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**KAP Endline survey report for ECHO funded project entitled
'Integrated Water, Sanitation and Hygiene Response to Support
Drought-Affected Communities in Ethiopia, Oromiya National
Regional State, Borena zone'**

**The survey has covered: Dire, Miyo Teltele, El-woye and Dubluk
Woredas of Borena Zone**

**Funded By: EUROPEAN CIVIL PROTECTION AND HUMANITARIAN AID
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1. EXECUTIVE SUMMARY

The End line survey was carried out in five woredas/districts in Borena zone, Oromia regional state namely: (Arero, Dire, Dubluk, El-waye, Miyo & Teltele woredas). The end line survey intended to gather end line data regarding the current status of water supply, sanitation and hygiene coverage in the project implementation woredas that will be used to compare the progress made at the end of the project period.

A total of 191 sampled households were involved in the study. Household level data has been collected from 12 kebeles located in 5 project targeted Woredas. From CARE side a total of 95 individuals (55 Female and 40 Male) and from ACF side 96 have participated in the end line survey. With regards to the type of respondents involved in the survey, majority (112) of them were mothers, 79 of them were fathers and. While the min-max age of respondents were between 16 to 80 years; the mean age of respondents was close to 43. Regarding the marital status of respondents, 154 of them are married & living together and majority of the respondents (close to 91 %) are either agro-pastoralist or pastoralist

The water sources used by the households are different. As the end line survey indicated, percentage of households who uses water from motorized well increased from 15% in the baseline to 19% at the end line. Majority 54% (64% during the baseline) of them indicated that they are not getting enough water per day for family consumption; while 46% (36% during the baseline) of respondents indicated that they are getting enough water for household consumption. The main reason for not getting enough water is distance of the location of the water source 48% (54% Baseline)

The result of the end line survey indicated that more than 72% (78 % during the baseline) of the respondents are using less than 15 liters of water per capita per day (below the SPHERE standard of daily per capita consumption, which is 15L/p/d).

A few respondents 19% (52% during the BL) witnessed that they are not treating their drinking water before consumption; while majority 81% (48% during the BL) of them replied that they are treating their drinking water before consumption. Regarding method of water treatment, majority 78% (54% during the BL) of them are using treatment chemicals to treat water.

From the total 191 respondents, 124 of them (111 during the base line) of them explained that they do have a latrine and are using; while 67 of them (81 during BL) responded they do not have a latrine. Most of the respondents 63% used a container like bucket to collect their solid waste and this figure was 58% during the baseline. 92 of the respondents indicated that they are burning the collected solid waste in prepared pit either outside or inside their yard (this figure was 85 during the baseline).

2. Introduction

Borena zone is located in the south eastern part of Ethiopia, bordering Somali Region in the East, Northern Kenya to the South, Guji Zone to the northeast and SNNPR region in the West. It is one of the 20 zones in Oromia regional state located in the arid and semi-arid southern lowlands. Livestock rearing is the major livelihoods for 1 million people residing in the zone. In normal years the zone is one of the major sources of livestock supplying to both local, national and international markets.

Borena has a bi-modal rainfall pattern, annual average rainfall ranges from 400mm (southern) to 600mm (northern areas). The main rainfall season occurs during March to May (locally known as *Ganna*) contributing 59 % of the annual rainfall. The short rainfall from September to November (*Hagaya*) contributes 27% of the annual precipitation.

For many years, Borena has been experiencing recurrent drought and increasing conflict over resources, devastating the lives and livelihoods of pastoralists. Per capita livestock holdings and production are declining as a consequence of multiple factors; human population growth, shrinking range lands, reduced mobility and climate change. The lack of alternative income generating opportunities make the situation serious.

The result of two consecutive below average rainfall seasons in 2016 and 2017 for communities in Borena has been loss of livelihood options, crop failure, livestock productivity reduction and death, increasing levels of food insecurity, and acute water shortages.

This project is designed with an overall objective to reduce the morbidity and mortality among drought-affected populations in Borena zone through an integrated water, sanitation and hygiene response. The project will be implemented in five woredas (Miyo, Dubluk, Dire, El-woye & Teltele)

The proposed actions in this project were supposed to improve access to, and use of, safe drinking water, improved sanitation and adoption of safe hygiene practices in drought-affected communities in Borena

- Improved access to safe drinking water was achieved through water point rehabilitation/ construction; rehabilitation/construction of rain water harvesting schemes in schools and health facilities; strengthening of Water Management Committees (WASHCO)
- Enhanced access to improved sanitation and hygiene was achieved through school latrines rehabilitation/ construction; hygiene promotion in schools (using Children's Hygiene and Sanitation Training - CHAST); and hygiene promotion in health facilities.

3. Objective and Methodology of the KAP survey

3.1. General Objective

To assess communities Knowledge, attitude and practice on hygiene and sanitation, Borena Zone, Oromia region, Southeastern Ethiopia

3.1.1. Specific Objective

- To determine sanitation coverage of CARE and AAH intervention targeted community and public institutions
- To assess factors for Hygiene & sanitation behavior change

3.2. Methodology Employed

3.2.1. Study area and period of data collection

The study was conducted in five project targeted woredas/ districts in Borena zone, Oromia region namely Arero, Dire, Dubluk, El-waye, Miyo & Teltele woredas.

3.2.2. Sampling technique & Procedures

Those HHs who are permanent dweller and beneficiary of rehabilitated/ maintained water schemes are eligible for this study and 191 HHs were randomly selected.

3.2.3. Data Collection Procedures:

Training for data collectors and supervisors were given before the actual field work. Pre-test on postpartum mothers was done in the same study areas in rural community but not part of the study.

Team leaders/ supervisors were closely following the day-to-day data collection process and ensure completeness and consistency of questionnaire administered in each day and any missed information was corrected on timely

3.2.4. Data Collection instruments

Household data was collected through individual interview using prepared pre-tested questionnaires developed for this purpose. Added to this, observational check list, FGD and KII data were collected by supervisors in order to compliment.

3.2.5. Data Collection

The data collection on the field had been conducted from 17 to 20 of April 2018. A total of 14 data collectors/ enumerators and 5 supervisors were participated in the field level data collection work. The household questionnaire administered primarily to the woman of the house (head of

household, wife of head of household or other woman who is responsible of the household chores).

3.2.6. Sample size per each kebele's

A total of 191 sampled households were involved in the study. Household level data was collected from 12 kebeles located in 5 project targeted Woredas. The selection of Kebeles/ villages for the KAP survey was made purposive sampling where the maintained/ rehabilitated water schemes are located. Households are randomly selected from these villages. The size of samples from each village is proportional to the number of beneficiaries per village.

Table 1: Number of households selected per kebele in each woreda

Name of woreda	Name of kebele	Sample size	WASHCO FGD/KII	School KII	Health KII
Miyo	Boku	12	1	1 (Kargola)	1 (Melbana HC)
	Dhokisu	12			Gombisa HC
	Girincho	11	1		
	Arda Jila	19			
Dubluk	Dublik	9	1	1 (Dubluk)	1 (Dubluk HC)
	Jigesa	8	1	1 (Agirte)	
	Bokosa	8			
	Filo Bika	11	1		1 (Filo Bika HP)
	Dokole	6	1		
Dire	Fullo Romso	21	1	1	
Teltele	Jerarsa	37	1		
Elewoye	Sarite	37	1	1	
Total		191	9	3	4

4. Project Baseline and End line target indicators

According to the Logical Framework (LFA) validated by ECHO, several indicators have to be measured at end line level.

Table 2: Project results (Baseline and Target indicators)

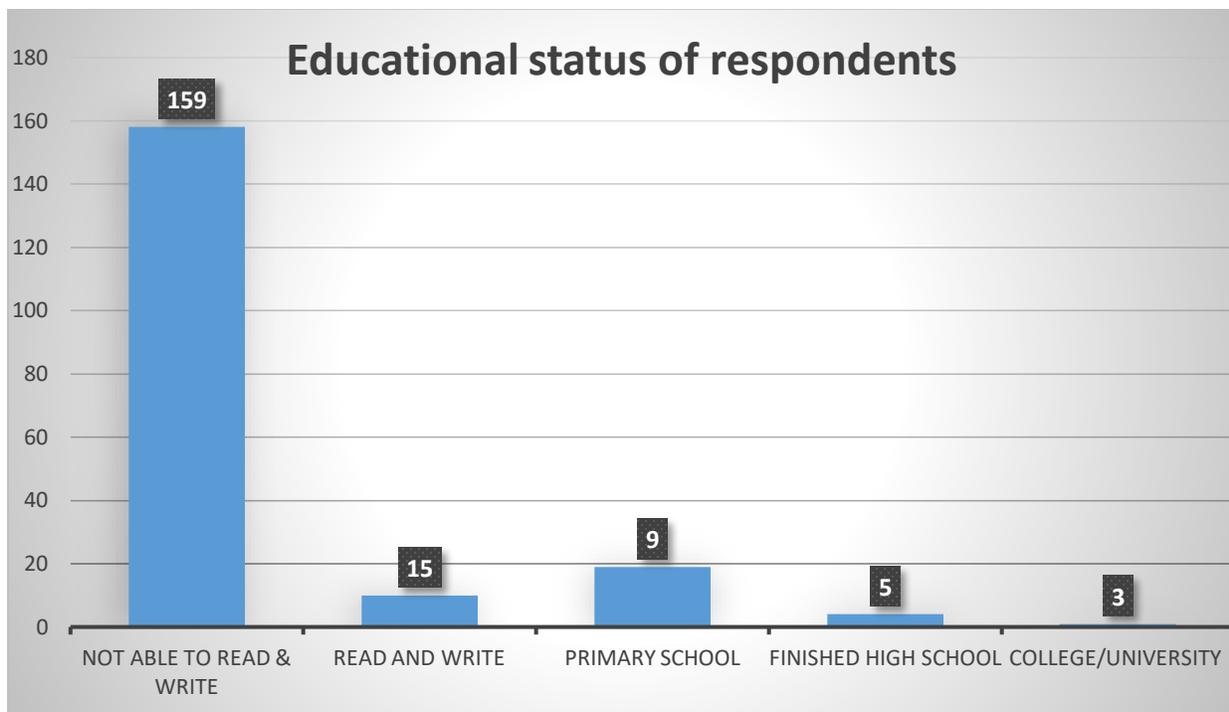
Indicator	Baseline	Target	Achieved	Comments
Indicator 1.1: Number of Water Management Committees (WASHCOs) strengthened	0	19	19	
Indicator 1.2: Number of people having access to sufficient and safe water for domestic use	0	17,398	15,503 (7,906 Female, 7,597 Male)	Disaggregated by sex and age
Indicator 1.3: Percentage of WASHCO members that are women	ACF-36%	50%	49%	Disaggregated by sex
Indicator 1.4: Number of people having access to safe water through rehabilitation/construction of rain water harvest system in schools and health facilities	0	12,000	10,762 (5,489 Female, 5,273 Male)	Disaggregated by sex
Indicator 1.5: Water schemes rehabilitated/constructed are appropriately used and regularly maintained	0	19	19	
Indicator 1.6: Number of Roto water tankers provided to use during water trucking	0	9	11	
Indicator 2.1: Percentage of female students consulted prior to the improved sanitation facilities design and rehabilitation/ construction activities in schools	0	10%	12.5%	
Indicator 2.2: Number of people having regular access to soap to meet hygienic needs	684	4,200	4,650	
Indicator 2.3: Number of people with access to dignified, safe, clean and functional excreta disposal facilities	972	4,200	2,576	
Indicator 2.4: % of individuals who practice hand washing at four critical times	ACF-8%	40%	42%	

5. Result and discussions

5.1. Household Characteristics

The end line survey was conducted in 5 woredas (Dire, Teltele, Dubluk, Miyo and Ele-woye) of Borena zone in Oromia Region. From CARE side a total of 191 individuals participated in the end line survey. From the total 191 respondents, 21 were from Dire, 37 from Teltele, 42 from Dubluk, 54 from Miyo and the remaining 37 were from Ele-woye woreda.

With regards to the type of respondents involved in the survey, majority (112) of them were mothers, 79 of them were fathers and. While the min-max age of respondents were between 16 to 80 years; the mean age of respondents was close to 43.



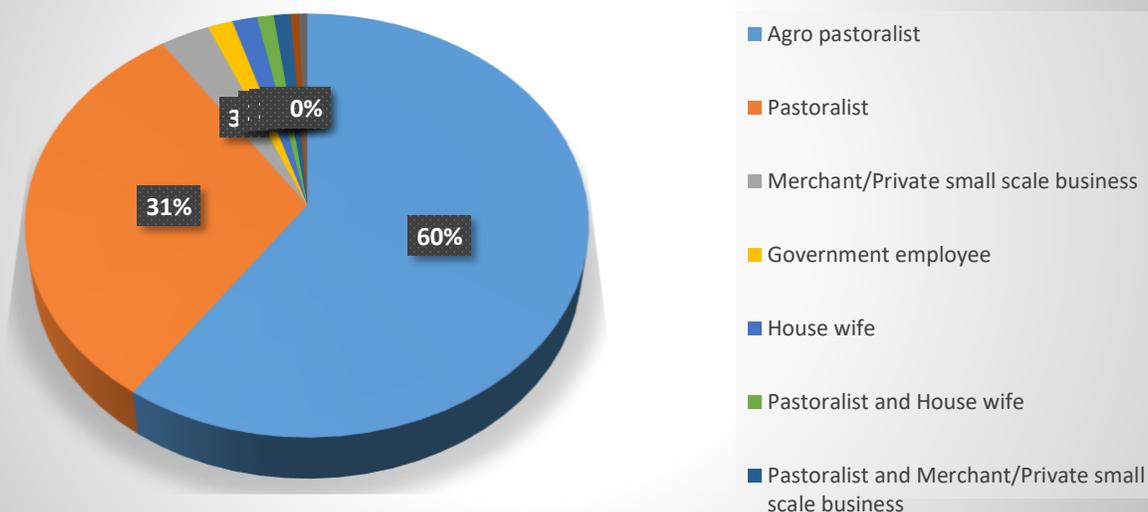
5.2. Marital status of respondents

Regarding the marital status of respondents, 154 of them are married & living together, 2 are single, 7 are divorced, 26 are widowed and 2 are separated

5.3. Livelihoods and income sources

Majority of the respondents (close to 91 %) are either agro-pastoralist or pastoralist and as the next picture depicts close to 3% of the respondents engaged in petty trading to generate income for the household. Please refer to the next picture for detail

Source of livelihoods of the households



5.4. Household water sources

The water sources used by the households are different. As the end line survey indicated, percentage of households who uses water from motorized well increased from 15% in the baseline to 19% at the end line. Those households who were using water from unsafe sources like Surface water/pond decreased for 42% in the baseline to 25% at the end line. Please refer the table below for detail

Table 3: Source of water for domestic use

S/n	Sources of water for households	Baseline		End line	
		Number	Percent	Number	Percent
1	Shallow well	25	13%	25	13%
2	Motorized well	29	15%	36	19%
3	Surface water/pond	81	42%	48	25%
4	Motorized well and Shallow well	10	5%	37	19%
5	Surface water/pond and Ella/traditional well	2	1%	9	5%
6	Ella/traditional well	29	15%	20	10%
7	Spring (unprotected) and Ella/traditional well	4	2%	4	2%
8	Spring (unprotected)	12	6%	12	6%
Total		192	100%	191	100%

5.5. Time/ hour needed to fetch water from the source

Regarding time needed to fetch water and back home from the source, during the baseline 19% of the respondents needed less than 30 minutes; at the end line this figure increased to 23%, those who needed 30 to 45 minutes were 19 % during the baseline and this one increased to 29% at the end line. Look at Table 5 for detail on this

Table 4: Time needed (for round trip) for fetching water from the sources

Time it takes (round trip) to fetch water	Baseline value		End line value	
	Frequency	Percent	Frequency	Percent
1. Less than 30 minutes	36	19%	43	23%
2. 30 – 45 minutes	36	19%	56	29%
3. 45 – 60 minutes	60	31%	35	18%
4. More than 60 minutes	60	31%	57	30%
Total	192	100%	191	100%

Regarding water fetching responsibility in the household, 126 (119 BL) of the respondent indicated that mothers are the only responsible while 22 (49 BL) respondents mentioned girls are responsible. Please refer the table below for detail on this:

Table 5: Water fetching responsible in the household

Household members	Base line	End line
1. Girls only	49	22
2. Mother only	119	126
3. All family members	17	7
4. Girls & Mother		31
5. Other members (boys, maid etc)	7	5
Total	192	

1.1. Household and per capita water consumption per day

Out of the total 191 respondents, majority 54% (64% During the Baseline) of them indicted that they are not getting enough water per day for family consumption; while 46% (36% During the Baseline) of respondents indicated that they are getting enough water for household

consumption. The main reason for not getting enough water is distance of the location of the water source 48% (54% Baseline)

The result of the end line survey indicated that around than 72% (78 % during the BL) of the respondents are using less than 15 liters of water per capita per day (below the SPHERE standard of daily per capita consumption, which is 15L/p/d); while 28% (22% during the BL) of them are using above 15 liters of water per capita per day.

1.2. Household water treatment methods

A few respondents 19% (52% during the BL) witnessed that they are not treating their drinking water before consumption; while majority 81% (48% during the BL) of them are replied that they are treating their drinking water before consumption. Regarding method of water treatment, majority 78% (54% during the BL) of them are using Chemicals (PUR, Bishangari, Water guard, Aqua tab).

1.3. Water Facility Management

Water governance is under the responsibility of WASH committees at local level (Kebele). During the baseline FGDs conducted with WASHCOs, there was a problem of functionality of the WASH committee at local level. The main gaps mentioned were the maintenance of the water points (frequent damage of hand pumps) and the lack of technical training for WASH committee members. Women comprise 36% of these committees. The WASHCOs either lacked the skill required for maintenance of the schemes, or forget what they have already known about scheme maintenance. Furthermore, the required maintenance tools were not available at hand.

At the end of the project, 5 out of the 6 WASHCOs who underwent the FGD are established by the project and trained. Based on the identified gaps during the baseline survey user guides for operation and maintenance developed in local language.

There was disparity among the WASH committee in terms of their capacity and performance. Some have their own by-laws, some are able to conduct regular meeting, auditing, etc. while others do not. The WASCHOs collect fees from the water service they provide.

1.4. Access to Sanitation Facilities

1.4.1. Latrine utilization by households

From the total 191 respondents, 124 of them (111 during BL) explained that they do have a latrine and are using; while 67 of them (81 during BL) responded they do not have a latrine. Those who do not have latrine indicated they are either sharing with neighbors or using open defecation out of the yard. Those who do not have latrine mentioned different reasons for not having a latrine

including: Affordability issue to construct and Religion/Culture reasons. There is a custom that households can share latrines based on neighborhood and among relatives.

1.4.2. Observation on the type of latrine used by households

During the physical observation it has been understood that majority 72% (54 % during the base line) of households have simple traditional pit latrine and only 16% of the (5% during the baseline) households are using improved kind of latrine at household level.

1.7.2.1. Distance or location of the latrine

Distance of a latrine from the houses or kitchen has its own implication in terms of enhancing disease contamination and infection. Particularly to avoid prevalence of contagious disease like diarrhea, household need to construct their latrine at some distance from their houses and kitchen usually (>6 meter). In this regard, from the physical observation during the home visit at the end line survey from the total 124 households who have latrine majority 57 are having their latrine at > 6m distance from their house or kitchen (This was 47 during the BL).

1.7.2.2. Structures of roof and wall of the latrines

Concerning the structures of roof and wall of the latrines: majority (87) of the roof of the latrines are thatched with grass. On the other hand, majority of the wall of the latrines (85) are mud sealed. Please look at the next Table for detail on this:

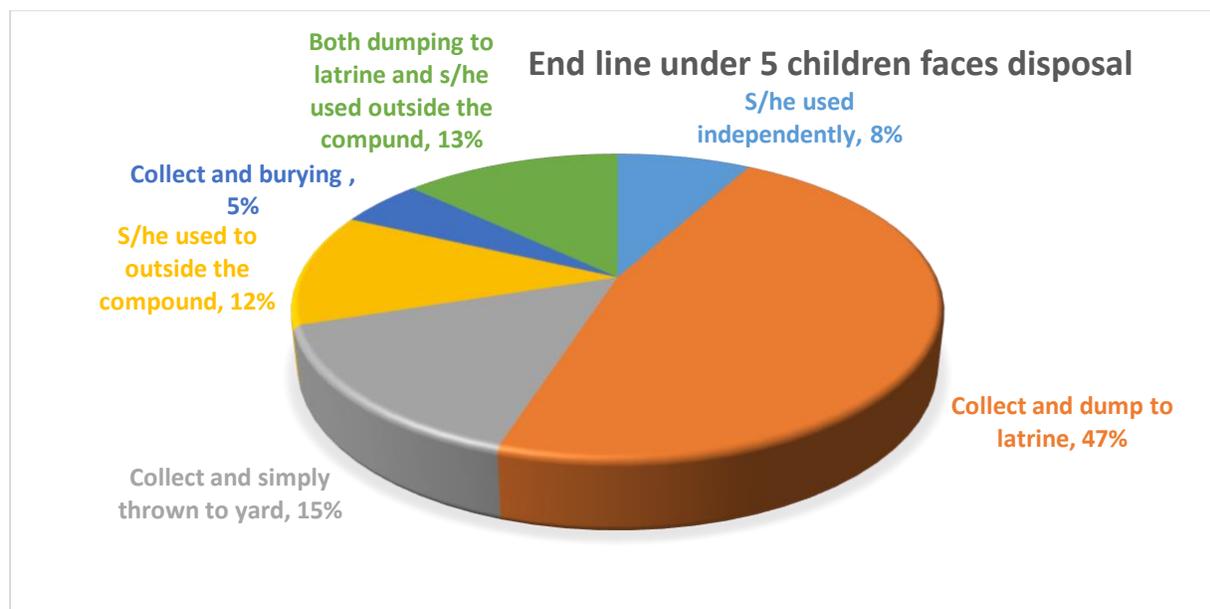
Table 6: Structures of the latrine (Roof and Wall)

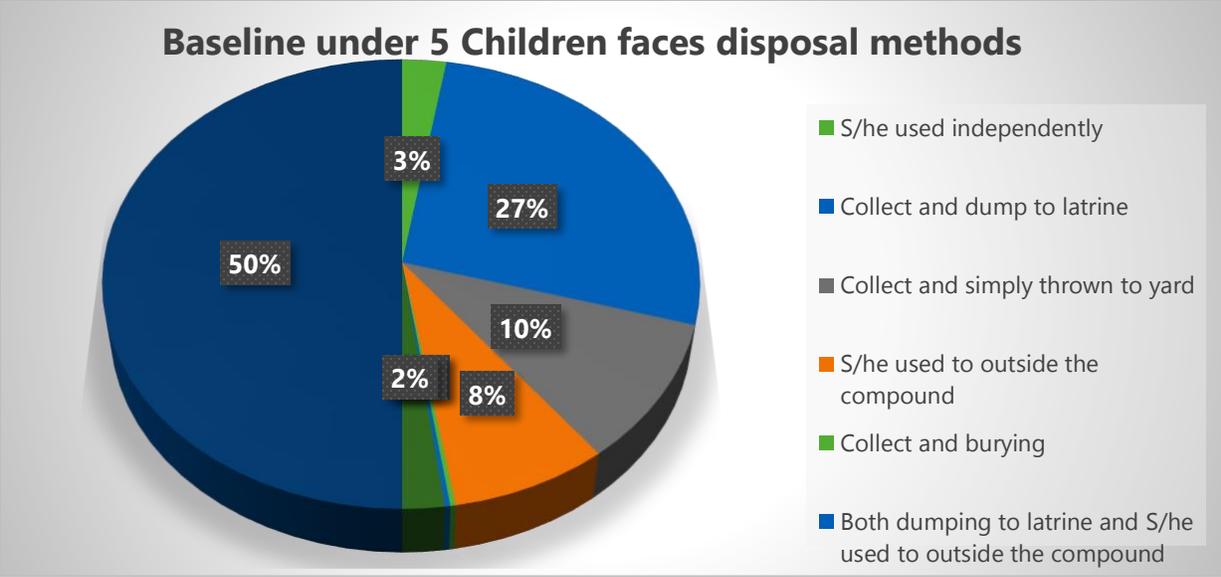
Structure of the roof of latrine	Baseline (BL)	End line
Corrugated Iron Sheet	6	6
Thatched	63	87
No roof at all	36	20
Plastic cover	6	11
Total	111	124
Structure of the wall of latrine		
Mud sealed	51	85
Corrugated Iron Sheet	11	5
Not properly maintained rags	27	4
Plastic covered	15	22
Open	7	8
Total	111	124
Structure of the floor of		
Cemented	7	10
Cemented cracked	6	3
Rages and sealed	34	40
Rags but not sealed	23	25

Fragmented rags/ not safe	39	46
Simply open	2	0
Total	111	124
Structure of the squatting hall		
Properly maintained	32	71
With no foot rest	79	53
Total	111	124
Observation on the floor cleanliness		
Flies infestation	47	29
Anal cleansing materials dropped simply on floor	11	40
Some filths/droplets around squatting hall	14	5
No one of the above	39	50
Total	111	124
Observation of feces in the compound		
Yes	68	41
No	124	150
Total	192	191

1.7.2.3. Under five children faces disposal

With regards to under five children faces disposal methods, respondents indicated that they are using different faces disposal methods. As the below pi-chart depicts: majority of the households (47%) are collecting and dumping to latrine while (15%) are collecting and simply thrown to yard



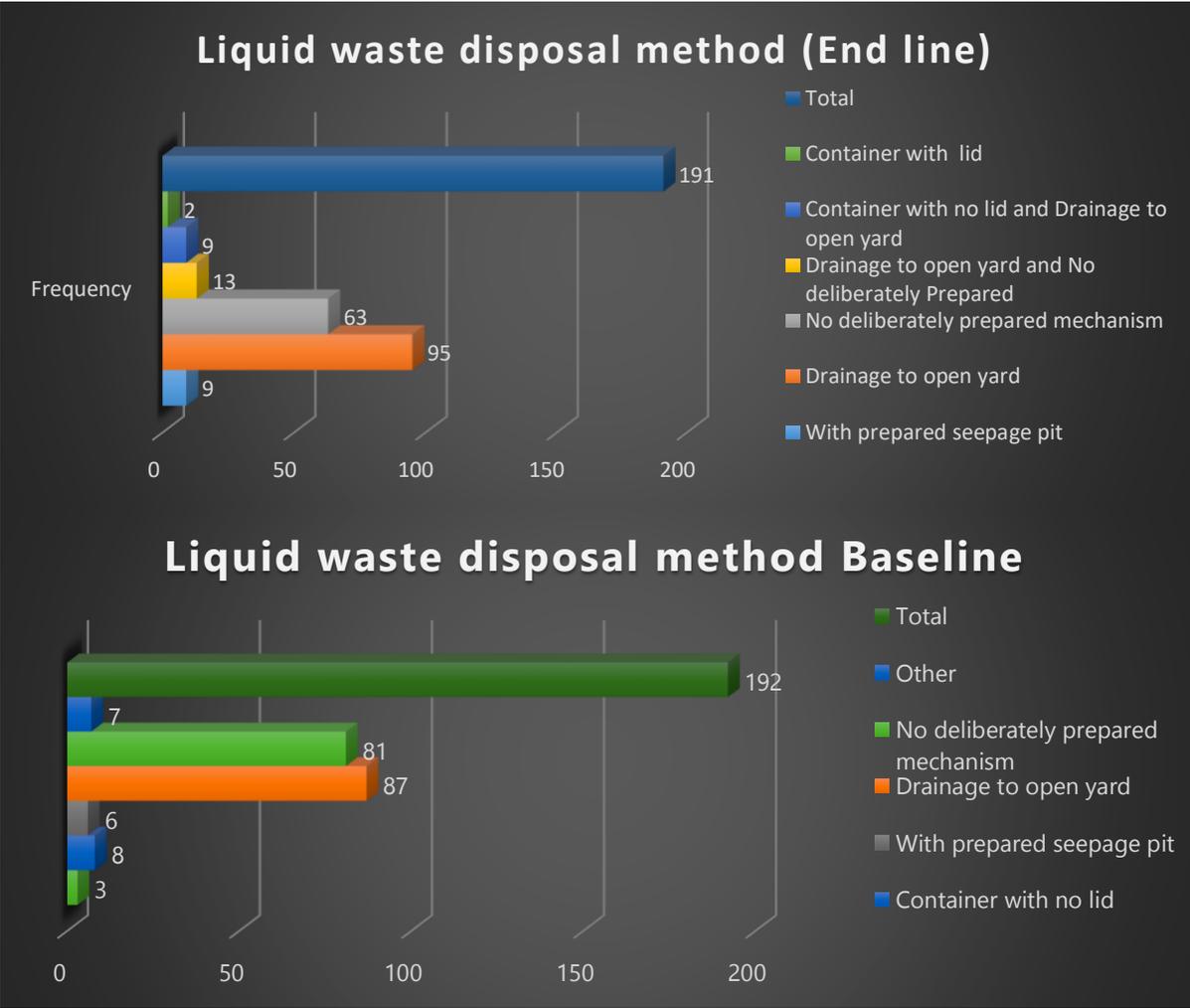


1.4.3. Solid waste collection and disposal

Most of the respondents 63% used a container like bucket to collect their solid waste and this figure was 58% during the baseline. 92 of the respondents indicated that they are burning the collected solid waste in prepared pit either outside or inside their yard (this figure was 85 during the baseline). Regarding frequency of collection, majority of them (93%) replied are collecting their solid waste either every day or as if required

1.4.4. Liquid waste disposal methods

Households are using different methods to dispose their liquid waste. Majority of the respondents (63) replayed that they don't use deliberately pre prepared mechanism to dispose their liquid waste, 95 of them indicated that they are using drainage to open yards, 9 of them replayed that they dispose it in prepared seepage pit



1.4.5. Household hand washing practices

People usually wash their hands at different time throughout the day to protect themselves from disease contamination. As the table below depicts, majority of the respondents wash their hands before food preparation, after visiting a toilet, before eating/feeding oneself & child and after cleaning of child bottom. Please refer the table below for detail

Table 7: Hand washing practices by households

S/n	Response category	# of Respondent Baseline	# of Respondent End line
1	Before preparing food	59	3
2	After visiting toilet	43	21
3	Before eating/feeding oneself & child	43	6
	After collecting dirty materials		5

4	After cleaning of child bottom	8	2
5	Before preparing food and after collecting any dirty material	0	9
6	Before preparing food and Before eating/feeding oneself & child	0	10
7	After visiting toilet ,Before eating/feeding oneself & child and after collecting dirty materials	0	46
8	Before eating/feeding oneself & child & After cleaning of child bottom	0	8
9	Before preparing food, Before eating/feeding, After toilet, After collecting dirty materials and after cleaning of child button	39	81
10	Total	192	191

Majority of the respondents 102 (146 during the BL) witnessed that they don't have hand washing facilities near to their toilet and only 89 (46 during the BL) respondents indicated that they do have hand washing facilities near to their toilets. Majority of the respondents are using plastic Jerican with less than 5 liter in capacity. Regarding the type of detergent used for hand washing: majority of them are using soap and powder soap for their households.

Table 8: Type of detergents used by households

Type of detergents	Baseline	End line
1. Soap	36	38
2. Powder soap/ Soap	5	31
3. Ash	3	0
4. Both soap and ash	2	4
Total	46	73

Households/ mothers are using different child anal cleansing materials. According to the end line result majority (102) of them are using water + Leaf as child anal cleansing material and this number was 67 during the baseline.

Table 9: Child anal cleansing materials used, mostly used

Child anal cleansing materials you used, mostly	# of respondent Baseline	# of respondent End line
Valid Washing with plain water only	80	46
Soft + water	16	15

Leaf + water	67	102
Leaf + water & Clean Cloth	0	16
Other materials/ Cloth	29	0
Total	192	179

1.4.6. Diarrhea occurrence

Majority of the respondents 173 (160 during the baseline) explained that their children did not had diarrhea in the last 2 weeks while 18 (32 during the baseline) respondents mentioned that their children had diarrhea in the past 2 weeks. Diarrhea incidences reduced during the end line survey as per the finding

11 (65 during the baseline) of the respondents did not know whether diarrhea is preventable or not, and majority 135 (82 during the baseline) of them believe that diarrhea can be prevented through one of or a combinations of (Washing hands at key moments using soap, Using latrine to defecate, Treating water before drinking and Keep food hygienic). However, the other 45 (45 during the baseline) did not believe that diarrhea can be prevented through this practices

Level of satisfaction on the support provided by the project

Respondents were also asked about the level of satisfaction regarding the support made by the project. According to the end line survey result, around 82% of the survey respondents mentioned that they are satisfied with the support made by the project. On the other hand close to 15% of the survey respondent explained that they are not satisfied mainly due to issues related with timeliness of the support provided. There was civil unrest in allover Oromia during the project period and movement was significantly hampered

6. Conclusion remarks

1. Safe access to water

- In the surveyed area, the water consumption of the majority is less than the sphere standard and it does not show improvement from the baseline. There is slight improvement in average daily per capita consumption. However, there is significant improvement in terms of access to safe/improved water sources as compared to the baseline, which showed that the majority of the target community has benefited from the constructed water schemes. The number of respondents who took more than an hour to fetch water has dropped; and on the other hand, the number of those who need a maximum of 30 minutes to fetch water during the baseline has also dropped.
- This could be attributed to the concentration of respondents to nearby protected water sources unlike during the baseline where the respondents could simply consume any available water regardless of its quality. Thus, the project is able to increase access to safe water and to improve this situation considerably. It also comprised ensuring the sustainability of the service by building the local capacity that is practical and need based. It included hands-on trainings, provision of maintenance tools and development of brief User Guidance manuals for water schemes operation and maintenance.

2. Sanitation & Hygiene

- As per the baseline, though majority of respondents have latrine of some kind, the observation indicated that the hygienic condition of the latrine was found to be improved. In addition, open defecation is high in the project area. During the end line survey, both latrine hygiene and open defecation practices showed slight improvement. Faces observed in the compound of significant number of households during the baseline has declined similarly. Hand washing practice at all the four critical times was the main topic of the hygiene promotion activity. The achievement is significant with this regard.

3. Water related diseases and other

- Diarrhea prevention was found to be one of the focus areas of the hygiene promotion as per the baseline survey results. Accordingly, there has been improvement on the number of respondents who are able to answer all means of the diarrhea prevention. Similarly, treating water at household level was promoted and thus improvement was seen in the project period.
- The observed high level of house fly infestation showed some improvement because of the hygiene promotion activities that included environmental sanitation with the application of IEC materials to illustrate the main cause of disease and the protection measures. Yet, there is reduction in the rate of feces and refuse observed in the compounds of households.
- As the observation indicated, most of the respondents do not have hand washing facility nearby their latrines. Therefore, hand washing facility should be one of the topics of the Sanitation and Hygiene promotion. The Solid and liquid waste disposal system observed in the community showed improvement. However to achieve more result, mass campaigns or School Sanitation & Hygiene clubs promotion of Environmental sanitation is very important.