African Medical and Research Foundation in Ethiopia

Final Evaluation to Access to Water, Sanitation and Hygiene Promotion Project, Gullele Sub City, District-5, Addis Ababa, Ethiopia

BY: CONCRESCENCE FOR HEALTH DEVELOPMENT SERVICES PLC

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Final Evaluation Findings

1. GENERAL INFORMATION

A total of 192 households were interviewed in the district. The majority of the evaluation participants were females 146(76.0%), married 100(52.1%) and illiterate 56(29.0%).

Regarding to occupation, sixty respondents (31.3%) were crafts man followed by housewives 44(22.9%). Similarly, the survey indicated that the average household income is to be 500.00 Ethiopian birr per month.

Table-1: Summary of socio-demographic characteristics of study participants in Gullele subcity, district 05, July, 2012, Addis Ababa

Characteristics		Frequency	Percent (%)
Sex of respondents	Male	46	24.0
	Female	146	76.0
Marital status	Never married	40	10.9
	Married	100	52.1
	Divorced	12	6.3
	Widowed	39	20.3
Educational status	Illiterate	56	29.0
	Read and write	26	13.5
	Grade 1-6	25	13.0
	Grade 7-8	21	10.9
	Grade 9-12	43	22.4
	TVET	7	3.7
	College/University	14	7.0
Occupation	House wife	44	22.9
	Government employee	19	9.9
	Private employee	18	9.3

Daily laborer	13	6.8
Crafts man	60	31.3
Trader	16	8.3
Other	16	8.3

2. WATER SUPPLY

2.1. Water facilities construction, location and quantity of water used

The study also indicated that the main source of drinking water for the households was piped water into yard 176(92.0%) followed by public tap water 12(5.8%). The majority 172(90.0%) of the respondents reported that the water sources are constructed by the government whereas 11(5.7%) and 4(2.0%) were by both NGO & Community, and NGO respectively.

The majority 119(63.0%) of respondents reported that water sources were available all year round. On the other hand, significant number of respondents 70(37.0%) reported that water sources are not available all year round. As a result, a number of respondents 50(71.4%) and 20 (28.6%) use prior storage of water in larger household containers and other sources respectively. Nearly 1% of respondents reported from unprotected well and spring sources (Table 2).

Table 2: Summary of water sources, construction and availability in Gullele sub city, district 05, July 2012, Addis Ababa

Variables		Frequency	Percent (%)
What is the main source of water for your family? (N=192)			
	Piped water into yard/plot/building	176	92.0
	Public tap/standpipe	12	5.8
	Procure from the private	4	2.2
Who constructed your water source?			
	Government	172	90
	NGO	4	2.0
	The community	0	0.0
	Government and NGO	2	1.0
	Government and community	3	1.3
	NGO and community	11	5.7
	Other (Specify)	0	0
Is the source available all year round?			
	Yes	119	63.0
	No	70	37.0
	Total	189	100
If not what other source do you use?			
	River	0	0
	Unprotected well	0	0
	Prior storage of water	50	71.4
	Other(specify)	20	28.6

The evaluation also identified the type of containers used to transport water from the source to their home. The majority 106(55.2%) were usually used jerry cans followed by buckets 70(36.5%) and barrel 5(2.6%). Based on these container volumes and frequency of fetching water for all purposes, it was estimated that the quantity of water used was 18.5 liters per capita per day. Regarding to water sources access, the traveling time varied from 3-60 minutes with an average of 10.0 minutes. In addition, the average waiting time was 6.1 minutes.

Table 3: Summary of water container, quantity and frequency of fetching, in Gullele sub city, District 05, July 2012, Addis Ababa

Variables	Frequency	Percent (%)
With what containers do you transport drinking water for drinking, cooking food, washing clothes, animals, garden, etc from the source?		
Bucket	70	36.5
Jerry can	106	55.2
Bottle/Plastic bags	0	0.0
Pots/clay	0	0.0
Barrel/drum	5	2.6
Other (specify)	11	5.7
Average frequency of collecting/transporting water per day from the water source		1.6
Average time in minutes required getting water, and coming back?		
Travel and back to house		10.0
Waiting time elapsed		6.1

3. Management of Water sources

Project document review and field visit during the evaluation period indicated that there is water point (tanker) constructed by the project in Eline and Tesfa and sanitation committee took the responsibility in managing the water supply points. The water source is estimated to serve 450 people in the village. Similarly, the project also constructed two shower rooms for the community at Hidese site in the district. The shower rooms are estimated to benefit for 950 people in the area.

Meanwhile, the district administration such as health and water office as well as urban health extension workers is providing technical assistance in management. In every facility the beneficiary is paying for water and shower. There is also monthly contribution for future operation and maintenance. The money is managed by water and sanination committee through their by-law which developed. In every facility there are seven member of the committee: chair person, secretary, accountant, store keeper, purchaser and two members.

4. SANITATION CONDITIONS

4.1. Latrine access and utilization

Latrine access and utilization was one of the main parts of the evaluation in the district. Ninty eight percent of the households possessed latrine facilities either private, communal or public.
Out of which 80 (42.6%) stated that they have access to private latrine and 99(52.6%) stated their latrine is communal type. Majority of the latrines (58.3%) were located outside the yard. Only 9 (7.3%) are located inside or attached to dwelling.
Regarding the distance of the outside yard latrine from the house, more than half (51.6%) were less than 10meter and 41.7% between 10 and 20meters as shown in the table below.

Table 4: ***Reported latrine possession, ownership and locations in Gullele sub city, July 2012, Addis Ababa***

Variables		Frequency	Percent (%)
Possession of private, communal or public latrines			
	Yes	188	98.0
	No	4	2.0
Latrine ownership			

Private	80	42.6
Communal	99	52.6
Public	9	4.8
Location of latrines		
Inside or attached to dwelling	14	7.3
Elsewhere inside yard	66	34.4
Outside yard	112	58.3
Estimated distance of latrine from the house		
Below 10meters	99	51.6
10-20meters	80	41.7
20-50meters	10	5.1
More than 50meters	3	1.6

In regarding to reasons for latrine construction, the respondents reported that it is for privacy (32.7%), to prevent filth born disease (28.9%) and to use at any time (27.5%).

During evaluation period latrines in the district were observed in order to define whether they are improved or unimproved. It was found that 85.0% of the latrines were improved. (table 5).

Table 5: Latrine conditions and types in Gullele sub city, district-5, July 2012, Addis Ababa

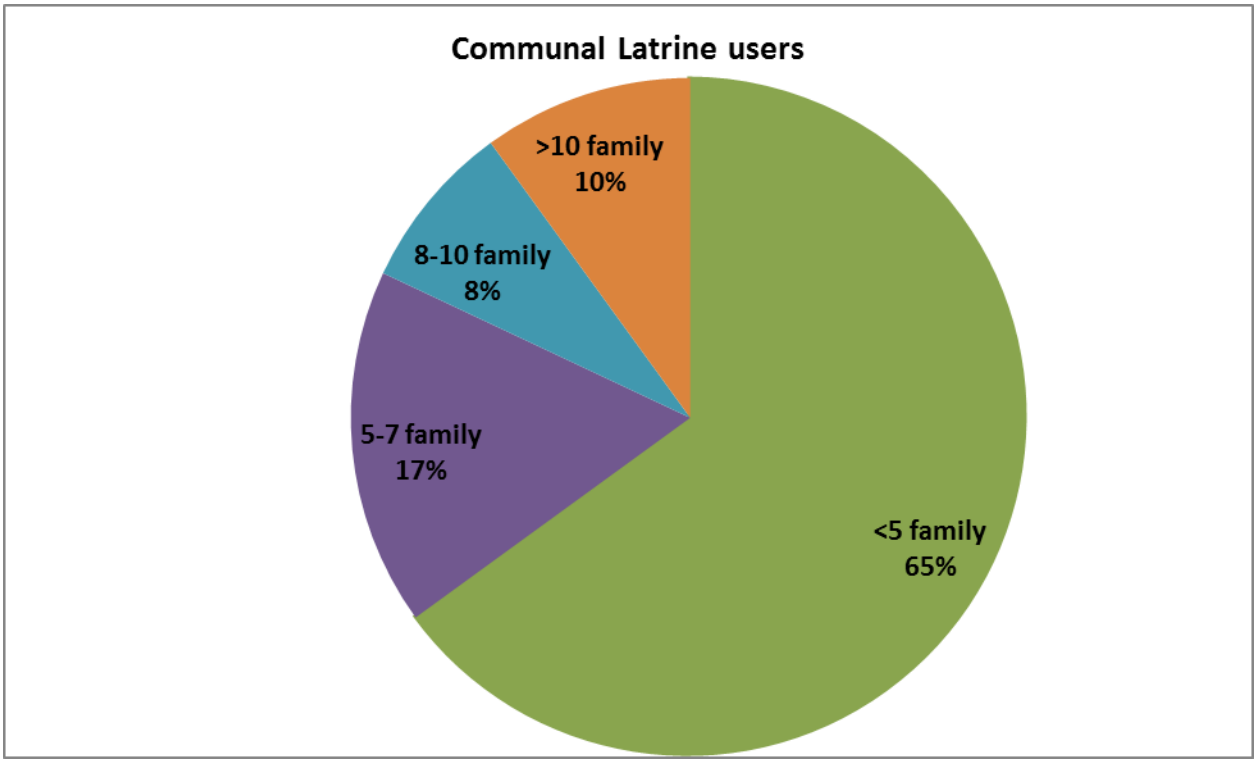
Variables	Frequency	Percent (%)
Is the latrine unimproved or improved?		
Improved pit latrines	160	85.0
Unimproved	28	15.0
VIP latrine	32	16.8
Pour-flush toilet/washable with water	14	7.2
Other	2	1.0

[1**]Possible reasons for construction of latrines

Privacy	120	32.7
Prevent filth born disease	106	28.9
Use at any time	101	27.5
Dignity	27	7.4
Sign of richness	13	3.5

[1**]Multiple response

Among communal latrine users, the respondents were asked about number of users per communal latrines. The responses were 65.0% was less-than five family members and 10.0%% more-than 10 family members (***figure 1***).



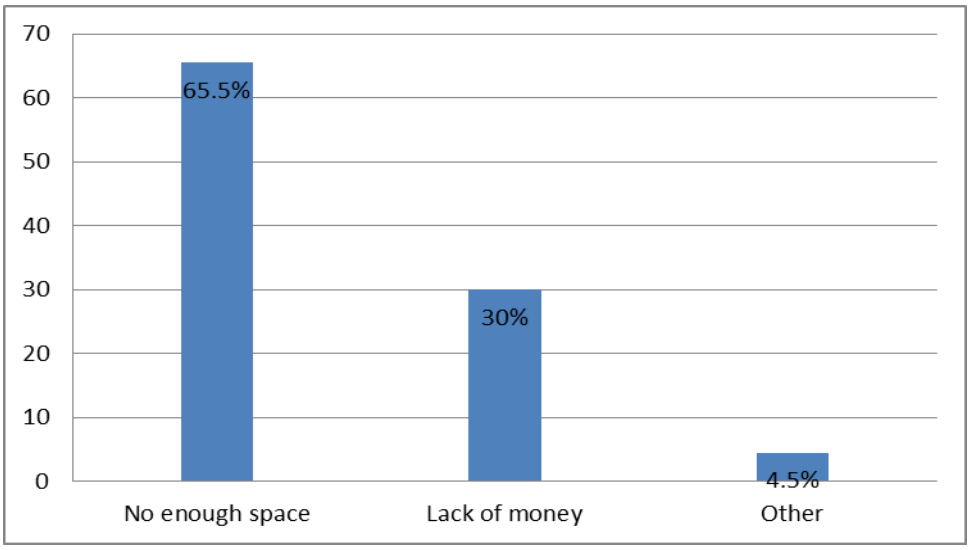
For respondents who have no latrines, it was asked about the alternative defecation sites. The respondents used different means of defecations as shown in the table below by age disaggregation.

Table 6: Summary of alternative defecation sites per age group, Gullele sub city, district 05, July 2012, Addis Ababa

Variables	<5yrs		5-18 yrs		>18 yrs	
	Frequency	%	Frequency	%	Frequency	%
In bucket	5	50.0	1	7.7	1	5.0
Around yard	2	20.0	1	7.7	1	5.0
Out of yard	0	0.0	0	0.0	7	35.0
Fly toilet	2	20.0	1	7.7	1	5.0
Other	1	10.0	10	76.9	10	29.4
	10		**13**		**20**	

The reasons why the respondents don't construct latrines were also asked during evaluation period. The majority 65.5% mentioned that it is due to lack of enough space while 30.0% stated lack of money. (***figure 2***).

Figure 2: ***Reasons for not constructing latrines in Gullele Sub-City district -5, July 2012, AA***



5. Solid and Liquid Waste Management

Safe solid and liquid waste disposal is important to prevent communicable diseases. The situation in district 05 as reported from the evaluation was found to be 42.5% discharge liquid wastes connecting into run off tubes. Similarly, 30.0% liquid wastes dispose either through septic tank accumulation and emptied by the Addis Ababa City Administration Water and Sewerage Authority or use soak away pits. And yet 11.5% of the respondents dispose liquid wastes in to open fields (***Table-7***).

Table 7: ***Solid and liquid waste disposal system in Gullele Sub-City district -5, July 2012, Addis Ababa***

Variables	Respondent	Percent (%)
How do you dispose liquid wastes?		
Discharge into open field	22	11.5
Septic tank	29	15.0
Soak away pits	29	15.0
Emptied by Water and Sewerage authority	4	2.0
Connecting to run off tube	82	42.5
Along roads/add to run off tubes	26	14.0
How do you dispose solid wastes?		
Throw out of the premises	1	0.5
Throw along road sides	1	0.5
Give to small scale enterprise crews	180	93.8
Add to waste containers	9	4.7
Give to *'qoralew'*	1	0.5

6. Management of Sanitation Facilities

During technical field visits and project document review, there are two communal latrines constructed by the project in Eline and Tesfa sifere where water and sanitation committee took the responsibility in managing the sanitation facilities. More than 86 households / 688 people are benefited from two sanitation facilities, (i.e, 458 females and 230 males). In addition, the project also constructed one school sanitation facility in Kechene Medhanlem high school. The sanitation facility has 12 rooms for boys and 8 rooms for girls separately, hand washing compartment and water tanker with 5000 litter capacity also established nearby the facility.

7. HYGIENE PRACTICES

7.1. Knowledge on Water and Sanitation

Regarding household water safety, 184(95.8%) and 5(2.6%) of respondents think that the usual water sources are safe and unsafe respectively. Those respondents who considered as safe are knowledgeable in justifying the possible reasons such as colorless, free of turbidity and disease causing organisms as shown in the table below (Table-8).

The respondents reported also the knowledge of the possible factors/causes of diarrheal diseases. Majority of the respondents know more than one possible cause/ factor for diarrheal diseases as summarized in the table.

Ninety-nine percent of the respondents know that diarrheal diseases can be prevented. Almost all respondents know more than one method of diarrheal diseases prevention at household levels.

Project document review also indicated that Community mobilization events for awareness raising on personal hygiene, sanitation promotion & campaign, environmental sanitation, water quality, communicable disease/ water and hygiene related –diarrheal diseases/ and importance of hand washing was provided for 440 people in the district. At the same time IEC/BCC materials were being distributed to participants and the community as well.

Sixty water and sanitation committee members were trained on water and sanitation programs to enhance their knowledge and skill to improve water and sanitation services in the community.

On the same token, 10 water and sanitation committees were established to assist households in their respective communities.

Table 8: ***Summary knowledge on water safety, cause of diarrhea, and method of prevention in Gullele Sub-City district-5, July, 2012, Addis Ababa***

Variables		Frequency	Percent (%)
Do you think the usual water source you are using is safe?			
	Yes	184	95.8
	No	5	2.6
	Don't know	3	1.7
If yes, could you please tell why you said safe?(N=184)			
	Colorless water	74	40.2
	Water with tastes	9	5
	Water free of turbidity	57	31.8
	Water free of coli forms (microorganisms)	33	18
	Other (specify)	9	5
Have you received health education on Water, Sanitation and Hygiene from Health Extension Workers?			
	Yes	175	91.3
	No	17	8.7
Do you know the cause of diarrheal diseases?			
	Yes	187	97.4
	No	5	2.6
If yes, what do you think the cause of the diarrhea?(N=187)			
	Drinking contaminated water	186	99.5
	Eating contaminated food	182	97.3
	Eating food without washing hands	179	95.7
	Defecating in open fields	180	96.3
	Contamination of food and drink with flies	169	90.4
	Others	18	9.6

Do you think diarrheal diseases can be prevented? (n=192)

Yes	191	99.9
No	1	0.1

If yes, could you please mention how it could be prevented? (N=191)

Washing hands with soap	187	97.9
Using latrine	189	99.0
Adding children's feces into latrine	150	78.5
By Covering latrine holes(always)	149	78.0
Keeping latrine clean regularly	169	88.5
Drinking safe water	176	92.2
Safe storage of drinking water	154	80.6
Hygienic preparation and safe storage of food	169	88.5
Cooking food properly	178	93.2
Keeping the leftover foods covering properly	171	89.5
Proper management of solid and liquid wastes	138	72.3
Keeping the residence compound clean	179	93.7
Medication	184	96.3

8. Hand washing

The evaluation data indicated that 188(98.0%) of the households have had soap in their home. They also reported that 98.9% of the respondents were using soap for hand washing purposes

either today or yesterday at the time of data collection. Only 50(26.0%) were found to use other materials such as ash (50%), soil/sand (40%) and leaves/grass (10%).

The hand washing with soap is being practiced at household levels at critical times such as after using toilet (95.3%, before breast feeding (76.6%), before preparing food (79.2%), before eating and feeding food (99.0%) and after washing child's bottom (97.9%).

Document review also depicts that 12 community hygiene promoters and HEWs were trained on personal hygiene, hand washing practices and sanitation to improve knowledge and practice on water and sanitation.

Table 9: ***Knowledge on hand washing practices in Gullele Sub-City district-5, July 2012, AA***

Variable		Frequency	Percent (%)
Do you have soap in your household currently?(N=192)			
	Yes	188	98.0
	No	4	2.0
Have you used soap today or yesterday? **(N=188)**			
	Yes	186	98.9
	No	2	1.1
Do you use other materials to wash your hands other than soap?			
	Yes	50	26.0
	No	142	74
What other materials other than soap do you commonly use?(N=50)			
	Ash	25	50.0
	Soil/sand	20	40.0
	Leaves/grass	5	10.0

At what times you wash your hands? (N=192)

After using toilet	183	95.3
After washing child's bottom	188	97.9
Before preparing food	152	79.2
Before eating and feeding food	190	99.0
Before breast feeding	147	76.6
Early in the morning while get off beds/ sleeping	190	99.0
Others (specify)	80	41.7

9. CONCLUSION AND RECOMMENDATION

General Information

From the sample of 192 households interviewed in district-5, it was found that 76.0% were females, and 52.1% married. Thus, 4 in 5 households were females and almost half of the respondents who are household heads are single/divorced/ widowed. This may impose undue pressure on them both economically and socially. One third of them being identified that they were engaged in handcrafts for livelihoods and one- fourth are housewives. This is informative that residents of district -5 need more support in improving the income generating options that may help access to safe & adequate water supply, sanitation facilities and hygiene.

Water Supply

The main source of drinking water for the study households was reported as piped water into yard/building (92.0%). However, 8.0% of the respondents are still forced to join the "*bono system*". Based on the type of containers used to transport water from the source to their home volumes and frequency of fetching water for all purposes, it was estimated that the quantity of water used was 18.5 liters per capita per day. This is slightly lower than the national water policy, 20 liters per capita per day within 0.5kms radius in urban centers still needs more effort to improve the access.

Latrine access and utilization

Ninety-eight percent of the respondents possessed latrine facilities either private or communal or public. As this figure compared to WHO/UNICEF JMP 2010 update report (28%), it is much better. As also indicated in the HSDP IV Ministry of Health (84% by 2015), latrine coverage of district-5 is in an adequate condition.

According to the finding, the reasons for constructing latrines were for privacy (32.7%), to prevent filth borne diseases (28.9%) and to use at any time (27.5%). When this finding is compared to the baseline survey it is found that there is a remarkable change in the knowledge of the households why they construct latrine mainly to prevent filth borne diseases (2.9%).

Solid and liquid waste management

Regarding solid and liquid waste disposal situation in district-5, it is reported 72.5% of liquid wastes are disposed using either connecting to run off tubes, septic tank or soak away pits whereas solid wastes are disposed using small scale enterprise crews and adding to waste containers (98.5%). When this finding is compared to baseline survey (57.3% used open field to liquid waste) it is much better off due to the direct impact of the project.

Knowledge on water and sanitation

The respondents' knowledge on water safety and sanitation issues were found that 95.8% of them were responded as the water source is safe. More than 90% of the respondents who considered water as safe are knowledgeable in justifying the possible reasons such as colorless, free of turbidity and disease causing organisms. Similarly, the majority of the respondents 99.9% are found knowledgeable on the use of latrines. The finding of the study also indicated that 97.3% of the respondents have knowledge of the possible causes of diarrheal diseases.

All of the respondents (100.0%) know more than one possible cause/ factor for diarrheal diseases. Ninety-nine percent of the respondents know that diarrheal diseases can be prevented. Almost all respondents know more than one method of diarrheal diseases prevention at household levels.

Generally, when we compare the findings with the baseline survey there is a significant change on the level of knowledge on water and sanitation among the respondents.

Hand washing

During the data collection, 98.0% of the households have had soap in their home. They also reported that 98.9% of the respondents are using soap for hand washing purposes either today or yesterday during data collection period. The hand washing practices with soap at critical times was in general found very high. However, the behavior of hand washing before preparing food (79.2%) and before breast feeding (76.6%) were found low as compared to other critical times.