WASH BASELINE
Knowledge, Attitude and Practice Survey Report
Gogrial West County, Warrap state
South Sudan

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Executive Summary

ACF-USA received funding from ECHO and CHF to implement its program activities in Gogrial West county, Warrap state. In 2012-2013, the WASH programs are targeting fifteen (15) villages for intervention. Villages targeted are those with high prevalence of malnutrition among children less than five (5) years of age according to 2011 nutrition data and surveys. ACF WASH program conducted the baseline survey to ascertain the knowledge, attitude and practices of the target population on water supply, sanitation and hygiene before it implements its program activities.

The baseline will be used to highlight the root causes of malnutrition in the selected villages and will provide a baseline for evaluation of program effectiveness. The survey was conducted in Mid-May when the hunger gap period was at the peak. 124 households were interviewed during the survey, which included returnees (4%), but were dominantly long term residents (96%). It was found that 56% of the households were headed by females and only 44% by males.

Water Supply: In the dry season, up to 99% of the population gets drinking water from safe water sources, that is from hand pumps and protected hand dug wells. 28% of the target population gets their drinking water from unsafe water source during the rainy season and this only improves in the dry season when surface water is not available. Females do 99% of the water collection. About 40% of the target population has poor water storage practices.

Sanitation: Almost the entire population practices open defecation (96%).

Hygiene: Hand washing at the most critical times is very poor. About half (45%) of the population do not wash hands during the key times and 76% of the respondents wash hands with water only.

Solid wastes Management: 80% of the total population interviewed said that they throw the household wastes to the bush/garden or leave them in the compound.

Diarrhea incidences: 70% had a household member who suffered from diarrhea in the last two weeks. 32% of the total population interviewed said they do not have any knowledge on the causes of diarrhea.

Recommendations:

I. There is need to increase awareness to people on the danger of drinking water from unsafe water sources which is the root cause of many diarrheal and water-borne diseases. Messages should discourage the use of rainy season surface water sources.

II. Appropriate times must be designed for women for hygiene sessions. It has been seen women are everyday being overburdened with domestic work and hence do not have time to attend hygiene sessions yet they are expected to be the role models on good hygiene/sanitation practices at the household level.

III. There is need for intensive campaign on hygiene/sanitation to strongly discourage open defecation which is a predominant practice among the population targeted.

IV. The communities also need to be encouraged on other hygiene practices such as having rubbish pit, bathing shelters, drying racks and clothing lines.

V. Field staff should as much as possible spend maximum time with the community to mobilize, aware and slowly transform the entire population from bad to good hygiene/sanitation practices.

VI. WASH and nutrition to strengthen health and hygiene/sanitation campaigns in the communities targeted. The CNV and hygiene promoters should work together to intensive mobilize and create awareness among the targeted population.
I. Background

1.1 Introduction

Action Against Hunger | ACF International is a global humanitarian organization committed to ending world hunger. Recognized as a leader in the fight against malnutrition, ACF works to save the lives of malnourished children while providing vulnerable communities with sustainable access to safe water and long-term solutions to hunger. With 30 years of expertise in emergency situations of conflict, natural disaster, and chronic food insecurity, ACF runs life-saving programs in over 40 countries benefiting nearly five million people each year.

1.2 WASH Program and Operations Areas

On 9 July 2011, the Republic of South Sudan became the world’s newest country. The realization of the South’s independence came after nearly four decades of a civil war that devastated the lives and livelihoods of the South Sudanese. The consequences of the long conflict on people’s lives, livelihoods and access to basic services were devastating. South Sudan has a long history of childhood (under 5) malnutrition; despite substantial funding and scaling-up of efforts childhood malnutrition rates continue to rise in South Sudan. Numerous studies have shown that poor water, hygiene and sanitation (WASH) practices are the main causes of diarrhea, one of the underlying causes of childhood malnutrition, and a driver on numerous developmental indicators (Bartram and Cairncross, 2010).

ACF USA South Sudan Mission started its operations in South Sudan since 2006 treating malnourished children (less than 5 years) while addressing the underlying root causes of malnutrition through an integrated approach; Nutrition, Food Security and Livelihood and Water, Sanitation and Hygiene. ACF USA South Sudan mission is currently operating in Warrap and Northern Bahr el Ghazal (NBeG) states. In Warrap State, ACF USA operates in Twic and Gogrial West Counties and is the State focal point for WASH.

ACF USA WASH program activities in South Sudan include, but are not limited to, the following: drilling of new water points, rehabilitation of existing water points (mainly boreholes fitted with India Mark II hand pumps) and improving hygiene/sanitation practices of the communities and schools through CLTS and PHAST/CHAST hygiene awareness campaign approaches.

This survey and report covers villages in Alek North and Alek West Payams, Gogrial West County, Warrap state.
1.3 Funding

ACF received funding from ECHO and CHF to implement its program activities in Gogrial West. In 2012-2013, the WASH programs are targeting fifteen (15) villages for intervention. Villages targeted are those with high prevalence of malnutrition among children less than five (5) years of age according to 2011 nutrition data and surveys.

1.4 Objective of the survey

ACF WASH program conducted the baseline survey to ascertain the knowledge, attitude and practices of the target population on water supply, sanitation and hygiene before it implements its program activities. The baseline will be used to highlight the root causes of malnutrition in the selected villages and will provide a baseline for evaluation of program effectiveness.

2. Methodology

KAP questionnaire and FGDs were used to collect the data. ACF WASH team and external enumerators were used for the data collection. The survey was conducted in the month of May when the hunger gap period was at the peak. The survey took a period of 2 weeks. A simple random sampling method was used.

Sample Size (N)

\[ N = \frac{t^2 \times (pq)}{d^2} \]

- \( N \): sample size
- \( t \): error risk (1.96 - 5% risk)
- \( p \): expected prevalence (50%)
- \( q \): 1-p (0.5)
- \( d \): degree of accuracy 0.1 (10% accuracy)

Therefore:

\[ N = \frac{1.96^2 \times (0.5 \times 0.5)}{0.1^2} = 96 \text{ samples} \]

Figure 1: The table below shows the villages where the survey was conducted.

<table>
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<tr>
<th>S/N</th>
<th>Village</th>
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<th>Payam</th>
<th>No. of Household</th>
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**Limitations**

I. It is difficult to find skilled enumerators in the area; therefore, available low skilled enumerators were used who are often too slow and time consuming. Wash program officer and monitoring and evaluation supervisor constantly supervised the survey teams in the field to maintain the quality of data collection.

II. Bad roads can be a major problem hindering access to many of the villages under survey.

3. **Summary of findings**

The baseline KAP survey was conducted in 15 villages from Alek West and Alek North payams. Alek North and Alek West payams are some of the underserved payams in Gogrial West in terms of provision of access to safe water and health/hygiene education due to in accessibility, especially during the rainy season, and as such have been shown to have the highest prevalence of malnutrition according to last years’ ACF nutrition data and surveys. Before the intervention, WASH conducted a baseline KAP survey in all the fifteen (15) villages shown above to find out the knowledge, attitude and practices of the people on water supply, sanitation and hygiene. The survey was conducted in Mid-May when the hunger gap period was at the peak.

124 households were interviewed during the survey, which included returnees (4%), but were dominantly long term residents (96%). It was found that 56% of the households were headed by females and only 44% by males.
3.1 Water Supply

3.1.1 Main sources of drinking water

72% of the respondents get their drinking water from safe water sources (hand pumps or protected wells) during the rainy season and about 99% in the dry season. This indicates that the use of water from open sources only diminishes when not available.

This clearly shows that 27% of the respondents still use water from open (contaminated sources) in the rainy season, when they are available.

3.1.2 Water Use

The average quantity of water used is 10.5 l/p/d and 83% of the population uses less than 15 l/p/d.

3.1.3 Water Collection and transportation

Collection

Adult women predominantly collect the water for the everyday use in the household. In 124 households interviewed, 83% responded adult women fetch the water for the household and 16% says female children also as well do the collection. Only 1% of the respondent says male children sometimes fetch the water. In average 99% of water collection is done by females.

This indicator implies that women are being overburdened with domestic work and hence no time to take proper child’s care.

Only 48% of the respondents travelled less or about half an hour to the nearest safe water source to fetch water.

This indicates that about 52% do not fall in within the Sphere standard of less than 30
minutes. There is need to increase the number of water sources.

**Queuing time at the Water source**

50% of the total respondents spend 15-30 minutes to get water from the water point. 18% spend 30-60 minutes and 15% more than one hour to fetch the water. Only 17% spend less than 15 minutes. Spending high time on queuing is indicating that inadequate water points or inadequate yield of the water points serve the population. It can cause the lack of water intake per capita and contributes to the burden of work for women.

Jerri cans are the predominant containers used for collection and transportation of drinking water. About 94% of the total respondents use Jerri cans and only 6% use buckets.

### 3.1.4 Water Storage

**Container use for storing drinking water**

- Jerri can: 60%
- Plastic bucket: 40%
- Muddy or clay pot: 2%
- Metal pot: 11%

60% of the respondent use jerri-cans for storage of drinking water. Meanwhile 40% use plastic buckets and pots. It was observed during the survey that these are often without lids. The use of open buckets and pots without a lid is a poor practice simply because water can easily get contaminated.

Additionally, dipping method of fetching water from the storage container is a predominant practice among the population, which can also lead to contamination.

**How often you clean the water container**

The general practice of the population is to wash the water containers by using water only.

According the survey result 73% of the population wash their containers fairly often: either whenever it is dirty (29%) or during fetching (44%) every time. 22% of the respondents said they wash their water containers every day. However, 6% of the population does not have a good practice on washing containers for water; they either wash it once a week or month.
3.2 Sanitation

3.2.1 Defecation practices

Open defecation is a predominant practice according to the findings (about 96%) and only 4% use traditional latrines. 95% practice open defecation in open bush and 1% near the house. This contributes to the high occurrence of diarrheal and other water-borne diseases (see later section on diarrhea incidence).

3.2.2 Handling children feces

Only 4% of the total population interviewed says they either bury or rinse children’s feces into traditional latrines. Meanwhile 96% throw the stool into the bush or garden.

3.3 Hygiene

3.3.1 Hand washing practices

About half of the respondents do not have a good hand washing practice during key times. 55% said they wash their hands during one of the three (3) critical times; 5% after defecation, 24% before preparing food and 26% before eating food. It is important to note that most of the respondents do not have a good hand washing practice after defecation, arguably the most important time to wash ones hands to prevent spread of diarrhea.

Some respondents have shown other good hand washing practices for example: 1. after cleansing child’s backside (7%) 2. before breastfeeding (6%).
However, 20% responded they wash their hands after eating and 6% says they only wash when their hands are dirty.

### 3.3.2 Material for Hand washing

Most of the respondents do not use soap or ash when washing their hands: 76% of the total respondents interviewed wash their hands with water only; washing hands only with water alone is not enough to stop the transmission of diarrhea. However, 24% indicated that they wash their hands with clean water and soap.

### 3.3.3 Knowledge on hand washing

#### Why do you wash your hands

- To remove dirty
- Prevent diseases or germs infections
- Clean hands/smartsness

- 90%
- 7%
- 3%
- 0%

About 93% of the respondents do not have knowledge on the importance of hand washing. Hand washing is done to get rid of dirt and to have clean looking hands only. Only 7% understands that washing hands with clean water and soap/ash is to remove/prevent diseases.

### 3.4 Solid waste management

Only 20% of the total respondents have a good practice on household solid wastes management. They either collect the wastes into rubbish pit (12%) or burn/bury them (8%).

This indicates that about 80% of the total respondents do not have a good practice on solid wastes management at the household level. They throw the wastes anyhow to the bush/garden or waste is left in the compound.

The improper disposal of wastes encourages breeding grounds for disease vectors such as mosquito, flies, etc. Knowledge and practices on hygiene & sanitation
3.5 Knowledge and practices on hygiene/sanitation

3.5.1 Bathing practices

About 6% of the total respondents do not show good bathing practices. 4% said they bath when told and 2% do not take bath at all. While 34% and 60% take bath once and twice a day respectively.

10% of the respondents take bath at the water point (borehole) and 17% of the respondents said they take bath inside bathing shelter. About 73% take bath at home in the open.

3.5.2 Handling kitchen utensils

59% of the total respondents do not have either drying rack or table for drying kitchen utensils. 19% dry the utensils on smeared ground, 30% wash prior to meals, which mean they do not dry them, and 10% completely do not wash their utensils.

This indicator clearly shows about a half of the population interviewed do not have proper handling practices for household utensils. Drying of utensils kills germs/bacteria in water that possibly remains in the utensils after washing. Only 41% have a good practice on handling kitchen utensils. 30% say they have drying racks for drying kitchen utensils and 11% said they use tables for drying.
3.5.3 Drying household clothes after washing

Only 36% of the total respondents said they have clothing line for hanging clothes after washing. That means about 64% have other ways of drying. Predominantly, most of the population hangs their clothes on poles/trees after washing (44%) while 1% lay on the ground. While others dry on grass and roofs.

There is need to encourage the population to have line for drying clothes as drying clothes on the ground, roofs, etc can contribute to parasite (fly) and bug infestations.

3.6 Diarrhea incidences

Diarrhea incidences level in the study area is high. About 70% of the respondents said at least someone in their household had had suffered from diarrhea in the last two weeks. This is most likely as a result of lack of knowledge and predominant poor hygiene and sanitation practices. The pie chart below shows the understanding of the population on the causes of diarrhea.

32 % of the respondents do not have any knowledge on the causes of diarrhea. Only 6% understands that dirty hands can cause diarrhea.

In general, about 68% at least have some knowledge on the different causes of diarrhea. Many of the respondents say contaminated food is the major cause of diarrhea (41%).
4 Summary

Water Supply

I. In the dry season, up to 99% of the population gets drinking water from safe water sources, that is from hand pumps and protected hand dug wells. 28% of the target population gets their drinking water from unsafe water source during the rainy season and this only improves in the dry season when surface water is not available. The use of water from open sources for drinking only diminishes when not available.

II. Women and female children predominantly collect the water for everyday use in the household. Females do 99% of the water collection. Only 48% of the women moves less than or 30 minutes to get water from the nearest safe water source, 83% spending at least more than 15 minutes queuing time to get water. This is not in accordance with Sphere standard. Considering the distance to the safe water point, queuing time at the water point and number times they move to fetch the water for everyday use in the household, women are being overburdened. Not only are they expected to collect but also to do other domestic work.

III. About 40% of the target population has poor water storage practices. Use of open containers for storage is a common practice. Additionally, dipping method of drawing water from the storage container is a dominant practice by many households.

Sanitation

Almost the entire population practices open defecation (96%) and only 4% of 124 households interviewed use traditional latrines. In a similar scenario, 96% of the total population does not properly dispose of the children’s stool.

Hygiene

Hand washing at the most critical times is very poor. About half (45%) of the population do not wash hands during the key times. 76% of the respondents wash hands with water only. 93% of the respondents do not have knowledge on importance of hand washing at critical times.

Solid wastes Management

80% of the total population interviewed said that they throw the household wastes to the bush/garden or leave them in the compound. This is not a good practice as leaving wastes anyhow would inhabit and will provide a breeding ground for vector diseases such as mosquitoes, flies, etc.

Diarrhea incidences

70% had a household member who suffered from diarrhea in the last two weeks. 32% of the total population interviewed said they do not have any knowledge on the causes of diarrhea.

Knowledge and practices on hygiene & sanitation

I. Bathing shelters: Only 17% of total population has bathing shelters. That means, 83% of them either take bath in the open or at the water point. The population seems to be having good practice on what times they take bath. At least 96% said they bath once or twice daily.

II. Drying racks: 41% of the total respondents have drying racks and tables for drying household utensils after washing. This shows that about 59% do not have a good practice on handling household utensils. They either dry them on the ground or do not wash them all.

III. Clothing line: Only about a third (36%) of the entire population have clothing lines for drying clothes, 2/3 of the population still do not care or use other in hygienic methods of drying clothes.
5 Recommendations

VII. There is need to increase awareness to people on the danger of drinking water from unsafe water sources which is the root cause of many diarrheal and water-borne diseases. Messages should discourage the use of rainy season surface water sources.

VIII. Appropriate times must be designed for women for hygiene sessions. It has been seen women are everyday being overburdened with domestic work and hence do not have time to attend hygiene sessions yet they are expected to be the role models on good hygiene/sanitation practices at the household level.

IX. There is need for intensive campaign on hygiene/sanitation to strongly discourage open defecation which is a predominant practice among the population targeted.

X. The communities also need to be encouraged on other hygiene practices such as having rubbish pit, bathing shelters, drying racks and clothing lines.

XI. Field staff should as much as possible spend maximum time with the community to mobilize, aware and slowly transform the entire population from bad to good hygiene/sanitation practices.

XII. WASH and nutrition to strengthen health and hygiene/sanitation campaigns in the communities targeted. The CNV and hygiene promoters should work together to intensive mobilize and create awareness among the targeted population.

6. Acronyms

ACF – Action Contre La Faim
WASH – Water Sanitation and Hygiene
NBG – Northern Bahr el Ghazal
CLTS – Community Led Total Sanitation
PHAST – Participatory Hygiene and Sanitation Transformation
CHAST – Children Hygiene and Sanitation Transformation
ECHO – European Commission for Humanitarian Offices
CHF – Common Humanitarian Fund
OFDA – Office of disaster Agencies
KAP – Knowledge Attitude and Practices
SMART – Standardized Monitoring and Assessment of Relief and Transition