015 results.

The following conclusions and recommendations were drawn from this survey and actioned with timelines as highlighted below:

Table 8: Conclusions & Recommendations

FINDINGS	RECOMMENDATION	BY WHO	TIME LINE
Poor handwashing practices and water treatment at household level	• SBCC to promote handwashing and water treatment at household level. • CLTS scale up to address OD. • Provision of water treatment chemicals for use at household level	MoH (public health) /Health partners	Oct 2016
High open defecation rate	• CLTS scale up. • Sensitize the community on importance of toilet use.	MOH(department of public health)	
Low IFA supplementation	• Advocate and create public awareness and campaigns on IFA Supplementation. • Promote the early ANC attendance to ensure mothers take for the recommended period • Department of health to procure adequate IFA supplies	MO	Ongoing
Low vitamin A supplementation and deworming	• Conduct mass VAS supplementation and deworming during Malezi bora. • Integrate vitamin A supplementation at ECDs • Create awareness on VAS and other health and nutrition interventions?	MOH/Partners	Nov 2016
Poor access to health and nutrition and water in the Agro pastoral Zone	• Scale up of services by MOH, MOAW, WASH. • Joint supportive supervision and monitoring. • Creation of more water points for the agro pastoral. • Sensitize the community on water treatment • Sensitize communities on health seeking and importance of growth monitoring and immunization	MOH,MOAW,WASH and partners	Oct 2016

High GAM rates in the Pastoral Zone	Scale up continuous active case finding for malnourished cases (U5,PLW) in the pastoral zone.	MoH (nutrition and community health strategy) and nutrition partners	Immediately

5. ANNEXES

5.1 Plausibility Report

5.1.2 Plausibility check for Pastoral livelihood zone 2016

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
Flagged data (% of out of range subjects)	Incl	%	0-2.5 0	>2.5-5.0 5	>5.0-7.5 10	>7.5 20		**0** (0.9 %)
Overall Sex ratio (Significant chi square)	Incl	p				>0.1 0	>0.05 2	>0.001 4	<=0.001 10	**0** (p=0.616)
Age ratio(6-29 vs 30-59) Incl (Significant chi square)		p	>0.1 0	>0.05 2	>0.001 4	<=0.001 10		**0** (p=0.173)		
Dig pref score – weight		Incl	#	0-7 0	8-12 2	13-20 4	> 20 10		**0** (4)	
Dig pref score – height	Incl	#	0-7 0	8-12 2	13-20 4	> 20 10		**2** (8)		
Dig pref score – MUAC	Incl	#	0-7 0	8-12 2	13-20 4	> 20 10		**0** (6)		
Standard Dev WHZ . .	Excl Excl	SD SD		<1.1 and >0.9 0	<1.15 and >0.85 5	<1.20 and >0.80 10	>=1.20 or <=0.80 20	**0** (1.02)		
Skewness	WHZ		Excl	#	<±0.2 0	<±0.4 1	<±0.6 3	>=±0.6 5	**0** (0.01)	
Kurtosis	WHZ		Excl	#	<±0.2 0	<±0.4 1	<±0.6 3	>=±0.6 5		**0** (-0.05)
Poisson dist WHZ-2	Excl	p	>0.05 0	>0.01 1	>0.001 3	<=0.001 5		**3** (p=0.003)		
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	**5** %			

The overall score of this survey is 5 %, this is excellent.

5.1.2 Plausibility check for Agro-Pastoral livelihood zone

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**
Flagged data (% of out of range subjects)	Incl	%	0-2.5 0	>2.5-5.0 5	>5.0-7.5 10		>7.5 20	**0** (1.2 %)
Overall Sex ratio (Significant chi square)		Incl	p				>0.1 0	>0.05 2	>0.001 4	<=0.001 10	**0** (p=0.332
Age ratio(6-29 vs 30-59) Incl (Significant chi square)			p	>0.1 0	>0.05 2	>0.001 4	<=0.001 10	**0** (p=0.151)			
Dig pref score - weight		Incl	#	0-7 0	8-12 2	13-20 4	> 20 10		**0** (3)		
Dig pref score - height	Incl	#	0-7 0	8-12 2	13-20 4	> 20 10	**0** (7)				
Dig pref score - MUAC	Incl	#	0-7 0	8-12 2	13-20 4	> 20 10	**0** (4)				
Standard Dev WHZ . .	Excl Excl	SD SD	<1.1 and >0.9 0	<1.15 and >0.85 5	<1.20 and >0.80 10	>=1.20 or <=0.80 20	**0** (0.98)			
Skewness	WHZ	Excl	#	<±0.2 0	<±0.4 1	<±0.6 3	>=±0.6 5	**0** (-0.02)		
Kurtosis	WHZ	Excl	#	<±0.2 0	<±0.4 1	<±0.6 3	>=±0.6 5	**0** (0.04)		
Poisson dist WHZ-2	Excl	p	>0.05 0	>0.01 1	>0.001 3	<=0.001 5	**0** (p=0.571)			
OVERALL SCORE WHZ =			0-9	10-14	15-24	>25	**0** %			

The overall score of this survey is 0 %, this is excellent.

5.2 Smart survey clusters-2016

Pastoral			**Agro pastoral**		
Geographical Unit Agro-Pastoral	Population Size	Cluster	Geographical Unit Pastoral	Population Size	Cluster
Malkagufu	2304		Abakore	7673	
Fullow	1152	1	Abdiaziz	1087	
Buna	9140	2,3	Abdille Gaab	477	
Garseake	1016		Abdiwako	5463	1
Beramu	1872	4	Adan Awale	2081	
Ingirir	3111	5	Ademasajida	8558	2
Batalu	4945	RC	Ali Dumal	554	
Sala	1397		Alimao	4609	
Korondille	13540	6,7,8,9	Anole	12156	RC
Milseded	1251		Arablow	1004	
Lensayu	6912	10,11	Arbajahan	6975	
Kurow	2793	12	Arbaqaranso	2964	3
Hote	1101		Athibohol	2752	
Bute	22005	13,14,15,16,17,18	Bagdad	880	
Adadijole	4037	19	Baji	842	
Ogomdi	7887	20,21	Balad Amin	2419	
Ogorji	3789	22,23	Banane	3761	

Watiti	5095	24	Bangal	880	
Dugo	7412	RC,25	Barmil	1916	
Ajawa	8249	26,27	Barwaqo	3520	4
Bosicha	917		Basanicha	2073	
Garakilo	2616	28	Basir	5462	
Qudama	8903	RC,29	Berjanai	4934	5
Danaba	15891	30,31,32,33,RC	Biyaad	2114	
Qarsabula	3819	34	Boa	1071	
Gurar	14100	35,36,37,38	Boji yare W	2085	
Malkagufu	2304		Boji Yareh S	663	
Fullow	1152	1	Bulla Gadud	1153	
Buna	9140	2,3	Bulla Hewa	880	
Garseake	1016		Bulla Isiolo	2153	
Beramu	1872	4	Bulla juu	799	
Ingirir	3111	5	Bulla Kom	1631	
Batalu	4945	RC	Bulla Majina	1979	6
Sala	1397		Bulla power	5774	
Korondille	13540	6,7,8,9	Burder	5067	
Milseded	1251		Burmayo	1249	
Lensayu	6912	10,11	Dadantalai	1425	7
Kurow	2793	12	Dambas	9727	

Hote	1101		Dasheq	6005	8
Bute	22005	13,14,15,16,17,18	Dela	11789	
Adadijole	4037	19	Dilmanyale	3612	9
Ogomdi	7887	20,21	Dodha	4012	
Ogorji	3789	22,23	Dunto	9594	10
Watiti	5095	24	El-Adow	3602	
Dugo	7412	RC,25	Elben	13129	11
Ajawa	8249	26,27	Eldas	21263	12
Bosicha	917		Elnur	6752	RC
Garakilo	2616	28	Elyunis	3644	
Qudama	8903	RC,29	Eyrib	3008	
Danaba	15891	30,31,32,33,RC	Finni	879	
Qarsabula	3819	34	Ganyure	4557	13
Gurar	14100	35,36,37,38	Garsegoftu	6960	
Malkagufu	2304		God- Ade	7218	14
Fullow	1152	1	Godrahma	1979	
Buna	9140	2,3	Griftu	7310	
Garseake	1016		Gunana	2799	
Beramu	1872	4	Habaswein Central	2904	15
Ingirir	3111	5	Hadado North	14786	16
Batalu	4945	RC	Halane	1443	

Sala	1397		Haragal	1744	
Korondille	13540	6,7,8,9	Hassan Yarrow	1292	
Milseded	1251		Hodhan	2970	
Lensayu	6912	10,11	Hubsoy	561	
Kurow	2793	12	Hungai	6961	17
Hote	1101		JaiJai	1081	
Bute	22005	13,14,15,16,17,18	Jogoo	7355	
Adadijole	4037	19	Jowhar	3614	18
Ogomdi	7887	20,21	Kajaja1	2448	
Ogorji	3789	22,23	Kajaja2	2448	
Watiti	5095	24	Kalkacha	2640	
Dugo	7412	RC,25	Kanjara	1791	
Ajawa	8249	26,27	Karu	370	
Bosicha	917		Katote	3487	19
Garakilo	2616	28	Kibilay	3542	
Qudama	8903	RC,29	Kilkiley	5690	
Danaba	15891	30,31,32,33,RC	Kiwanja Ndege	4279	

5.2. Calendar of Events 2016

LOCAL ENENTS CALENDER FOR WAJIR COUNTY (SMART SURVEY)		

MONTH	Seasons	2011	2012	2013	2014	2015	2016
JANUARY (JITOKO, BISHAKOWAD)	ORAHED, BIRA (HOT AND DRY SEASON)		54	42	30	18	6
			Al-Shabab attack at Gerile/Duubki Gerile	Mowlid	Mowlid	ORAHED, BIRA (HOT AND DRY SEASON)	Mowlid/GAF GALI HOBAY, GEL - FAROOD
FEBRUARY (JILAMA,BISHALABAD)			53	41	29	17	5
			Mowlid/Waggala Masacre memorial	Waggala Masacre memorial	Waggala Masacre memorial	ORAHED, BIRA (HOT AND DRY SEASON)	
MARCH (JISADI,BISHASADAHAD)			52	40	28	16	4
			KCSE Results Cancelled /Natijadi Mtihanki Ladithay	General Elections/Doorashadi guud		GU'U, GANI (LONG RAINS)	

APRIL (JIAFURI,BISHAAFARAD)	**GU'U, GANI (LONG RAINS)**		**51**	**39**	**27**	**15**	**3**
				President Inaugration		**GU'U, GANI (LONG RAINS)**	
MAY (JISHANI,BISHASHANAD)			**50**	**38**	**26**	**14**	**2**
				Eldas Bus Accident		**GU'U, GANI (LONG RAINS)**	
JUNE (JIJAHA, BISHALIHAD)	**HAGAY ADHOLES (COLD SEASON)**		**49**	**37**	**25**	**13**	**1**
					Ramadan	**Ramadan**	
JULY (JITORBA,BISHATODOBAD)		**60**	**48**	**36**	**24**	**12**	
			Beginning of Ramadan	**Ramadhan**	**Ramadan**	**Sonfur/Idul-fitri**	

AUGUST (JISADED, BISHASADEDAD)		**59**	**47**	**35**	**23**	**11**	
		Ramadan/Abar Iskugur/Uji Badan	**IDD FITRI**			**Dacuun Dilaac**	
SEPTEMBER (JISAGAL, BISHASAGALAD)	**JILAL,BON (DRY SEASON)**	**58**	**46**	**34**	**22**	**10**	
			National Teachers Strike/Mudhaharadki Macalimiinta			**IDD weyney/ Idd Arafa**	
OCTOBER (JIKUDAN, BISHATOBANAD	**DERR AGAY (SHORT RAINS)**	**57**	**45**	**33**	**21**	**9**	
		KDF ATTACKS SOMALIA IN SEARCH OF ALSHABAAAB	**Idul-Adha(Arafah)**	**Idul-Adha(Arafah)**	**Zakka**	**Zakka/deyr**	
NOVEMBER (JIKUDANI,BISHAKOWITOBANAD)		**56**	**44**	**32**	**20**	**8**	
		Idul-Adha(Arafah)/Deyr wen/Bisha zakkah	**Bisha Zakkah/Beginning of voter registration**	**Bisha Zakkah**	**bisha Zakka**		

DECEMBER (JIKUDLAMA, BISHASALABAITOBANAD)		**55**	**43**	**31**	**19**	**7**	
		Deyr Wen				**Iskul xiray (deeray)/Mowlid**	

5.3: Questionnaire

1.IDENTIFICATION 1.1 Data Collector_____ 1.2 Team Leader_____ 1.3 Survey date (dd/mm/yy)----------								
1.4 County	1.5 Sub County	1.6 Division	1.7 Location	1.8 Sub-Location	1.9 Village	1.10 Cluster No	1.11 HH No	1.12 Team No.

2. Household Demographics									
2.1	2.2	2.3		2.4	2.5	2.6	2.7	2.8	2.9
Age Group	Please give me the names of the persons who usually live in your household.	Age (months for children <5yrs and years for over 5's)		Childs age verified by 1=Health card 2=Birth certificate/ notification 3=Baptism card 4=Recall	Sex 1= Male 2= Female	If 3 yrs and under 18 Is child enrolled in school ? 1 = Yes 2 = No (If yes go to 2.8; If no go to 2.7)	Main Reason for not attending School (Enter one code from list) 1=chronic Sickness 2=Weather (rain, floods, storms) 3=Family labour responsibilities 4=Working outside home 5=Teacher absenteeism 6=Too poor to buy school items e.t.c 7=Household doesn't see value of schooling 8 =No food in the schools 9 = Migrated/ moved from school area 10=Insecurity 11-No school Near by 12=Married 13=others (specify)……..	What is the highest level of education attained?(level completed) From 5 yrs and above 1 = pre primary 2= Primary 3=Secondary 4=Tertiary 5= None 6=others(specify)	If the household owns mosquito net/s, who slept under the mosquito net last night? (*Probe- enter all responses mentioned(Use 1 if "Yes" 2 if "No and 3 if not applicable)*
		YRS	MTH						
< 5 YRS	1								
	2								
>5 TO 18 YRS	5								
	6								
	7								
ADULT	13(HH)								
	14)								
	15								
	16								

2.10	How many mosquito nets does this household have? _____ (Indicate no.)	
2.11	Main Occupation of the Household Head – HH. (enter code from list) 1=Livestock herding 2=Own farm labour 3=Employed (salaried) 4=Waged labour (Casual) 5=Petty trade 6=Merchant/trader 7=Firewood/charcoal 8=Fishing 9=Others (Specify)|____|	2.12. What is your main current source of income 1. =No income 2. = Sale of livestock 3. = Sale of livestock products 4. = Sale of crops 5. = Petty trading e.g. sale of firewood 6. =Casual labor 7. =Permanent job 8. = Sale of personal assets 9. = Remittance 10. Other-Specify|____|
2.13	Marital status of the respondent 1. = Married 2. = Single	2.14.What is the residency status of the household? 1. IDP 2.Refugee

	3. = Widowed 4. = separated 5. = Divorced. |____|	3. Resident |____|

Fever with Malaria: High temperature with shivering	Cough/ARI: Any episode with severe, persistent cough or difficulty breathing	Watery diarrhoea: Any episode of three or more watery stools per day	Bloody diarrhoea: Any episode of three or more stools with blood per day

3. CHILD HEALTH AND NUTRITION (ONLY FOR CHILDREN 6-59 MONTHS OF AGE; IF N/A SKIP TO SECTION 3.6)

Instructions: *The caregiver of the child should be the main respondent for this section*

3.1 CHILD ANTHROPOMETRY

(Please fill in ALL REQUIRED details below. Kindly maintain the same child number as part 2)

A Child No	B	C	D	E	F	G	H	I	J	K	L	3.2	3.3
	what is the relationship of the respondent with the child/children 1=Mother 2=Father 3=Sibling 4=Grandmother 5=Other (specify)	SEX F/m	Exact Birth Date	Age in months	Weight (KG) XX.X	Height (CM) XX.X	Oedema Y= Yes N= No	MUAC (cm) XX.X	Has your child (NAME) been ill in the past two weeks? <u>If No, please skip part K and proceed to 3.4)</u> 1.Yes 2. No	If YES, what type of illness (multiple responses possible) 1 = Fever with chills like malaria 2 = ARI /Cough 3 = Watery diarrhoea 4 = Bloody diarrhoea 5 = Other (specify)	If the child <u>had watery diarrhoea</u> in the last TWO (2) WEEKS, did the child get THERAPEUTIC zinc supplementation? *Show sample and probe further for this component check the remaining drugs(confirm from mother child booklet)* 1 = Yes 2 = No 3 = Do not know	When the child was sick did you seek assistance? 1.Yes 2. No	If the response is yes to question # 3.2 where did you seek assistance? (More than one response possible- 1. Traditional healer 2.Community health worker 3. Private clinic/ pharmacy 4. Shop/kiosk 5.Public clinic 6. Mobile clinic 7. Relative or friend 8. Local herbs 9.NGO/FBO

										See case definitions below			
01													
02													
03													
04													

3.4 Kindly maintain the same child number as part 2 and 3.1 above									
	A	B	C	D	E	F	G	H	I
Child No.	How many times has child received Vitamin A in the past year? (show sample)	How many times did you receive vitamin A capsules from the facility or out reach	If Vitamin A received how many times verified by Card?	How many times has child received drugs for worms in the past year? (12-59 Months) *(show Sample)*	Has the child received BCG vaccination? 1 = scar 2=No scar	Has child received OPV1 vaccination 1=Yes, Card 2=Yes, Recall 3 = No 4 = Do not know	Has child received OPV3 vaccination? 1=Yes, Card 2=Yes, Recall 3 = No 4 = Do not know	Has child received measles vaccination at 9 months *(On the upper right shoulder)?* 1=Yes, Card 2=Yes, Recall 3 = No 4 = Do not know	Has child received the second measles vaccination (18 to 59 months) *(On the upper right shoulder)?* 1=Yes, Card 2=Yes, Recall 3 = No 4 = Do not know
01									
02									
03									
04									

MATERNAL NUTRITION FOR MOTHERS OF REPRODUCTIVE AGE (15-49 YEARS)*(Please insert appropriate number in the box)*				
3.7	3.8	3.9	3.10	3.11
Woman ID. (all ladies in the HH aged 15-49 years from the demographics page)	What is the mother's / caretaker's physiological status 1. Pregnant 2. Lactating 3. None of the above	Mother/ caretaker's MUAC reading: _____.__cm	During the pregnancy of the (name of child below 24 months) did you take iron pills, sprinkles with iron, iron syrup or iron-folate tablets? (name that appears in HH register) 1. Yes 2. No 3. Don't know 4. N/A	If Yes, for how many days? (approximate the number of days)

4.0 WATER, SANITATION AND HYGIENE (WASH)/- *Please ask the respondent and indicate the appropriate number in the space provided*

4.1	What is the MAIN source of drinking water for the household NOW? 1. Piped water system/ borehole/ protected spring/protected shallow wells 2. Unprotected shallow well 3. River/spring 4. Earth pan/dam 5. Earth pan/dam with infiltration well |____| 6. Water trucking /Water vendor 7. Other *(Please specify)*	4.2 What is the trekking distance to the current main water source? 1=less than 500m (Less than 15 minutes) 2=more than 500m to less than 2km (15 to 1 hour) 3=more than 2 km (1 – 2 hrs) 4=Other(specify) |____|				
4.2.2a	Do you queue for water? 1. Yes 2. No (If No skip to question 4.3) |____|	4.2.2b. If yes how long? 1. Less than 30 minutes 2. 30-60 minutes 3. More than 1 hour	|____|			
4.3a	Is anything done to your water before drinking *(Use 1 if YES and 2 if NO)*. if No skip to 4.4 |____|	4.3b If yes what do you do? (*MULTIPLE RESPONSES POSSIBLE) (Use 1 if YES and 2 if NO)*. 1. Boiling…… …… |____| 2. Chemicals (*Chlorine,Pur,Waterguard*)…|____| 3. Traditional herbs……|____| 4. Pot filters…… |____| 5. Other specify_____)……|____|	4.7.3	Probe further; what did the caregiver use to wash your hands? 1. Only water 2. Soap and water 3. Soap when I can afford it 4. traditional herb 5. Any other specify |____|	4.8 Where do members of your household Mainly relieve themselves? 1. In the bushes, open defecation 2. Neighbor or shared traditional pit/improved latrine |____| 3. Own traditional pit/improved latrine 4. Others Specify	
4.4	Where do you store water for drinking? 1. Open container / Jerrican 2. Closed container / Jerrican |____|	4.5 How much water did your household use YESTERDAY (excluding for animals)? *(Ask the question in the number of 20 liter Jerrican and convert to liters & write down the total quantity used in liters)*	|____|			

4.6	Do you pay for water? 1. Yes 2. No (If No skip to Question 4.7.1) |____|	4.6.1 If yes, how much per 20 liters jerrican _____ KSh/20ltrs	4.6.2 If paid per month how much |____|
4.7.1	If the caregiver is aware hand washing practices? 1. Yes 2. No 3. Don't know		
4.7.2	If yes, Yesterday (within last 24 hours) at what instances did you wash your hands? (MULTIPLE RESPONSE- (Use 1 if "Yes" and 2 if "No") 1. After toilet…… …… |____| 2. Before cooking…… …..|____| 3. Before eating…… …. 4. After taking children to the toilet……. 5. Others…… ……..		

5.0: Food frequency and Household Dietary Diversity

Type of food	Did members of your household consume any food from these food groups in the last *7 days?(food must have been cooked /served at the household)* *0-No* *1-Yes*	If *yes*, mark days the food was consumed in the last 7 days? *0-No* *1-Yes*								What was the main source of the dominant food item consumed in the HHD? 1.Own production 2.Purchase 3.Gifts from friends/families 4.Food aid 5.Traded or Bartered 6.Borrowed 7.Gathering/wild fruits 8.Other (specify)	6.0 Please describe the foods that you ate or drank yesterday during day and night at home or outside the home (start with the first food or drink of the morning) *0-No* *1-Yes*	VAD
		D1	*D 2*	D 3	D 4	D 5	D 6	D 7	TOTAL			
5.1. Cereals and cereal products *(e.g. sorghum, maize, spaghetti, pasta, anjera, bread*)?												
5.2. Vitamin A rich vegetables and tubers: Pumpkins, carrots, orange sweet potatoes												
5.3. White tubers and roots: White potatoes, white yams, cassava, or foods made from roots												

5.4	Dark green leafy vegetables: Dark green leafy vegetables, including wild ones + locally available vitamin A rich leaves such as cassava leaves etc.																	
5.5	Other vegetables *(e.g., tomatoes, egg plant, onions)?*																	
5.6	Vitamin A rich fruits: + other locally available vitamin A rich fruits																	
5.7	Other fruits																	
5,8	Organ meat (iron rich): Liver, kidney, heart or other organ meats or blood based foods																	
5.9.	Flesh meats and offals: Meat, poultry, offal *(e.g. goat/camel meat, beef; chicken/poultry)?*																	
5.10	Eggs?																	
5.11	Fish: Fresh or dries fish or shellfish																	
5.12	Pulses/legumes, nuts *(e.g. beans, lentils, green grams, cowpeas)*?																	
5.13	Milk and milk products *(e.g. goat/camel/ fermented milk, milk powder)?*																	
5.14	Oils/fats *(e.g. cooking fat or oil, butter, ghee, margarine)?*																	

5.15	Sweets: Sugar, honey, sweetened soda or sugary foods such as chocolates, sweets or candies										
5.16	Condiments, spices and beverages:										

6. COPING STRATEGIES INDEX		
In the past 7 DAYS, have there been times when you did not have enough food or money to buy food? *0-No* *1-Yes*If No; END THE INTERVIEW AND THANK THE RESPONDENT		
	If YES, how often has your household had to: *(INDICATE THE SCORE IN THE SPACE PROVIDED*)	Frequency score: Number of days out of the past seven (0 - 7).
1	Rely on less preferred and less expensive foods?	
2	Borrow food, or rely on help from a friend or relative?	
3	Limit portion size at mealtimes?	
4	Restrict consumption by adults in order for small children to eat?	
5	Reduce number of meals eaten in a day?	
	TOTAL HOUSEHOLD SCORE: END THE INTERVIEW AND THANK THE RESPONDENT	