



**Gender-sensitive WASH, Health/SRHR, and Nutrition support to vulnerable communities in  
East Darfur and South Darfur Project**

**Sudan (2021-2023)**

**Donor: Global Affairs Canada (GAC)**

**Baseline Survey Report**

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## List of Abbreviations

BL	Baseline
BLT	Baseline Team
ED	East Darfur
FG	Focus Group
GAC	Global Affairs Canada
HHs	Households
IDP	Internally Displaced Person
KI	Key informants
PLW	Pregnant and Lactating Women
RHS	Reproductive Health Service
SD	South Darfur
WASH	Water and Sanitation and Health

## Executive Summary

### Key findings

#### WASH

29 water sources are possessed by the 9 communities that include elevated tanks and boreholes. Elevated tanks are confined to densely populated camps that have a population of about 1,400 and water collection is restricted to few hours of the day and people compete for water and are hardly able to secure the quantity of water they need. The elevated tanks are operating but encounter fuel shortage and operate for about 2 hours in the day and 2 hours in the evening.

- Only 15% of the HHs reported adequate access to clean water by getting the amount of water they need.

- 38.5% stated that HHs have equal access to water, unequal access is attributed to water shortage and high competition as well as lack of storage containers at homes.

- 88.9% females and 84.5% males reported feeling safe as a result of the improvement of water services.

- Only 27.8% males and 29% females are satisfied with WASH services.

- 89% of the females and 30% of the schools do not have access to toilets

It is recommended to;

- Increase the capacity of the water sources by increasing number and operation hours and introduction of solar energy to reduce fuel operation cost
- Development of water committees water resource management skills and equipping them with maintenance skills and tool

#### Health

Tori and Alferdos are lacking HCs, the rest of the HCs, except Kario camp HC, which is operated by MSF, the rest of the HCs are in in poor condition, short of health cadre particularly nurses and health visitors, as compared to the presence of large number of traditional midwives. The poor health services in most of the location enforce often ill persons to be carried by community members on foot to the nearest hospital, such as Kass.

#### Methodology

The baseline methodology involved the following for data collection;

- Introductory meetings with field staff
- Review of available literature and meetings with WASH and Health officials

- Field survey of target locations that covered 9 communities.

- Interview of a representative sample of 360 HHs, evenly split between the 9 communities and different sex and age groups that included women, men, girls and boys.

- Facilitation of one FG sessions with the Community KIs and leaders in each community.

- Observations of water sites and health facilities.

- The field survey is supervised by field surveyor assisted by 3 teams of local enumerators. Each comprising 4 gender balanced members and a team leader provided technical support to the field staff and organized meetings with the WASH and Health department officials and obtained secondary data on the current situation of WASH, Health and nutrition services.

- The statistical data was entered and analysed on SPSS and the information and literature obtained from the officials is used to enrich the HHs statistical data.

- Constraints encountered included requirements for visits permission, restrict of use of immediate electronic data capturing applications, difficult and risky roads, unavailability of secondary information and communities' fatigue as a result of continuous data collection by many actor

- 48.9% of the females and 65.6% of the males are dissatisfied with the health services
- 71% of the women deliver at home and supervised by a traditional or trained midwife.
- 67% of the women indicated periodic follow up of pregnancy, while - 84% stated that they don't follow any family planning method. Those who have family plan mostly use pills and fewer use contraceptives.

For health, it is recommended;

- Rehabilitation and equipping of HCs including medical staff support, drug stores, laboratories and ambulances for remote and isolated locations
- Training and certification of the traditional midwives

### **Nutrition**

Nutrition assistance is very poor and 55.6% reported that none of their family members have received nutrition assistance. Those who are reached, seem to be equally targeted across the different location with an average of 43.3%.

- 60% of the females and 71.9% of males expressed dissatisfaction with the nutrition services.

For nutrition it is recommended;

- Expand nutrition assistance to PLW and U5 children
- Establishment of community-based nutrition centers

## **Introduction**

CARE International Sudan. is working in Sudan for more than ten years now. Its interventions are tailored to target vulnerable conflict affected host, IDPs and refugees in a number of marginalized states such as Darfur and South Kordofan. The activities provided are designed to saving life activities that have prompt effects on saving the lives of the people. Hence, emergency WASH, health and nutrition represents priority for CARE due to their immediate effect on the live of the people. Such activities are integrated with some peace building and conflict reduction interventions as well as establishment of management structures, working with communities, SCOs and concerned local departments to maximize and sustain CARE program benefits. On the long run, these live saving activities are anticipated to increase community's resilience that enable communities withstand recurrent crisis they encounter and deepening on their own resources and skills.

## **Background, project description**

This baseline study is carried out for the project 'The Gender-sensitive WASH, Health/SRHR, and Nutrition support to vulnerable communities in East Darfur and South Darfur Project'. The project serves CARE reviews, and builds on CARE learning over many years in the region, respond to the global overviews and the donor GAC interest in saving the lives of conflict affected communities, by provision of urgent humanitarian assistances to 144,173 persons including females, males, girls and boys, from the host, IDPs and refugees' communities, located in 7 localities in ED and 2 localities in SD. The key live saving activities delivery is designed with gender sensitive prospective focusing PLW and girls in reproductive age and U5 children health and nutrition needs. The project activities include; WASH, Health and nutrition interventions.

## **Objective, Methodology & Limitations**

### **Baseline Objective**

The baseline has been carried to set quantitative and qualitative values for the project indicators in the areas of primary health, WASH, nutrition services, as well as for equitable access and use of these lifesaving services for refugees, IDPs and host communities in South and East Darfur. Thus, the baseline is designed to measure the quantity or level of service/resources now available to the people as well as people level of awareness, attitude and practices associated with use of the lifesaving services. Settings values for the project indicators will enable CARE and its partners to monitor project progress, evaluate project achievements and inform planning of similar projects.

### **Baseline Design**

### **Methodology and Limitation**

On arrival to Nyala, the BLT was invited to join the CARE field staff daily review meeting. The meeting was very useful in introducing the BLT to all project staff and familiarized the team with the office on going activities and office method of work. After the meeting the BLT and project staff went directly into discussing BL concerns, reviewed the BL tools and the arrangements required for start of the field work. Local enumerators were selected with the project staff and were acquainted with the questionnaire and trained on use of Kobo Collect for instantaneous field data entry. But, due to security measures, taking into consideration that some of the areas surveyed are out of government control, household's data was recorded on hard questionnaires and was entered later. It worth appreciating the efforts of the CARE staff, who facilitated, accompanied and contributed to filling of the questionnaires in the out of government control locations.

## Sample size and sampling method

The BL covered 9 Out of the 10 community locations which represent 90% of the target locations and would be representative of the communities. For determination of a representative HHs number, the standard formula  $s = \{z^2(1-p)^2\} / r^2$  is applied, where, s is the required sample size. P is probability of occurrence (set at 0.5 for maximum sample size) and r is the marginal error set at 0.05 for 95% level of confidence, which yielded a sample size of 364 households. The sample is then split equally between the 9 location and 40 households are allocated to each location and selected randomly. In line with the project equal targeting policy, the sample size, within each community is split equally between community women, men, girls and boys as shown below;

## Sample distribution

Location	Women	Men	Girls	Boys	Total
Toor	10	10	10	10	40
Tory	10	10	10	10	40
Kario	10	9	9	11	39
Mohajeria	10	10	10	10	40
Alneem	10	17	10	10	47
Abukarinka	10	10	10	10	40
Alferdos	10	10	10	10	40
Alnimir	10	10	10	10	40
Fina	10	10	10	10	40
<b>total</b>	<b>90</b>	<b>96</b>	<b>89</b>	<b>91</b>	<b>366</b>

## Data collection tools

The tools used for gathering data included three different questionnaires, used for interview and recording of households' responses, of which one is used for interview of women, the second is used for interview of men and the third is used for interview of girls and boys. A template is used to facilitate FG with communities and gathering of water and health information and a checklist is used to obtain information from the WASH and Health Departments. For data collection tools refer to annex 1, a, b, c, d and e.

## Field work

The data collection started on Sep 28 and finished on Oct 14, 2021. During this period 9 communities, of which 3 are in SD and 6 in ED are visited by BLT, Where, the data collection process included;

- i. Interview of 360 households, where in each community 40 questionnaires, split equally between, women, men, girls and boys are filled.
- ii. One gender mixed FG with community leaders and water and health service providers cadre
- iii. Structured meeting with WASH department and health officials in MOH in each state.

Three gender balanced teams of 4 enumerators, participated in households survey in SD, ED and Jabal Marra regions Work at the communities went smooth, communities were prepared by CARE field focal points, however, irrespective of explaining the BLS objectives, communities indicated some fatigue attributed to the continuous interviews by different development actors. The travel between communities, particularly to Fina and Tory is difficult and risky and some distance cannot be traveled by car and enumerators have to walk or use donkeys to reach the communities. Also, the road to Deain



is unpaved, hard and movement is obstructed by the nomads who occupy the narrow road. Meetings with concerned government departments were also difficult, as they seem very occupied and lack available secondary information to provide to the team.

### **Analysis and reporting**

The HHs data was analyzed using a predeveloped analysis framework that is tailored to generate measurement for the project indicators. Before analysis, data is cleaned and validated and a soft copy of the HHs statistical data is attached for CARE own future use.

### **Baseline Findings focusing on the project indicator results, Analysis and Interpretation**

#### **4.1 The current situation of water sources**

Across the 9 communities covered by the baseline there are 29 water sources that include 3 main different types of water sources and comprise elevated tanks/ donkeys, wells with hand pumps and a fountain. All water sources are inside the locations and accessible to the HHs, except for Fina, which is isolated and lack any type of water source and HHs depends entirely on the fountain that is 2 Km away. Out of the remaining 8 locations, 3 depends completely on wells equipped with hand pumps and the remaining 5 has elevated tanks, where, the latter is the most common type of water sources among the densely populated IDPs and refugees' communities.

The management of these water sources is usually under the responsibility of the communities, and mostly in cooperation with INGOs in some locations, such as CARE in Alferdos camp. The water sources are functional and are in working condition and operating almost all day, except for the elevated tanks in Alnimir, Alneem and Kario camps, where the water sources are operated for few hours each day. These locations which are provided with elevated tanks are densely populated with an average of 14,00 HHs per water point, that restricts water collection to few hours of the day and people compete for water and hardly manage to secure the quantity of water they need. Hence, the communities in camps call for installation of solar energy to increase the operation hours of the water sources and overcome the high cost and shortages of the fuel needed for operation of the water sources.

Mohajeria and Toori depends entirely on wells equipped with hand pumps, though working properly, but the number of well is small compared to the number of HHs using the source, particularly in Mohajeria, which has 8 wells shared by 34 villages and 11 nomads' groups. Details of water services in each of the locations surveyed are shown in table 1 below;

Table 1, number and type of water sources distribution by location

Location	Type of water source	No of water sources	Distance from village center	No of HHs using source	Responsible body	Work hours	Condition	Needs
Toor	Well with hand pump	3	Inside village	1,500	Committee for each pump	all day	Two working one broking	Increase no of pumps and maintain the broken ones
Tory	Fountain	1	2	650	Non	all day	Natural	Location is isolated, difficult to reach, tight security measures and lack water sources
Kario	Elevated tank	2	Inside village	13,000	Community members	4 hrs. mooring and 4 hrs. evening	Excellent	Fuel shortages, want solar energy
Mohajeria	Well with hand pump	7	Inside village	34 villages and 11 nomads' groups	Community members	All day	Good condition	
Alneem Camp	Elevated tank and net work  Donkey	3  1	Inside village	14,000	Community members	2 hrs day and evening	In good condition	
Abukarin ka	Donkey	4	Inside village	15,000	Community members	All day	Average	
Allfirdos	Elevated tank and network	2	Inside village	1,860	Community with Care supervision			
Fina	Well with hand pump	4	3 inside village	925	Community	All day	Working	
Alnimir	Elevated tank	2	Inside village	13,600 HHs	Community	one and a half hr. in the mooring and the evening	Working	

## 4.2 Situation of health services

The data for 2021 shows that SD state has 50 HCs in the 21 localities that make the state, with an average of 2.3 HC per locality, where, North and South Nyala localities possess about 20% of the HCs in the state. Almost half, 44% of these HCs need to be rehabilitated. Regarding health cadre, there is, on average of about 2.3 staff, of all medical levels in each HCs and the State shortage in the health cadre is estimated at about 59%.

In ED, which comprise 9 localities there are 22 HCs, with an average of 2.4 HCs per each locality. More than half, 55% of the HCs need rehabilitation. There are 41 of the health cadre working in the HCs, with an average of about 2 medical staff per HC, and the shortage in the health cadre is estimated at 53%. Details of HCs and health cadre distribution by state by locality is shown in table 2 below;

Table 2, Health facilities and health cadre distribution by location.

Location	Level of health facility	No of Doc	No of Med A	Number of nurses, males	Number of nurses, females	Number of traditional midwives	Number of trained midwives	Number of health visitors	Comments
Toor	HC Drug store	1 2	1	0	0	6	5	0	Health service is completely lacking, nearest in Kass. No ambulance so ill persons are carried on shoulders to the nearest hospital
Tory	0	0	0	0	0	0	0	0	
Kario Camp	HC	0	0	0	0	0	0	0	Well-equipped and operated by MSF, pharmacy, laboratory, maternal health
Mohajeria	HC	1	0	0	0	4	13	0	Increase health cadre, general doctor, pharmacy, ambulance and special doc
Al nimir camp	HC	1	1	0	4	0	2	0	Health cadre in short, village ambulance is kept in Deain. Critical cases treated in Deain, 10 trained midwives lost their certification during the war
Al Neem Camp	HC	3	3	0	0	24	17	0	Latrines in bad condition
Abukarin ka	HC	1	1	0	3	1	0	0	Doc, train midwives, laboratory, pharmacy, drug store, ambulance and mother and child care unit
Al Firdos	Health unit Drug store	1	2	0	0	0	3	0	Have 3 nutrition officers, drugs are free, want laboratory and a

									refrigerator for the drugs
Fina	HC	0	2	0	1	3	3	0	Want reproductive health services, nutrition, health awareness and drugs
Totals		8	10	0	8	34	43	0	

Tori lacks completely health services at any level, Alferdos has a health unit and the rest of locations have HCs. Except Kario camp HC, which is operated by MSF which is well equipped, the rest of the HCs are in poor condition, short of health cadre particularly nurses and health visitors, as compared to the presence of large number of traditional midwives. The poor health services in most of the location often result in ill persons being carried by community members on foot to the nearest hospital, such as in Kass, as most locations lack ambulance for transportation of ill persons. Except Toor and Alferdos, the remaining 7 locations lack drug stores and laboratories. The presence of large numbers of traditional midwives, is observed at 43, of whom 34 are in Alneem Camp. The largest number of trained midwives are also found in Alneem Camp and Mohageria, 17, while very few to none are found in the rest of the locations.

#### 4.3 Baseline key indicators

Baseline indicator	Indicator value					
% Targeted population (m/f) who report feeling safe following the implementation of WASH, health/SRHR, & Nutrition interventions	Table 3, Feeling of safety with improving health and water services					
	Males					
			Frequency	Percent	Valid Percent	Cumulative Percent
	Valid	Yes	82	85.4	85.4	85.4
		No	1	1.0	1.0	86.5
		To Some Extent	1	1.0	1.0	87.5
		I Do not Know	12	12.5	12.5	100.0
		Total	96	100.0	100.0	
	Table 4, Feeling of safety with improving the health & water services					
	Females					
			Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	5.6	5.6	5.6	

	Yes	80	88.9	88.9	94.4
	No	4	4.4	4.4	98.9
	To some Extend	1	1.1	1.1	100.0
	Total	90	100.0	100.0	

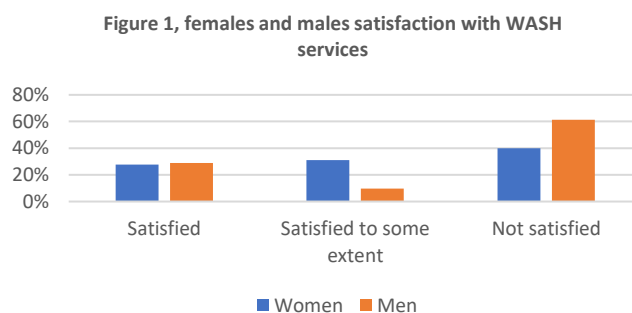
Both females and males, with percentages exceeding 84% report that they will feel safer as a result of the improvement of water services. They consider their safety is directly linked with the hardship and the risk they face in fetching water, particularly the females in the areas who are more affected with conflict and the high probability of their exposure to violence during fetching water. They believe that the closer the water source and the shorter the time they spend in bringing water home as important for the safety of all HHs members. The closeness of the source and the shorter the time spent at source is obviously important for females, (96% compared to males, 84%), though the difference is relatively small, but it is evident that safety at water is a more concern of the women than men, due to their more likely subject to harassment and violence than males.

Despite the fact that water sources are found inside the locations (except for Fina), the main concern that needs to be addressed is the water collection waiting time, which needs to be decreased by increasing the number of water sources or increasing the operation hours of the water source to increase the quantity of the water available. This is confirmed by the HHs, given that only 16% indicated that they always get the quantity of water they need. The least water access is in Mohajeria, Animir and Abokarinka, where 0% of the HHs answered that they always get the quantity of water they need.

Also, the current state of management of the water sources and provision of operation requirements and maintenance, suggests that the capacity of the community water management committees needs to be increased to equip them with basic water management and sources maintenance skills

% People (m/f) who report satisfaction with regards WASH assistance.

27.8% males satisfied  
29% females satisfied



From the analysis of men's responses regarding their satisfaction with the WASH service, see figure 1 above, it can be stated that two third of the males are not satisfied. When comparing males' responses to females, it reveals that females are more likely satisfied or satisfied to some extent compared to men, as about 40% of female respondents indicated dissatisfaction with WASH assistance. Nevertheless. The overall satisfaction with WASH services remains as low as 45% of the population. The slightly more dissatisfaction among males could be attributed to their responsibility for the water, taking into consideration that the males shoulder the responsibility of water sources management and operation, while women have less responsibility for operation and maintenance of water sources. In

addition, the more satisfaction of females compared to males could be attributed to the fact that hygiene assistance often targets women more than men.

% People (m/f) who report satisfaction with regards Health assistance	<b>Table 4, Females and males satisfaction with health services</b>			
		<b>Satisfied</b>	<b>Satisfied to some extent</b>	<b>Not satisfied</b>
	<b>Females</b>	33.3%	16.7%	48.9%
<b>Men</b>	27.8%	6.7%	65.6%	

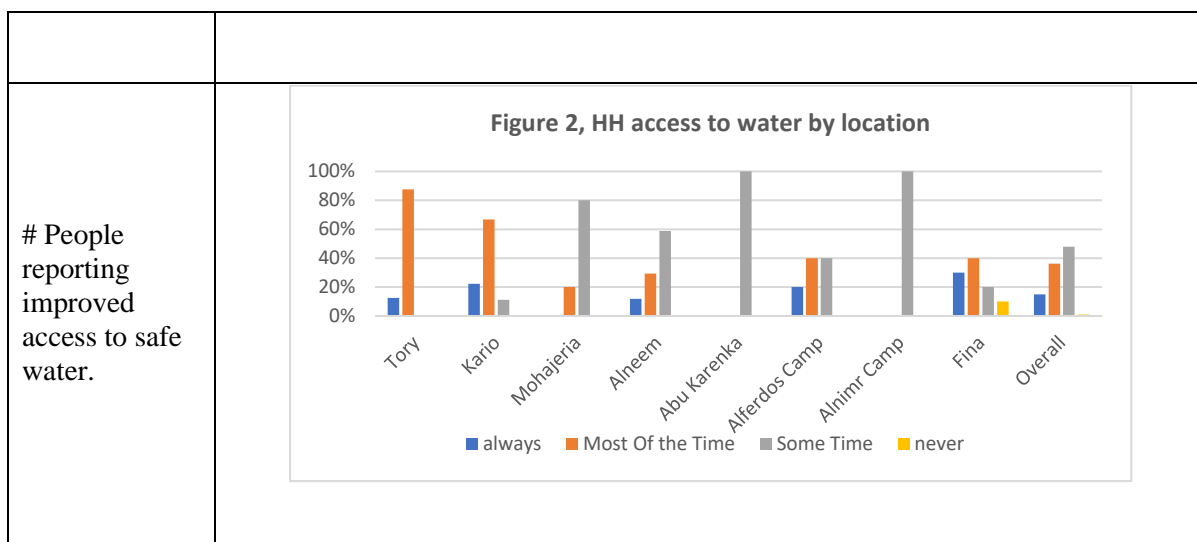
Dissatisfaction with health services among men is relatively high with an overall result 65% of male respondents feeling dissatisfied. 100% of male respondents in Mohajereria and Abukarinka are dissatisfied with health services., Fina men are completely satisfied with health services, noting that Fina is isolated and difficult to reach, lack HC and depends on 2 female nurses and some midwives. It also worth noting that, Fina needs are expressed in reproductive health, nutrition and health awareness rather than basic health services. The fact that Fina is isolated and use a fountain for drinking water, made location less subject to contamination and spread of communal diseases. Women indicated less dissatisfaction with health services than men, where around 50% indicated dissatisfaction with health services. Tory and Alnimir emerged as the locations with the highest level of dissatisfaction around health services (90%) from female respondents,. The high dissatisfaction reported in these locations is due to lack of SRH and nutrition services which are of more concern to the women.

The dissatisfaction with the health services is supported by the high prevalence of diseases, where overall, 84% of the women indicated illness of at least one family member in the last month. Most of the illness are related to water borne diseases such as diarrhea and vomiting in addition to malaria.

% People (m/f) who report satisfaction with regards nutrition assistance	<b>Table 5, Satisfaction with the nutrition services</b>				
		<b>Yes</b>	<b>No</b>	<b>to some extent</b>	<b>Indifferent</b>
	<b>Women</b>	35.60%	60.00%	2.20%	2.20%
<b>Men</b>	20.80%	71.90%	1.00%	6.30%	100.00%

In fact, most of the locations lack nutrition centers and supplementary feeding programs, that are confined to school meals in some locations described below.

60% of the interviewed females pointed their dissatisfaction with the nutrition services compared to 72% of men. 100% of female respondents in Toor and Tory are completely dissatisfied while female respondents in Kario and Fina are least dissatisfied and the rest of the locations showed almost moderate dissatisfaction. Households will usually eat 2 meals per day, with 10% who eat one meal per day and one third of the families eat three meals daily. About 10% of the households in 5 of the 9 communities surveyed eat one meal per day. The 5 communities in which there are some families that eat one meal per day are Kario, Mohajereria, Al neem, alnimir and Fina.



Only about 15% of the HHs indicated getting the quantity of water they want, where they attribute poor access to water to the shortage in the water quantity available

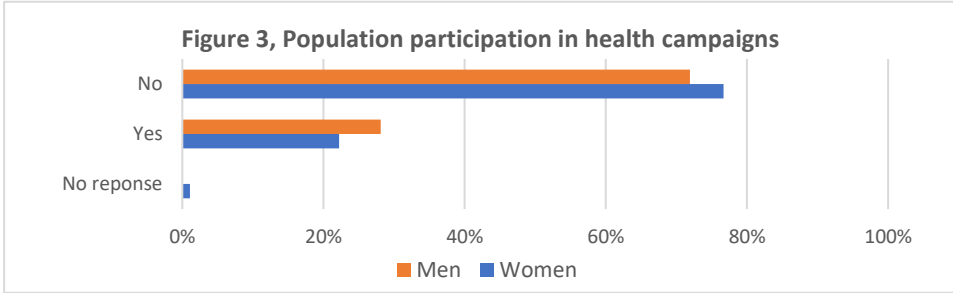
**Table 6, HHs equal access to water**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	37	38.5	39.4	39.4
	No	48	50.0	51.1	90.4
	Sometimes	9	9.4	9.6	100.0
	Total	94	97.9	100.0	
Missing	System	2	2.1		
Total		96	100.0		

The availability of water is good in about half of the schools. about 20% of the girls and 11% of the boys stated they don't have any water at schools. The availability of water is unreliable in the rest of the schools. Overall, water consumption per household ranges between 3 and 4 jerrycans, with an average of 2.6 jerrycans per day, which is far below the recommended standard.

Table 6 above shows that, concerning equal access to water is reported by 38.5% who consider HHs access to water is unequal. According to respondents' unequal access is due to water shortage and high competition and lack of storage facilities at homes.

# of people reporting improved access to	Women showed high inclination towards use of soap in washing with a percentage approaching 89%, except for Toor, which presented the lowest percentages of use of soap, with around one fifth of the females not using soap . For details by location refer to annexed table 6. Also, about 72% of communities indicated sound hygiene practices by cleaning water containers daily, except for Toor and Tory who tend to
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<p>sanitation services.</p>	<p>clean water containers every couple of days or once a week, more details by location are shown in annexed table 7.</p> <p>It has been also found that about 30% of the children don't have access to toilets at their schools, with Kario, Mohageria and Alferdos schools completely lacking toilets. Details are shown in annexed table 8</p>												
<p># of women and girls provided with access to sexual and reproductive health services, including modern methods of contraception</p>	<p>Delivery at home is the most common type of delivery among 71% of the women compared to other places such as HC or nearby hospital. Births were supervised by traditional midwives 48% of the deliveries and by trained midwives in 42% of deliveries. About 67% of the women indicated periodic follow up of pregnancy.84% stated that they don't use any family planning method. Those who have family plan mostly use bills and fewer use contraceptives. Refer to annexed tables 9, 10 and 11. It has been found that, women who are married for an average of 3.75 years has and average births of 2.59, which reveal women reliance on natural period for birth control rather than following an external method for family planning such as bills and isolators.</p> <p>As high as three quarter of the women indicated having no access to sanitary napkins, while those who have access either purchased them or received through NGO assistance. To assess the number of women who don't have access to SRH services, the average of the 5 above indicators is used, yielding on average 62% of the women as having no access to SRH services. Calculating this percentage from the number of HHs and average family size of 5.5 yields 106,622 women with no or poor access to SRH services, excluding mohageria, which accommodate 23 villages and 11 nomads' groups and is difficult to estimate its population.</p>												
<p># of individuals (m/f) reached through health campaign</p>	<p style="text-align: center;"><b>Figure 3, Population participation in health campaigns</b></p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Figure 3: Population participation in health campaigns</caption> <thead> <tr> <th>Response</th> <th>Men (%)</th> <th>Women (%)</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>~72</td> <td>~77</td> </tr> <tr> <td>Yes</td> <td>~28</td> <td>~23</td> </tr> <tr> <td>No reponse</td> <td>~0</td> <td>~0</td> </tr> </tbody> </table>	Response	Men (%)	Women (%)	No	~72	~77	Yes	~28	~23	No reponse	~0	~0
Response	Men (%)	Women (%)											
No	~72	~77											
Yes	~28	~23											
No reponse	~0	~0											
	<p>About three quarter of the HHs stated having not attended any awareness program on health, they are represented by 76.7% women and 71.9% men, and the total number reached is estimated on these percentages as above at 43,000 persons, of whom 22,195 are females and 20,805 males, who have not attended any awareness program in health, also excluding Mohageria.</p>												
<p># of people reached with therapeutic feeding (PLW,</p>	<p>All locations lack nutrition centers, therefore except for the few children who receive school meals.</p>												



boys and girls under 5)																																									
# of people reached through nutrition outreach activities	<p style="text-align: center;"><b>Figure 4, Distrubution of HHs reached with nutrition services by location</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Figure 4: Distribution of HHs reached with nutrition services by location</caption> <thead> <tr> <th>Location</th> <th>No (%)</th> <th>Yes (%)</th> <th>Na (%)</th> </tr> </thead> <tbody> <tr> <td>Fina</td> <td>60.0</td> <td>40.0</td> <td>0.0</td> </tr> <tr> <td>Alnimr Camp</td> <td>70.0</td> <td>30.0</td> <td>0.0</td> </tr> <tr> <td>Alferdos Camp</td> <td>50.0</td> <td>50.0</td> <td>0.0</td> </tr> <tr> <td>Abu Karenka</td> <td>70.0</td> <td>30.0</td> <td>0.0</td> </tr> <tr> <td>Alneem</td> <td>60.0</td> <td>30.0</td> <td>10.0</td> </tr> <tr> <td>Mohajerria</td> <td>50.0</td> <td>50.0</td> <td>0.0</td> </tr> <tr> <td>Kario</td> <td>40.0</td> <td>60.0</td> <td>0.0</td> </tr> <tr> <td>Tory</td> <td>50.0</td> <td>50.0</td> <td>0.0</td> </tr> <tr> <td>Location</td> <td>50.0</td> <td>50.0</td> <td>0.0</td> </tr> </tbody> </table>	Location	No (%)	Yes (%)	Na (%)	Fina	60.0	40.0	0.0	Alnimr Camp	70.0	30.0	0.0	Alferdos Camp	50.0	50.0	0.0	Abu Karenka	70.0	30.0	0.0	Alneem	60.0	30.0	10.0	Mohajerria	50.0	50.0	0.0	Kario	40.0	60.0	0.0	Tory	50.0	50.0	0.0	Location	50.0	50.0	0.0
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<p>More than half of the HHs, 55.6% reported that none of their family members have received nutrition assistance. Those who are reached, seem to be equally targeted across the different location with an average of 43.3%, with Kario camp being least targeted with 40% outreached through nutrition activities.</p>																																									

## Conclusion and Recommendations

The target communities presented poor indicators along the lifesaving WASH, health and nutrition activities. The distance to water is short and contribute to women feeling unsafe, however, the shortage in water quantity remains a key concern due to long waiting time that may subject females in particular to violence and increases the potential for conflicts among communities' members due to the high cometition for water.

The health services are very much limited and the available HCs are poorly equipped, short in medical staff, lack drugs and laboratories and the community members are forced to transport ill person for long distances on foot due to lack of transport facility or ambulances to get treatment. Women and girls access to RHS is inadequate, and deliveries are often at homes and supervised by traditional midwives. The majority of women don't use any family planning method

Almost all locations lack community nutrition centers and there is limited outreach for children at schools through distribution of school meals. The nutrition and health awareness programs are far below meeting the current needs of the target communities.

The following is recommended as urgent lifesaving activities for the target communities;

- Increase the capacity of the water sources by increasing number and operation hours and introduction of solar energy to reduce fuel operation cost
- Development of water community committees source management maintenance skills and equipping them with maintenance tools and equipment.
- Digging of boreholes along the nomads' roads would reveal the pressure on the water sources in Mohajerria and contain possible conflicts with nomads

## **Health**

- Rehabilitation and equipping of HCs including staff medical staff support, drug stores, laboratories and ambulances for remote and isolated locations, such as Fina
- Training and certification of the traditional midwives as there is a large number of traditional midwives who are attending deliveries.

## **Nutrition**

- Due to the confined nutrition assistance, the establishment of community-based nutrition centers would contribute to the saving of U5 children life and improve health of PLW.
- Organization of regular campaigns at locations on nutrition and reproductive health.

It is also important for CARE to build the capacity of the line ministries systems and staff, to improve the quality of the delivered services and overcome the shortage in reports and availability secondary information.

## Annexes

### Analysis tables

Table 7, Women use of soap for washing dishes by location

Location	Toor	Count	Do you use soap for washing dishes?				Total
			Always	Sometimes	Rearly	Never	
	Toor	Count	5	2	1	2	10
		% within Location	50.0%	20.0%	10.0%	20.0%	100.0%
	Tory	Count	9	1	0	0	10
		% within Location	90.0%	10.0%	0.0%	0.0%	100.0%
	Kario	Count	10	0	0	0	10
		% within Location	100.0%	0.0%	0.0%	0.0%	100.0%
	Mohajerja	Count	10	0	0	0	10
		% within Location	100.0%	0.0%	0.0%	0.0%	100.0%
	Alneem	Count	9	1	0	0	10
		% within Location	90.0%	10.0%	0.0%	0.0%	100.0%
	Abu Karenka	Count	10	0	0	0	10
		% within Location	100.0%	0.0%	0.0%	0.0%	100.0%
	Alferdos Camp	Count	10	0	0	0	10
		% within Location	100.0%	0.0%	0.0%	0.0%	100.0%
	Alnimr Camp	Count	10	0	0	0	10
		% within Location	100.0%	0.0%	0.0%	0.0%	100.0%
	Fina	Count	7	3	0	0	10
		% within Location	70.0%	30.0%	0.0%	0.0%	100.0%

Total	Count	80	7	1	2	90
	% within Location	88.9%	7.8%	1.1%	2.2%	100.0%

Table 8, availability of toilets at schools by location

Location	Toor	Count	Is there is toilets in the school			Total
			Yes	No		
	Toor	Count	2	14	4	20
		% within Location	10.0%	70.0%	20.0%	100.0%
	Tory	Count	3	15	2	20
		% within Location	15.0%	75.0%	10.0%	100.0%
	Kario	Count	7	13	0	20
		% within Location	35.0%	65.0%	0.0%	100.0%
	Mohajeria	Count	1	19	0	20
		% within Location	5.0%	95.0%	0.0%	100.0%
	Abu Karenka	Count	0	17	3	20
		% within Location	0.0%	85.0%	15.0%	100.0%
	Alferdos Camp	Count	2	17	1	20
		% within Location	10.0%	85.0%	5.0%	100.0%
	Alnimr Camp	Count	3	16	1	20
		% within Location	15.0%	80.0%	5.0%	100.0%
	Fina	Count	6	3	11	20
		% within Location	30.0%	15.0%	55.0%	100.0%
Total		Count	24	114	22	160
		% within Location	15.0%	71.3%	13.8%	100.0%

Table 9, place of delivery

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2.2	2.2	2.2
Home	64	71.1	71.1	73.3
Area health center	11	12.2	12.2	85.6
health facility outside the area	13	14.4	14.4	100.0
Total	90	100.0	100.0	

Table 10, women delivery distributed by level of medical supervision

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1.1	1.1	1.1
Midwife	43	47.8	47.8	48.9
Trained Midwife	38	42.2	42.2	91.1
Assistance Doc	1	1.1	1.1	92.2
Hospital Doc	7	7.8	7.8	100.0
Total	90	100.0	100.0	

Table 11, Distribution of women by tendency for follow up of pregnancy

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	4.4	4.4	4.4
Yes	59	65.6	65.6	70.0

No	27	30.0	30.0	100.0
Total	90	100.0	100.0	

### Baseline field schedule

SN	Date	Activity
1	26/09/2021	Travel to Nyala Introductory meeting with office staff\ Meeting with Logistic officer and preparation of the field visits permission request Meeting WASH officer Meeting Health and Nutrition Officer Selection of enumerators Field visits transport preparations to Kass and Jabal Marra
2	29/09/	Meeting Fina camp Coordinator and training of enumerators Meeting with HAC coordinator, Fina
	02/10	Travel to Fina
	03/10	Second team travel to Kass Travel to Toor and back to kass
	04/10	Travel to tory Back to kass and travel to Nyala
	05/10	Travel to Deain Introductory meeting in Deain
	06/10	Attend office staff meeting Obtain HAC permission Selevt and train enumerators
	07/10	Survey Elneem Camp
	08/10	Servey Kario camp
	09/10	Survey Abukarinka camp

	10/10	Survey Mohajeria
	11/10	Survey Al Firdos
	12/10	Survey Al Nimir Travel to Nyala
	13/10	Meet Health and WASH
	14/10	Travel to Khartoum

**List of people/organizations consulted, to be delivered**

**All data collection Tools (questionnaires etc.)**

**men questionnaire;**

Part 1- To be filled with adult males/heads of households						
Location -----						
1	What is the main food crop?	Dura	Millet	Dukhun	-----	
2	Is it available in the area?	Always	most time	some time	Rarely	not available
3	How do you get it?	Own produce	purchase	produce and purchase	aid NGO	aid relatives
4	Consumption of vegetables?	Daily		few times a week	Rarely	Nevr
5	Sources and availability of vegetables?	At location market		Outside market	not available	
6	Who brings the water?	Women	Girls	Men	Boys	all family members
7	How do you collect water	cart	donkey	water seller	on foot	network
8	How many times you bring water in a day	-----				

9	How many jerricans you use every day for domestic use	-----				
10	How much you pay for the jerrican	-----				
11	Do you get the quantity of water you need	Always	most of the time	Rarely	never	
12	If you don't get the water you need, why	Water not available	can not afford cost	can not afford effort	-----	
13	How do you rate the quality of water	Good	Moderate	poor		
14	How do you rate the availability of water	always available	available most time	available few times	not available most time	not available always
15	Are you satisfied with the current water service you have	Very satisfied	Satisfied	not satisfied		
	Do community members get water equally	Yes	No	Sometime no		
16	If no, why	cannot afford cost	cannot bring it	cannot store	-----	

### Women questionnaire

Part 2; To be filled with housewife/PLW in the household					
Location =====					
1	Age	-----			
2	No Years of marriage	-----			
3	No of deliveries	-----			
4	Place of last delivery	\at home	location health facility	health facility outside	
5	Delivery by whom	Traditional midwife	trained midwife	Doctor	-----



6	Pregnancy follow up	yes	No	not regular		
7	Vaccination	yes		No		
8	Birth control	Yes		No		
9	If yes, Methods of birth control	Natural	Bills	Isolation		
10	Access to clean kits	Yes		No		
11	Source of clean kits	-----				
12	Is any member of the household ill or has been ill during the past month	Yes		No		
13	If yes, what type of illness	Diarrhea	abdomen cramp	Vomit	malaria	-----
14	Did ill member get treatment	Yes		No		
15	If yes, where did member get treated	At home	at location health facility	outside location	-----	
16	How many meals do you prepare per day?	-----				
17	How often water containers are washed	-----				
18	Is soap used for cleaning of utensils and water containers	Always	Sometime	rare	Never	

### Girls and boys

Part 3; fill with girls and boys U 18						
Location -----						
1	Sex	Female		Male		
2	Age	-----				
3	Do you go to school	Yes	Never		Dropout	
4	If yes, how far is the school	-----				
5	Is it mixed school	Yes			no	
6	Is there feeding program in the school	Yes			No	

7	Is water available in the school	Yes	No	Sometime
8	Are there latrines in the school	Yes	No	
9	Are there separate latrine for girls in mixed schools	Yes	No	
10	Do you get or others get school meal	Yes	No	
11	Do you think you will continue your education	Yes	No	Don't know
12	If not, at what level do you think you will stop going to school	Basic	Secondary	university
13	What do you think will stop you from going to the school at this level	Not interested	Cost of education	parents -----
14	Do you work outside house	Yes	No	Some time
15	Do you think you will be married before you complete school	Yes	No	Don't know
16	If never attended school or dropout, why	-----		
17	Do you eat with their parents or they eat separately	Separate	With parents	sometime
18	If eat separately, do you eat with your male/female brothers/sisters	Yes	No	Sometime
19	Do you have any disability	Yes	No	
20	If yes, do you get the support you need	Yes	No	
21	If no, how can you be supported	-----		

**d- Community FG template, water**

- a- WASH; To be filled with community key informants in each location including leaders and water cadre

Location name -----

Type of water resource	Number	Distance from center of location in Km	Used by who and how many HHs	Managed by who	No of operation hrs per day	Current condition	Requirements
Fenced haffir							

Open haffir							
Wadi							
Well with hand pump							
Well with rope							
Elevated tank							
Elevated tank and water points							
Other							

Group opinion about availability of water, cleanness, encounter constraints and suggestions for improvements, causes underlying unequal access to water and for who?

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e- Community FG template, Health; To be filled with the location KIs including leaders and health cadre

Health facility	No of doctors	No of med assistants	Number of nurses	No of midwives	No health workers, visitors
Clinic					
Health center					
Hospital					
Pharmacy					

Comments of the group on availability and satisfaction of health services available in the location, the problems they encounter to get health services and suggestions for improvements?

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### **Checklist; WASH and health Institutions**

Information about the current status of WASH and health services in the state and the target locations (number, distribution, management, cadre, shortage, requirements, constraints)

State plans for drinking water and health facilities in the target locations

Obtain and review available reports on water and health

State malnutrition rate among children

### **Baseline Survey TOR**