INTERNATIONAL RESCUE COMMITTEE
ENVIRONMENTAL HEALTH PROGRAM
TIGRAY REGION, SHIMELBA REFUGEE CAMP

WATER SUPPLY, SANITATION AND HYGIENE
Knowledge, Practice and Coverage (KPC)
SURVEY Report

Tigray Region
Shemelba Refugee Camp
February 2018

Contents

I. List of Abbreviations:-

ARRA - Administration of Refugee and Returnees Affaires
CI- Confidence Interval
EHAs - Environmental Health Agents
EH - Environmental Health
UNHCR – United Nations Higher Commissioner for Refugee
HH - Household
HDW - Hand dug well
IRC - International rescue committee
SHP-Sanitation and Hygiene Promotion
TS - Tap stand
ECHO- European Commission Directorate-General Humanitarian Aid and Civil Protection

II. Acknowledgment

IRC Shimelba environmental health department would like to express deepest appreciation to all EH team and other IRC staff who contributed a lot while conducting this survey and for dedicated data collectors and supervisors for their hard work. Furthermore IRC would also like to acknowledge ARRA camp coordinator and protection staffs that helped IRC to accomplish this survey without any problem.

III. Abstract

BACKGROUND: Shimelba Refugee Camp is located in Tigray regional state Northern West of Ethiopia, at about 1210 km from Addis Ababa. In Shimelba refugee camp, IRC is currently providing safe drinking water to 5930 refugees **(Tigrigna, Kunama, Saho, Tigre, *Afar and Benin***) in Shimelba Refugee Camp (*UNHCR December 30, 2017 report*) .The existing water system consists of three 50m^3 capacity concrete reservoirs and 14 water points with six faucets each and seven hand dug wells, meeting UNHCR standards, with the capacity to supply refugees members with more than 20 liters per person per day. There are 1236 family latrines, 4 public solid waste disposal pits for five zones where their usage are controlled by Environmental Health Agents (EHAs) and sanitation facility attendants regularly. In addition, there are also 15 rooms of public showers and 9 cloth washing basins serving the refugee community. IRC hired 45 EH incentive staffs working on sanitation and HP activities and water system, one water technician officer and one sanitation and hygiene promotion officer for the intervention of environmental health program.

OBJECTIVE: To assess the current change in knowledge, practice and coverage of Shimelba refugee community in relation to water, sanitation and hygiene and to evaluate the current indicators of UNHCR (GUB79).

Methodology: Cross sectional study. The instrument used for data collection was a structured pre-tested and translated questioner having 36 questions. A total of 196 HHs selected by Systematic random sampling from Shimelba refugee community. The survey was conducted from December 25-29/2017. The collected data was entered in ODK collection using smart phone.

RESULT: In the survey period average water consumption was 26.9 liter per person per day and 100% of the households collecting water from improved water source. Nearly 80% of the HHs using family latrine and 17% of them using communal (shard) latrine but still 3% of the households defecating in open field. 99.5% of the respondents use water and soap for hand washing. About 100% of the respondents know at list three and above of the critical moments of hand washing.

CONCLUSION AND RECOMMENDATION: Distribution of enough water collection and storage containers have to be distributed as per the sphere standard and equity of water distribution has to be concerned, as some of the refugee community are collecting a lots of water where as others are collecting less than the standard. Hence Zone level water committee, being with ARRA representatives and IRC EH team, has to increase their effort so as to make the water evenly distributed to the beneficiaries and the water distribution point have to be accessible by peoples with disability , Allocation of enough amount of budget for house hold latrine construction, maintenance need to be focused. In addition, the survey result revealed that majority of the existing latrines don't addressed UNHCR standard, privacy and cleanness and it shows that majority of the latrine have to be maintained.

CHAPTER ONE

1.1 Background:

Shimelba Refugee Camp is located in North Ethiopia, Tigray National regional state, Northern West of Tigray, Ethiopia, at about 1,210 km from the capital city of Ethiopia, Addis Ababa. In the camp there are Eritrean refugees having different ethnic groups where the majorities are Kunama and then Tigrigna 66% and 31% respectively, and some minorities: Saho, Tigre, *Afar and Belen accounting 4%* In addition, a steady influx of Eritrean Kunama refugee has made their way to the refugee camp since 2001. The majority of these Kunama- speaking are less educated males evading military conscription.

IRC Ethiopia Environmental Health program began working in Shimelba Refugee Camp in April 2001. In order to reduce mortality and morbidity due to diarrhea and other water, hygiene & sanitation related diseases among refugee community in Shimelba, IRC Ethiopia Program has been implementing environmental health program focusing on water supply, sanitation and hygiene promotion. IRC provides the camp potable water supply, construction and maintenance of HH and communal WASH facilities, and ensuring the optimal utilization of those facilities by raising awareness through different hygiene promotion approaches which believed to be appropriate for refugee set-ups such us community hygiene club, house to house visit, small community group discussion, video education mass campaigns and hygiene education in public gatherings..

In Shimelba refugee camp, IRC is currently providing potable drinking water to 5,930 (2,530 F; 3,400 M) refugees (*UNHCR December, 2017 population report*) .The existing water system consists of three 50m^3 capacity concrete reservoirs and 14 water points with six faucets each and three hand dug wells, according to IRC report 26.6 liters of water per person per day is providing in Shimelba (IRC WASH December 2017 report). There are 1,236 family latrines , 4 fenced public solid waste disposal pits distributed serving for all zones where their usage are controlled by Environmental Health Agents (EHAs) and sanitation facility attendants on daily basis. In addition, there are also 15 rooms of public showers and 3 cloth washing basins serving the refugee community. IRC has hired 45 EH incentive staffs working on sanitation and HP activities and water system, one water technician officer and one sanitation and hygiene promotion officer for the intervention of environmental health program.

. 1.2 Significant of the Survey

As the study is to check the level of knowledge, practice and coverage of the residents of Shimelba refugee Camp and as this survey conducted at the end of the year, it have a great importance to evaluate the performance of program implementation and collect relevant information on the target group so that the finding will help to improve and address the issues that reviled on the study. It also helps decision makers and planners for a better planning and quality implementation of projects as base line information for further implementation of upcoming grant.

CHAPTER TWO; Objective of the study

2.1. General objective:

The general objective of this survey is to assess the knowledge practices and coverage of water, sanitation and hygiene related interventions of IRC in the camp, to evaluate performance of UNHCR and ECHO grants that were implemented in Shimelba Refugee camp in 2017 and to have base line data for the year 2018 interventions.

2.2. Specific Objectives

- To identify what people think, know and do with respect to IRC water, hygiene and sanitation interventions.
- To assess the current status in knowledge, practice and coverage of water, sanitation and hygiene.
- To measure achievements of water, sanitation and hygiene promotion interventions of UNHCR grants during the FY 2017.
- To draw lessons on modalities of WASH services/what works best & what not/ so that alternative options will be considered for the next time.
- To have base line data for future projects to be conducted on water, sanitation and hygiene

CHAPTER THREE; Survey Methods and Materials

3.1 Study area and period:

The study was conducted in Shimelba refugee camp and the survey was conducted from December 25-29/2017 in which the knowledge, practice and coverage of the refugee community was assessed in relation to water, sanitation and hygiene.

3.2 Study design:

Cross sectional study was used using systematic random sampling method. Data and information for analysis was collected by combination of developing questionnaires and observation at household.

3.3 Sample size and Sampling technique:

3.3.1 Sample size

Based on household data collected the first weeks of November 2016 there are about 1,811 households. The study subject (sample size) will be identified using standard statistical procedure as follows

$$n = \frac{(z)^2 (p)\,(1-p)}{d^2},$$

Where,
n=sample size
p= advance guess of population proportion of the most impact variable, from last baseline, percentage of target population demonstrating good hand washing practice was 46% and percentage of households dispose of feces safely was 49%. Taking 50% is good estimation
d= desired precision in percentage (margin error)
z= error risk parameter related to precision (1.96 for an error risk of 5%)

For this survey we have assumed the following condition to determine sample size that

- 50% of the population practice good hygiene practices
- 95% confidence interval and t value= 1.96
- ± 5% precision

Therefore $n = z^2 * p * q$ where, n= sample size, p=prevalence of 50%, q=1-p, d=precision (7%) $d^2 = 0.05^2$ z= 1.96 at 95% CI.

Sample size, $n = 1.96^2 * \frac{0.5*0.5}{0.05^2} = 196$

The sample size is greater than 10% of the entire population, hence correction is not needed.

Sample size % = sample size =196 X100% = 10.8227 %

Population size 181

3.4. Sampling technique and data collection:

The survey were conducted by systematic random sampling method in which all of the households in the refugee camp have same chance to be selected. Since the camp is divided into zones, so number of samples per zone were determined using sample proportion to total household size technique. The sampling interval of a zone were determined using total household of the zone divided by number of samples were collected from that zone. For example zone-A total household is 283 then number of samples collected from this zone were (283/1811) X total number of samples collected from the entire camp, in this case 196 =(283/1811)*196= 31, where 1811 and 196 are total house hold of the camp and sample size respectively. Then the number of sampling interval were 283/31=9

Rough sketch map of the camp divided by 5 zones were prepared by the survey team at the end of the training which prepared in the way that all data collectors and supervisors can easily understand. Then the number of samples to be collected were divided to each zones based on sample proportion to size method. Referring each zones sketch map, very first house were randomly selected from households in between 1st to Xth houses from the expected center of the zone, so that all data collectors expected to collect data by following every Xth house hold and the second HH to be sampled (second HH unit) will be xth HH starting from sampling unit one, third sampling unit is also the xth HH starting from sampling unit two; and the same will be applied throughout the sampling frame steps.

Each survey team had a pre fixed starting route and pick a prefixed sampling by zone. Once they initiated, the teams will count every household in their area and were conduct interview every xth household counted similar to the method described above. This systematic random method were continue until all houses in the study area covered by the sampling technique

3.4.1 Personnel:

A total of 12 personnel (1F&11M), twelve data collectors, and two supervisors were used for data collection and monitoring. Participants of the survey were selected from the Local community teachers who are with relatively high level of education. After data collection and analysis of data by ODK collection using smart phone, the **S&HP officer** prepares the report.

Table3.1. Summary of Sample size and personnel per each zone:

Zone	**Household size per zone**		**Sample Size**	
	Total Number of HHs	%	Total Number of HHs to be sampled	%
A	**283**	16%	31	16%
B	**486**	27%	53	27%
C	**246**	13%	26	13%

D	**488**	27%	53	27%
E	**308**	17%	33	17%
Total	1811	100%	**196**	100%

3.4.2 Respondents:

The survey was conducted on each Zone in the camp. To get relatively realistic information, household mothers 14 years and above were primarily targets, as they are more responsible group for water, sanitation and hygiene activities in the HH. But if not present, men house hold members 14 years and above were interviewed. In case of failure to get either of the above interviewee, the interviewer proceeded to the next house which had occupants available for the interview.

3.4.3 Personnel:

There were three group personnel in the survey; interviewers who had direct contact with interviewee, supervisors who supported and monitor interviewers, and S&HP officer for overall follow up. A total of 9 personnel were take part in the survey; 7 interviewers, 1 supervisor and 1 IRC national staff (SHP officer).Participants of the survey were selected from local community who were relatively better level of education and speak the local language in order to minimize respondent and interviewer bias and avoid inaccurate posing of questions and recording of responses. One supervisor was assigned to check proper data collection and no household was jumped without reason.

3.4.4 Training for data collectors and supervisors:

To collect the data correctly it was important to give training for interviewers and supervisor to make them familiar with the aims of the survey and how to conduct the interview. So; two day training was given on December 25-26, 2017 and the training was given by SHP officer. The theoretical part were covered on the first day and field practice and pilot testing were conducted on the second of the training

3.5. Study Limitation:

- The questioners was not translated to local language. So that , it was difficult to collect consistent data with the existing data collectors

3.6 Ethical consideration

IRC discussed the importance of the KPC survey with Administrative of Refugee and Return Affairs (ARRA) and got a permission from ARRA to conduct the survey. After receiving the permission, IRC communicated with different refugee structures and refugee camp representative to make them aware of the data collection exercise and enroll their involvement in informing the community about the KPC survey.

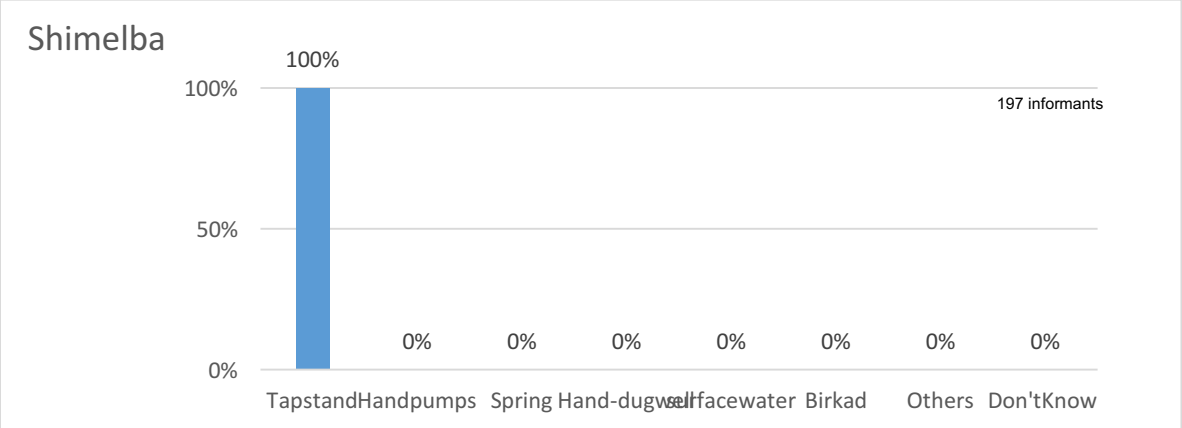
CHAPTER FIVE

Findings of the Study:

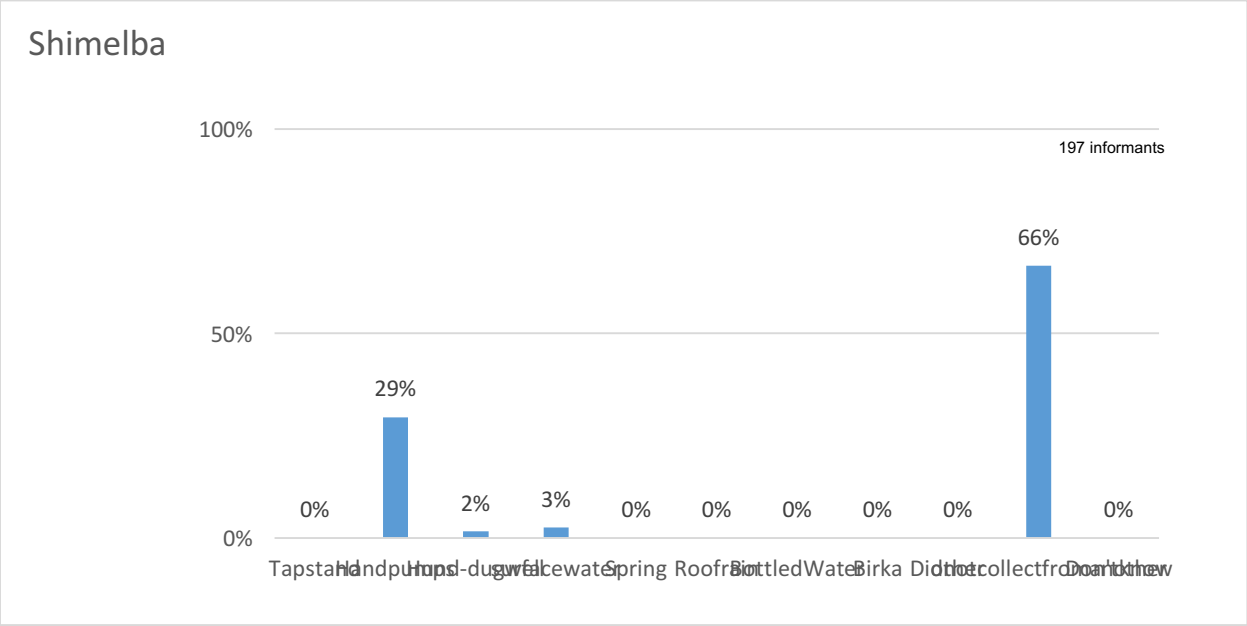
A. Water related results:

Concerning to source of water supply, tap stand is serving as the main source of water for 100% of the refugee community and 29% of the respondents respond that they use hand pump as second source of water. Average water consumption of the refugee community is 26.9. Liter per person per day, 98% of the respondents respond that water is available in their respective zones. However, still 21% of the respondents responded that as there is shortage of water in the camp. Regarding the time spent for walking form home to the nearest tap stand,45% of the respondents responded that it takes below 2 minutes, 43% responded that it takes form 2-4 minute , 11% of the respondent responded as it takes from 4-6 minute and the rest 2% responded as it takes above 6 minute to walk form home to the nearest tap stand .50% responded that it takes below 2 minute to queue water at the tap stand and the remaining 50% of the respondents responded that it takes from 2-4 minute to queue water at the tap stand. Besides that, 79% of the respondents mentioned that water is enough and the remaining 29% responded water is not enough. 0ut of the 29% of respondents who mentioned water is not sufficient. Their response to the reason for water insufficiency were, 54% due to lack of water storage and collection container , 34% long waiting time, 27% shortage of water , 34% distribution time not convenient , 5% too far , 5 % disability, 2% dangerous, 2% can't afford respectively and 60% the respondents respond adult females are responsible to collect water, 28% of the respondents respond adult males are responsible to collect water , 8% responded female children between 11-18 years of age collect water and 3% responded male children between 11-18 years of age collect water. 98% of the respondents respond they did not pay for collecting drinking water and the remaining 2% responded they pay for water. 80% the respondents clean water containers at list once per week, 5% the respondents clean water containers every day and the remaining 12% respondent they clean water containers at list once per month. 53% of the respondents draw water from containers by dipped cup, and the remaining 41 % and 6 % draw water by house and pouring respectively

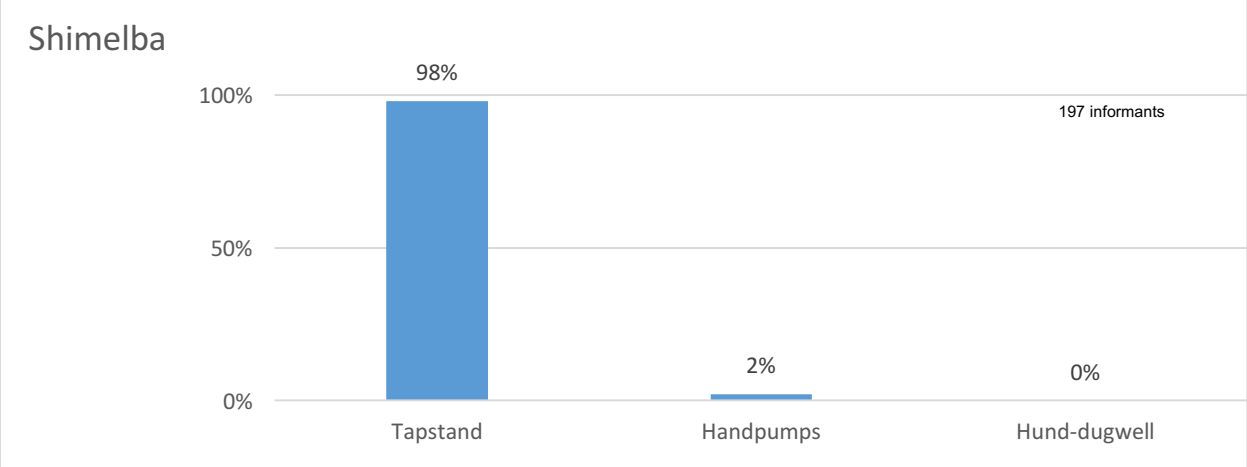
Graph 1: Showing result of ,the principal source of drinking water for members of your household



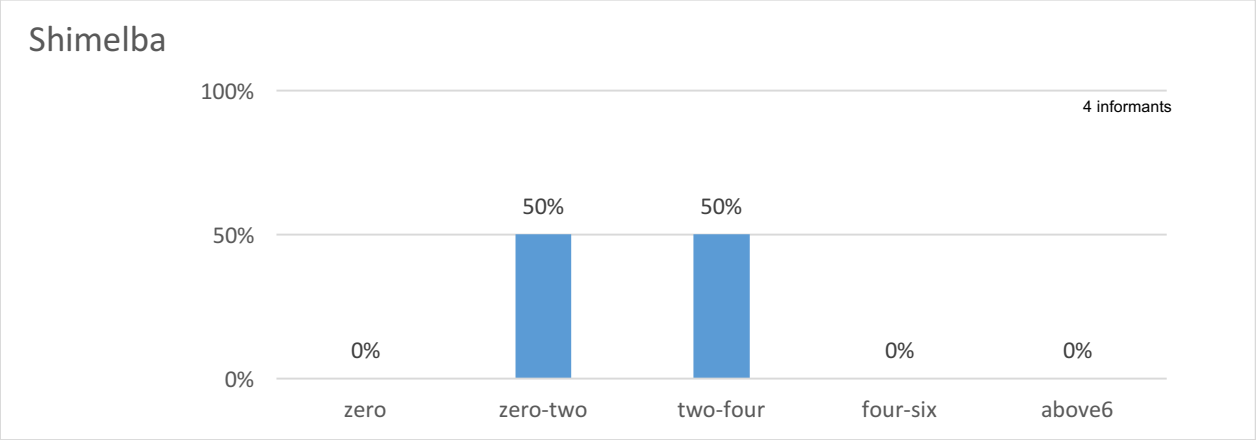
Graph 2: Showing the result of , aside from this main source, what is the second most used source of drinking water for members of your household



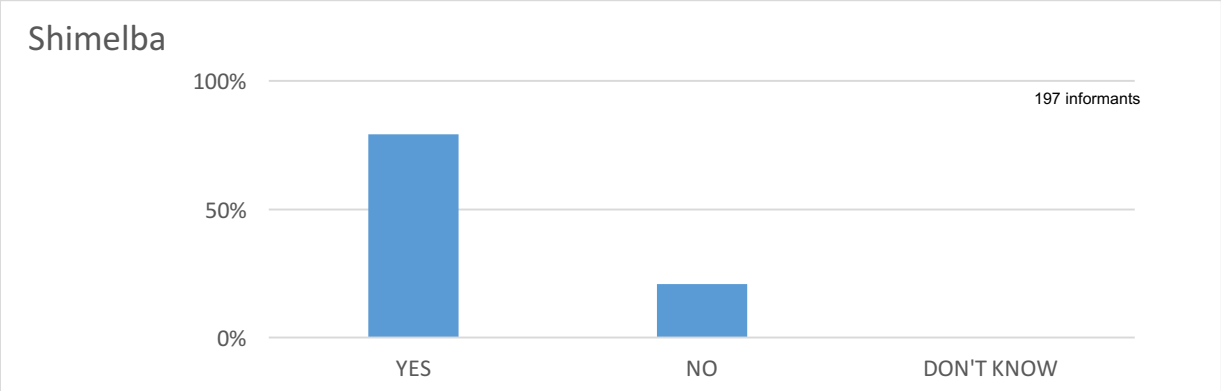
Graph 3: Showing the result of, is there a water source available directly on the villages



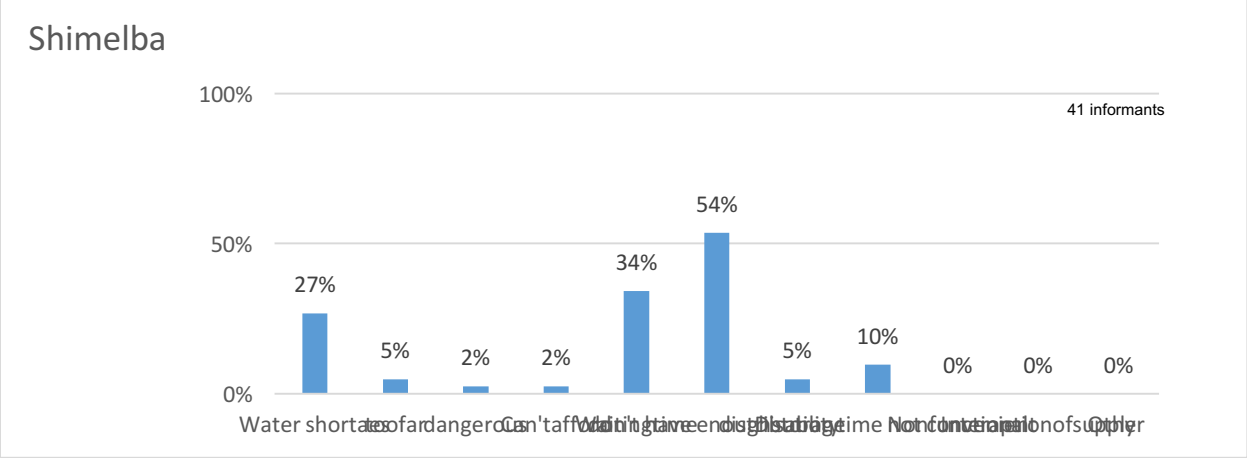
Graph 4: Showing the result of, How long does it take to fetch water at the water point? IN MINUTES



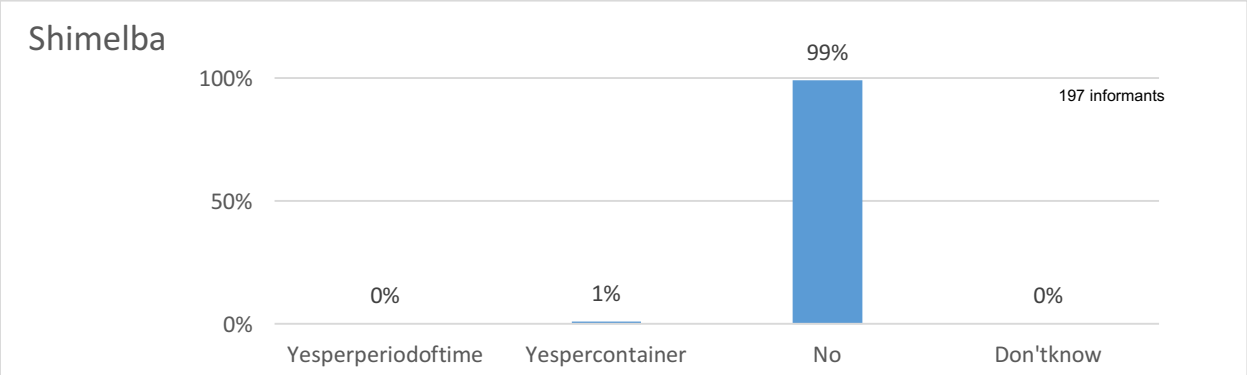
Graph 5: Showing the result of ,Do you collect enough water to meet all your households needs?



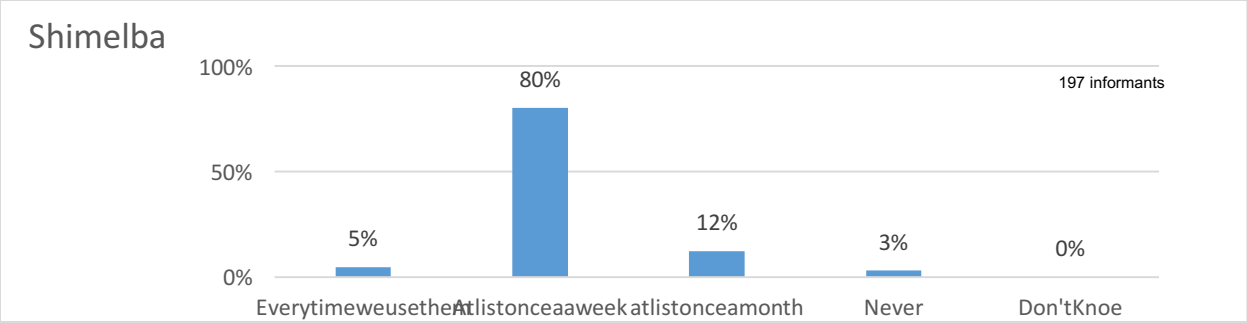
Graph 6: Showing the result of main reason for shortage of water



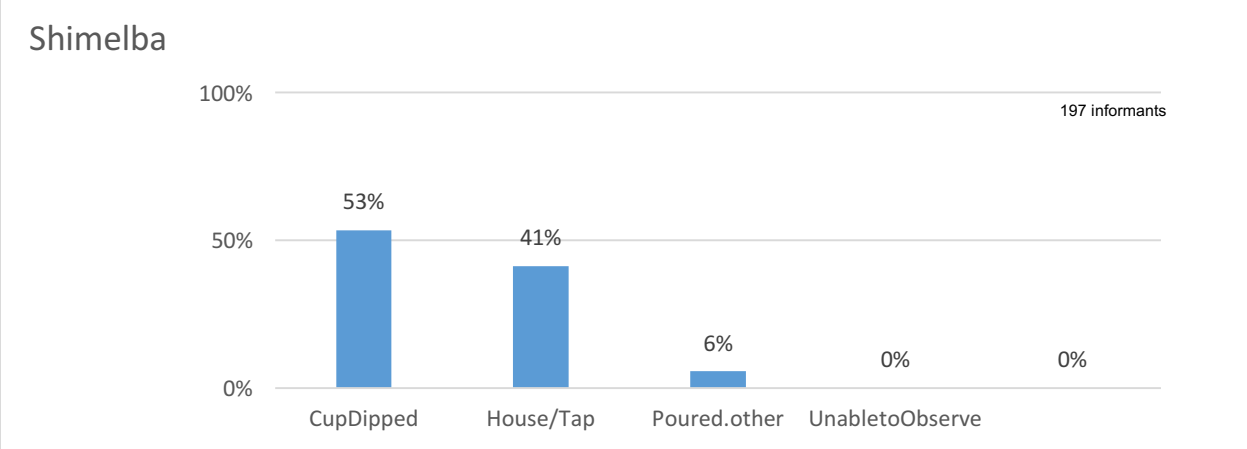
Graph 7: Showing the result of do you pay for your drinking the water



Graph 8: Showing the result of how often do you clean your water container



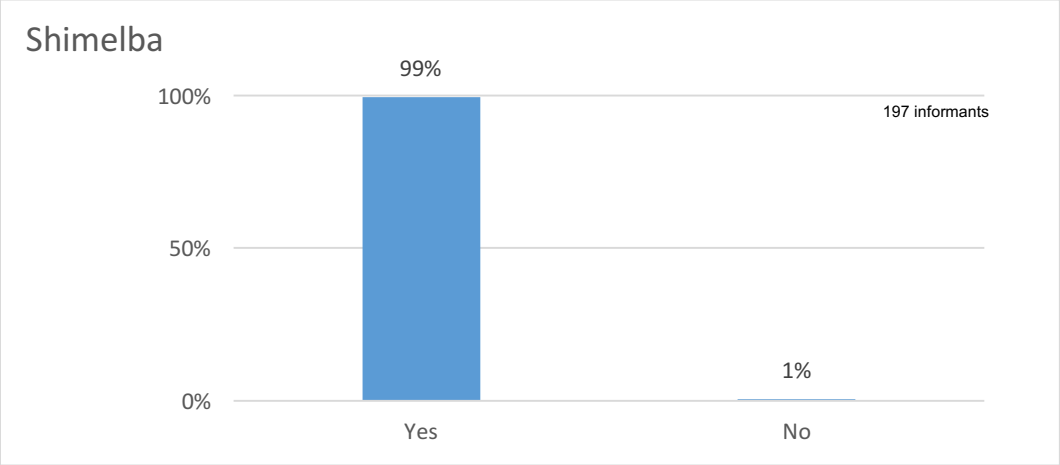
Graph 9: Showing the result of ,how did respondent remove water from the container



B. Results of Knowledge and practice of critical moments of hand washing:

99 % of the respondent households use soap and during absence of soap in the HHs, 52% of the respondents wash their hands with ash, 29% with water only, 18% the respondents respond don't know and the remaining 1% use sand in the absence of soap. Moreover, 100% of the respondents know at list three critical moments of hand washing and only 17% of the respondents have specific hand washing device. Out of the 17% respondent who have specific hand washing facility, 59 % the hand washing facility are Tip-Tap, 26 % use bucket and the remaining 15 % use pouring device .in addition, during the data collection 84 % of the hand washing facilities had observed without and 8 % had observed with water and the remaining 3 % were not known either it has water or not. In addition, 76 % of the hand washing facilities wear with soap or other rubbing agent and the remaining 24% % were without soap and other rubbing agent.

Graph 10: Showing the result of, Please show me the soap or other rubbing agent you have in the household.



Graph 11: Showing the result of, Please. When there is no soap in your household, what do you use for hand washing?

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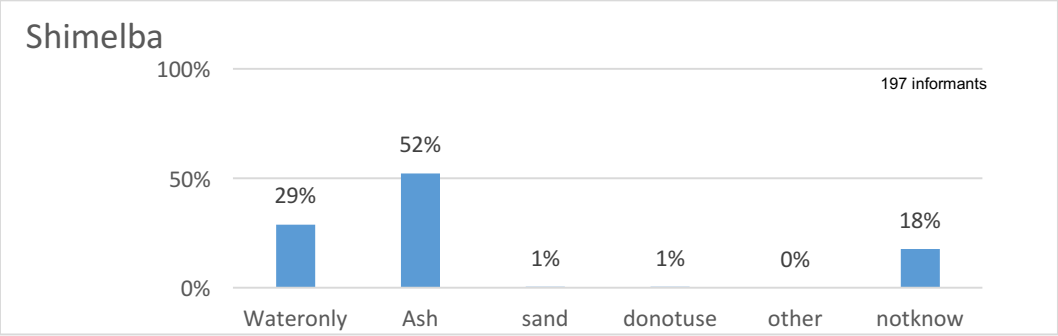
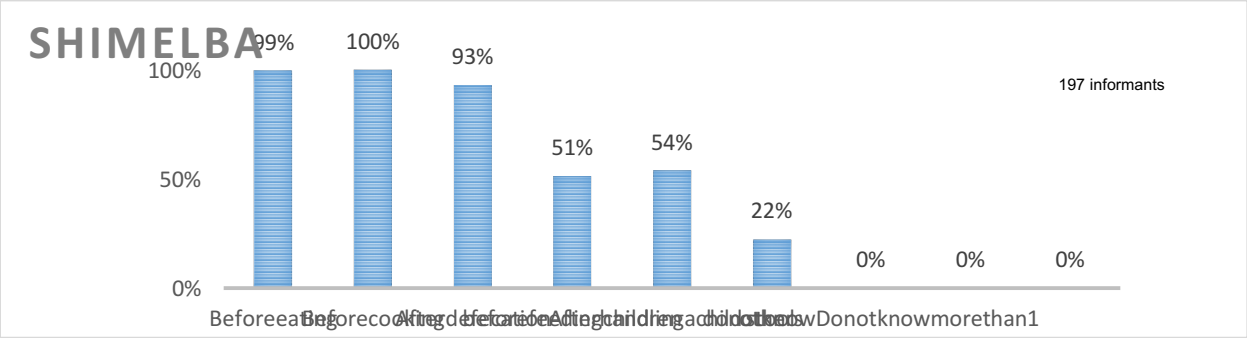
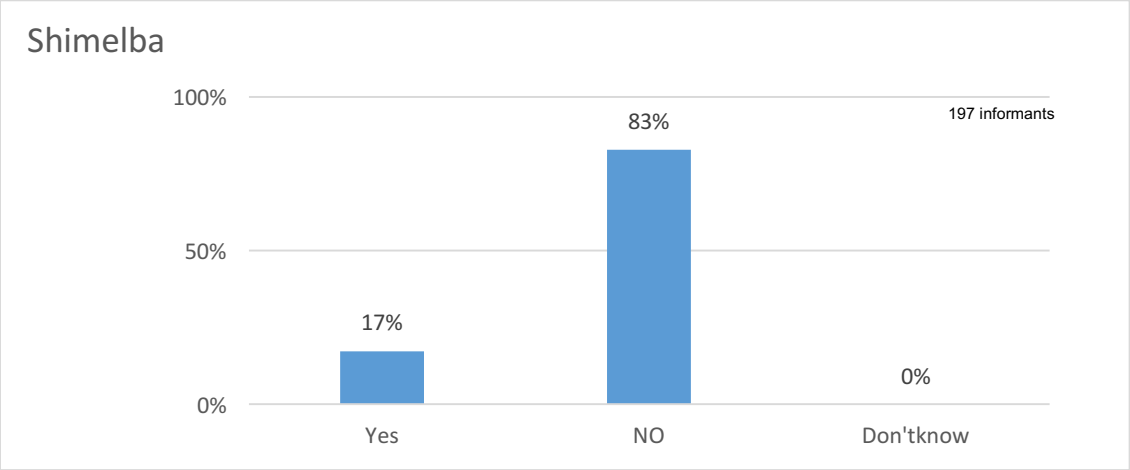


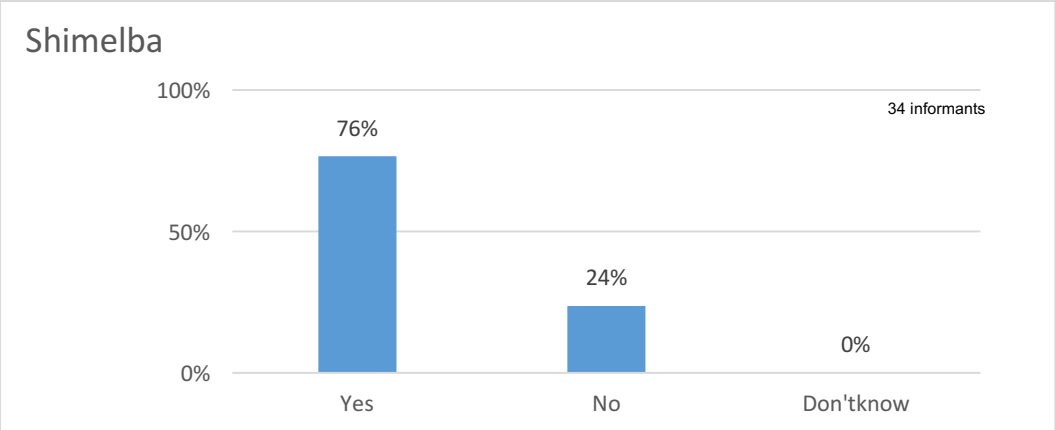
Graph 12: Showing the result of, Please name at least 3 of the most important/critical times when someone should wash their hands ?



Graph 13: Showing the result of , Is there a specific hand washing device/station in your house where your household washes their hands



Graph 14: Showing the result of, is there soap/other rubbing agent in the area of the hand washing device/station

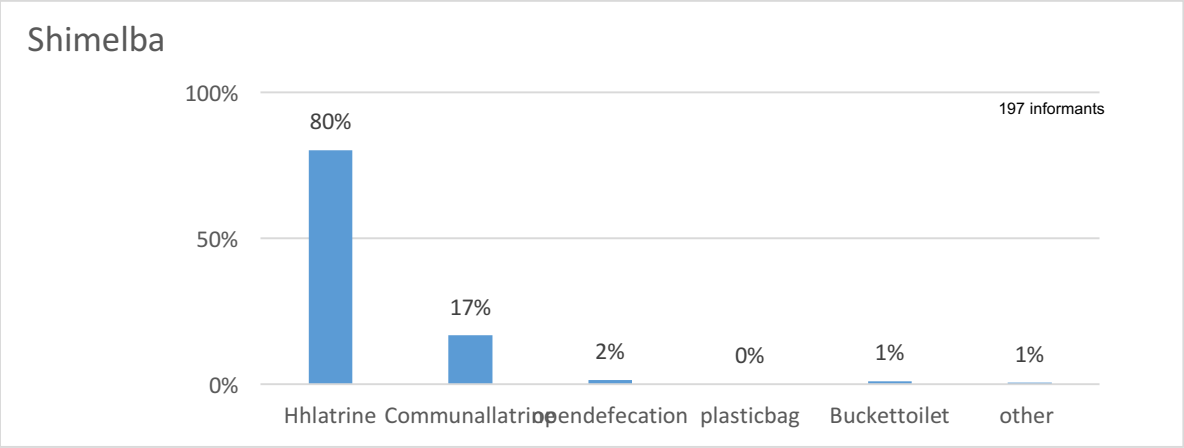


C. Latrine utilization and Bathing related results:

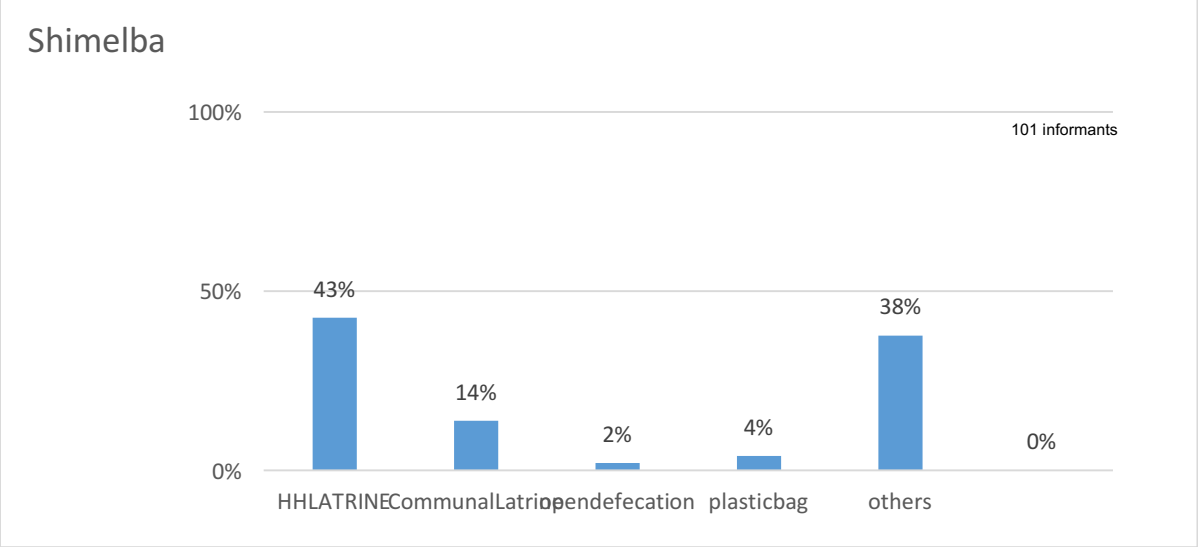
97% of the respondent households who had children of age above five years disposed feces safely i.e. 80% of the refugee community using family latrine, 17% group/communal latrine and the remaining 2% still defecate in open field. And Out of the total respondents who have under five children, 47% of respondents respond they use HH latrine, 14% use communal /shard latrine and 2% of under five children practice open defecation, 4% of under-five children use plastic bags and 48 % use other options for disposal of under-five children excreta. 9% respondents respond who have HH latrine sometimes adult members of the HH defecate in the bush. Out of the 9% the respondents who respond sometimes adult members of the HH defecate in the bush mention the reason why they sometimes use open defecation was, 24 % latrine is so far, 59% latrine is not safe and 18 % latrine is smelling. However, 50 % of the respondents responded mentioned it will take below 2 minute to go to the latrine ,24 % of the respondents responded it will take between 2-4 minute to go to the latrine , and the remaining 25 % of the respondents responded it will take above 6 minute to go to the latrine in one direction .in addition , 33 % of the respondents who have latrine responded they fill privacy while using the latrines ,and 67 % of the respondents who have latrine mentioned they latrines do not fulfil privacy for the users .Out of the 67 % respondents who mention the latrines don't fulfil privacy of the users , 50 % and the remaining 50 % of the respondents mentioned closeness of the latrine to HH and lack of sex segregation of latrine as the reason for not fulfilling privacy. From the total HH who have latrine it was observed that 51 % of the latrines wear poured/flushed latrine, 39 % wear pit latrine and 3 % wear composting and 6 % wear other type of latrines and 82 % of the latrines wear in use and the remaining 18 % the latrines wear Non-functional. It was also observed that 86 % the latrines wear not full and the remaining 14 % of the latrines wear observed as full, 45 % the latrine pit drop hole have lid to cover the latrines drop holes and 59 % of the latrine pit drop holes do not have lid.

Regarding the bathing facility, 41% of the respondents do not had designated bathing facility in their HH, 14 %, the respondent HH had designated bathing facility in their HH , 42 % of the respondents use latrine as bath facility and 3 % others of the respondents do not Know bathing facility .

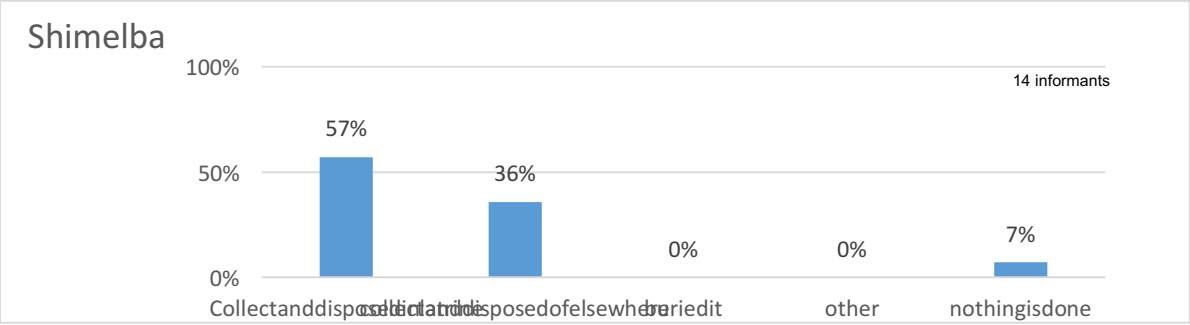
Graph 15: Showing the result of , Where do you and your household members (excluding children under 5) usually go to defecate?



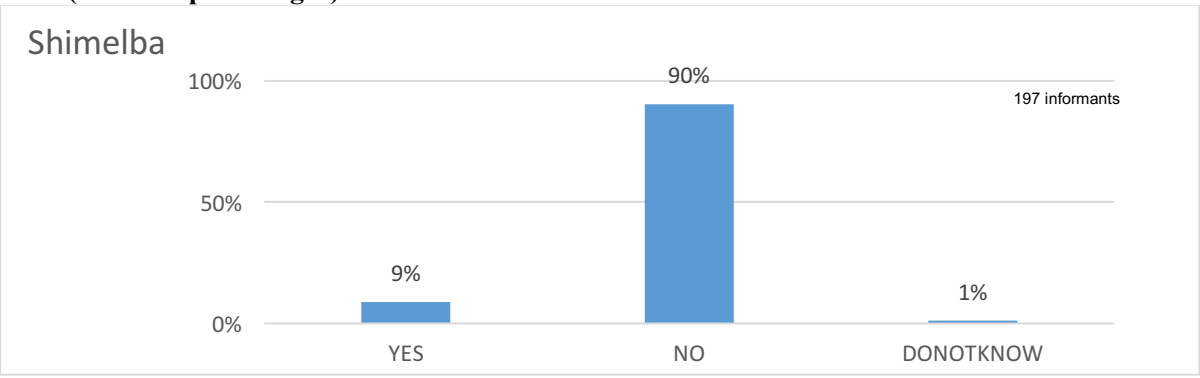
Graph 16: Showing the result of , Where do children under-5 living in this household usually go to defecate?



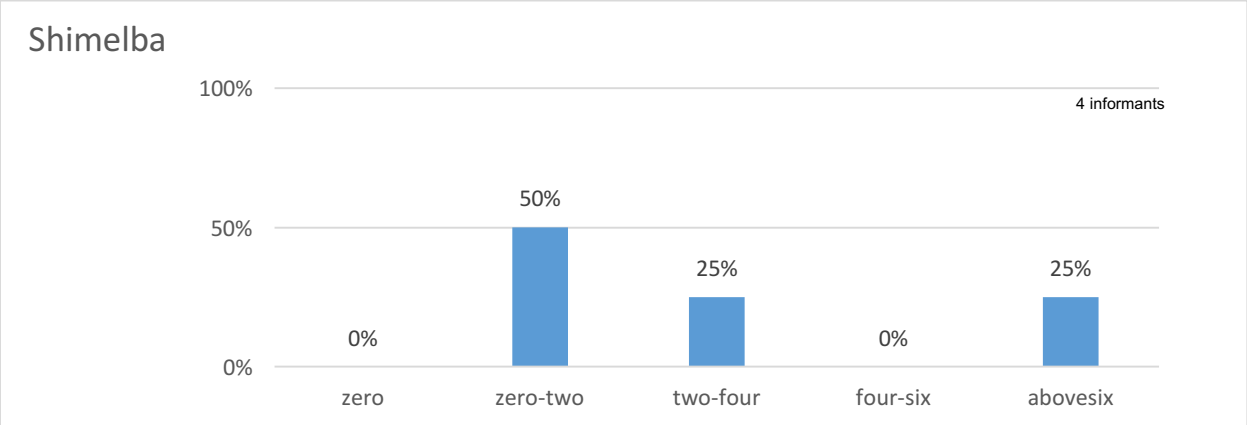
Graph 17: Showing the result of , For the children under 5 that don't use the latrine, what is done with their faeces?



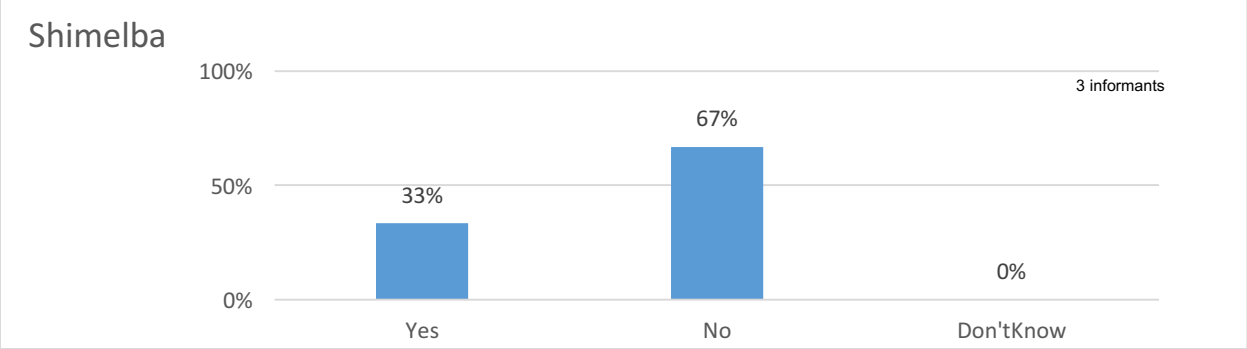
Graph 18: Showing the result of, do adult members of your household sometimes defecate in the bush (for example at night)?



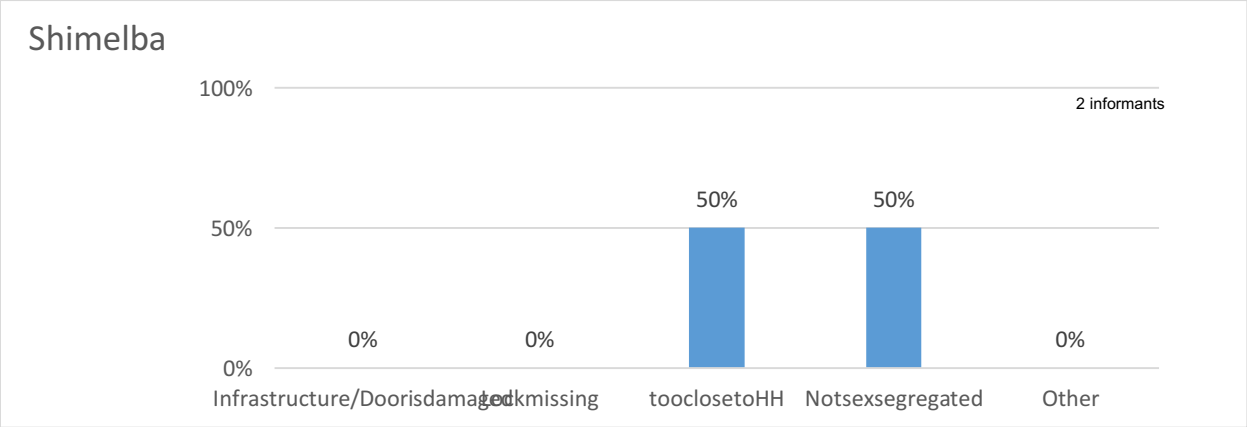
Graph 19: Showing the result of, How long does it take to go one direction to go to the latrine? IN MINUTES



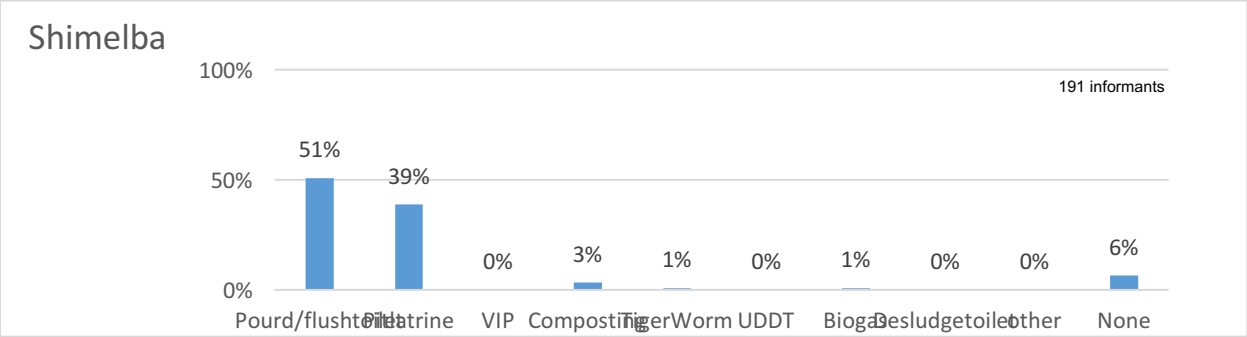
Graph 20: Showing the result of, does this latrine provide adequate privacy for you and your household members?



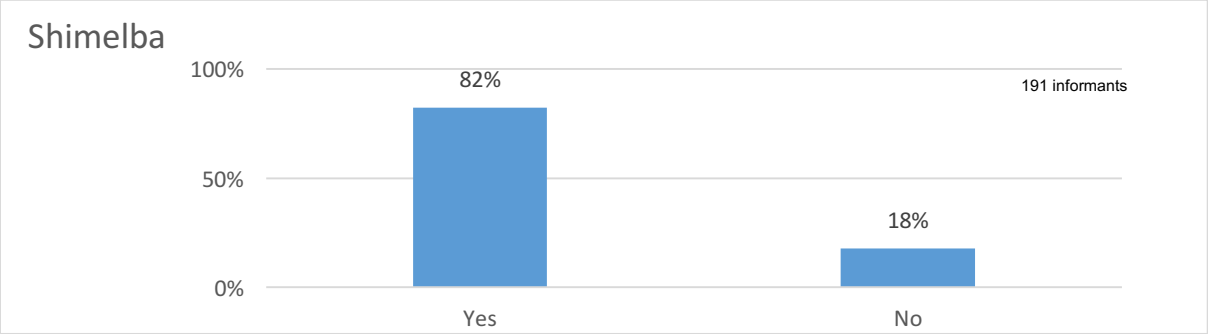
Graph 21: Showing the result of, why not?



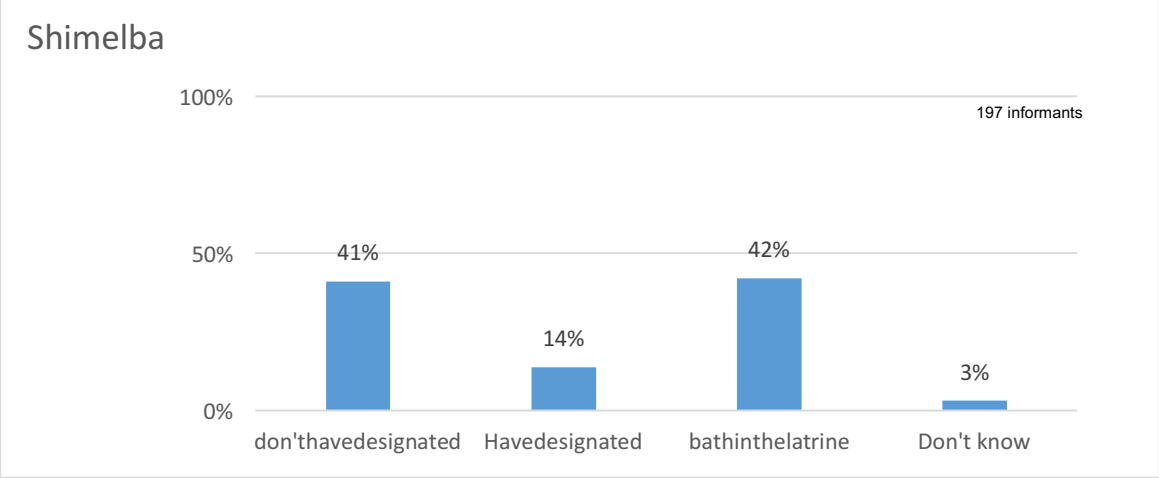
Graph 22: Showing the result of , type of latrine



Graph 23: Showing the result of , is the latrine in use ?



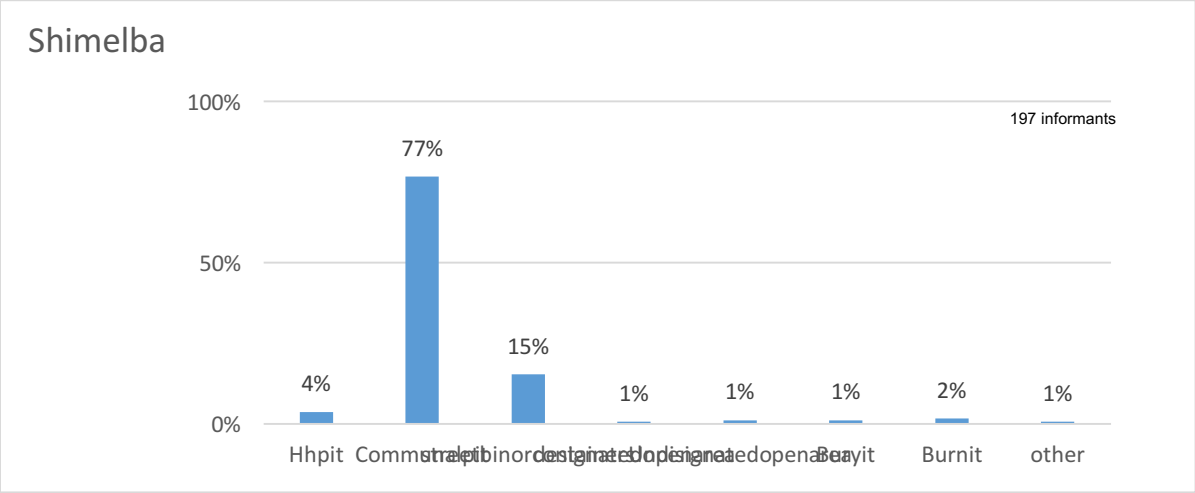
Graph 24: Showing the result of, show me where your family bath?



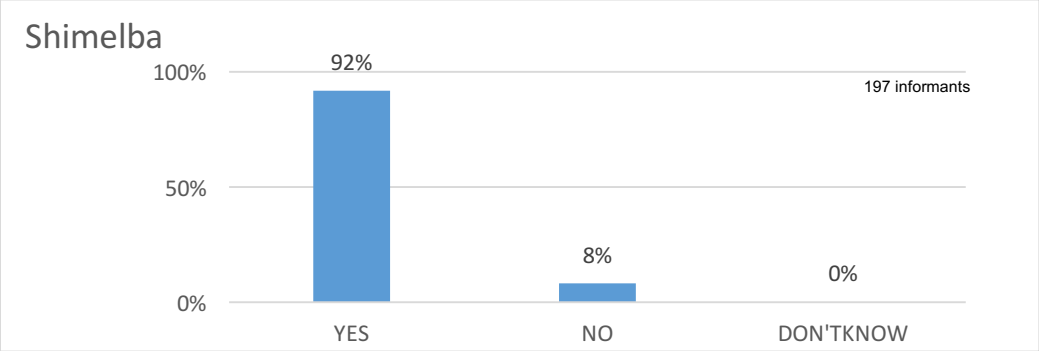
D. Solid waste disposal and Food handling related results

77% of the respondents responded that, they disposes solid waste in communal pit, the remaining 15% practice street garbage containers, 4% on waste pit in the compound, 2% burning and the remaining 1% practice street/open field disposal and burring it respectively. And it was observed 92 % the respondents courtyard was clean and the remaining 8% [95% CI: ±7%] the respondents courtyard was observed unclean.

Graph 25: Showing the result of, where does your household dispose of domestic waste?



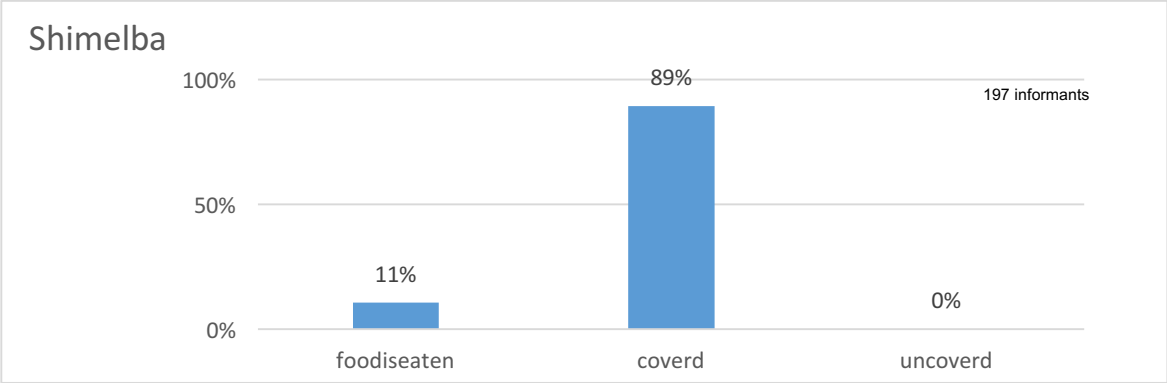
Graph 26: Showing the result of, Is the courtyard clean (no apparent trash scattered around)?



IV. Food handling:

89% of the respondents cover their food and 11% of the respondent's food storage observation shows uncovered.

Graph 27: Showing the result of , How do you keep your food?

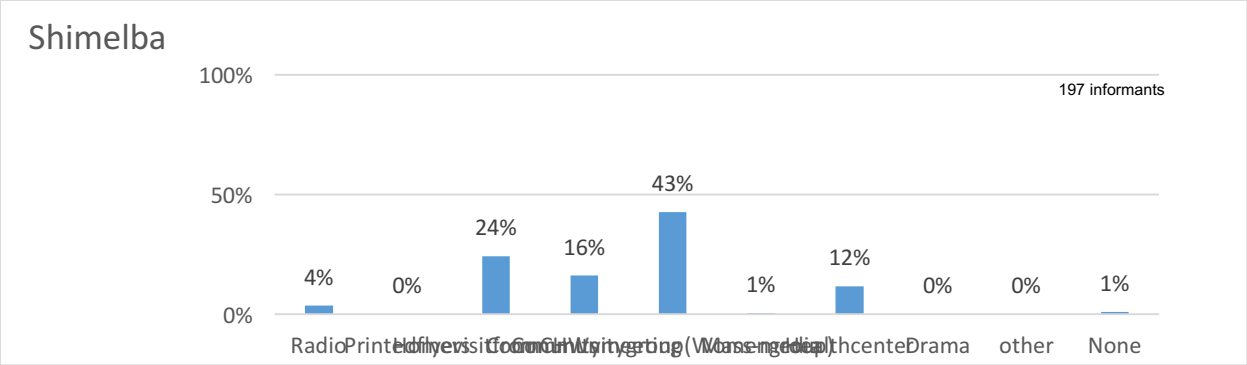


E. Results on Hygiene Promotion /communication approach:

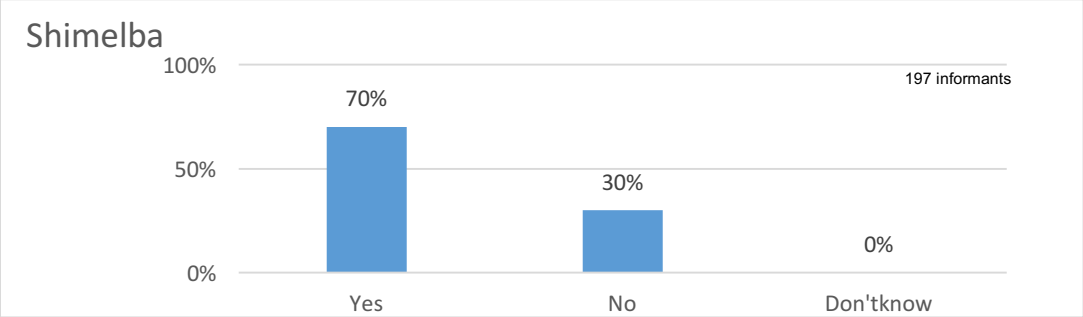
Concerning the hygiene promotion approach and communication methods, preference of the respondents as the best way for receiving hygiene message. 43% mentioned community /group discussion, 24% of the respondents mention HH visit, 16% of the respondents mentioned community meetings, 12% of the respondents mentioned school or health centre, 4% mentioned radio and 1% of the respondent mentioned mass-media as best way of receiving massages. 70% of the respondent HH received Hygiene message in last month and the remaining 30% were not addressed by any hygiene messages .60% the respondents responded they have attended a community meeting in the last month and the remaining 40% responded that they have never attended community meeting in the past month.

Regarding the literacy level of the respondents and availability of radio in the HH, 45% of the respondents wear able to read easily, 10% of the respondents wear able to read with difficulties and 46% of the respondents can't read. And 27% have functional radio and 73% of respondents responded that they do not have functional radio.

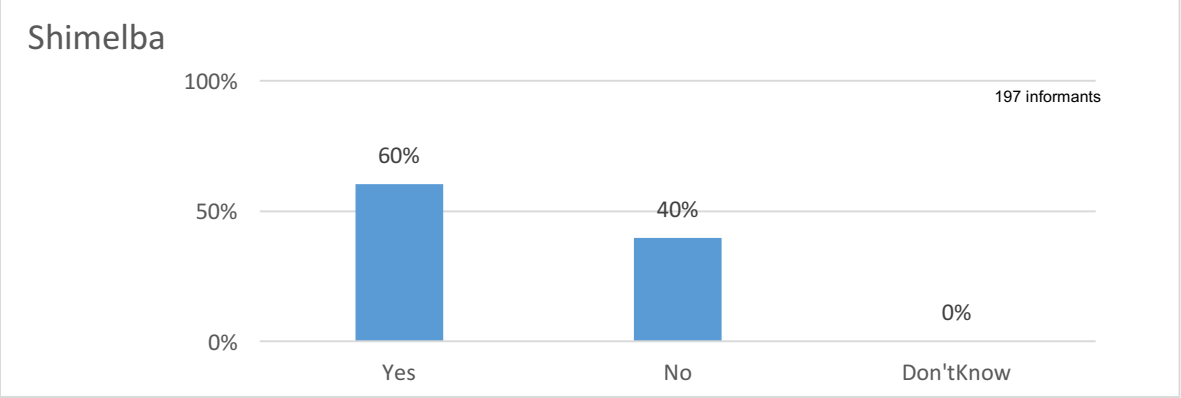
Graph 28: Showing the result of, Out of all the communication means available, what's the best way for your household members to receive hygiene and health messages?



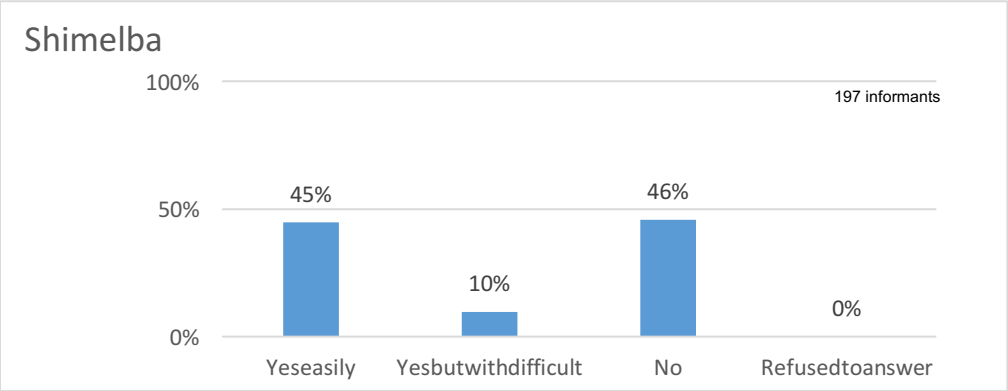
. **Graph 28: Showing the result of, In the last month did your household receive a visit from a community health worker to discuss any hygiene messages?**



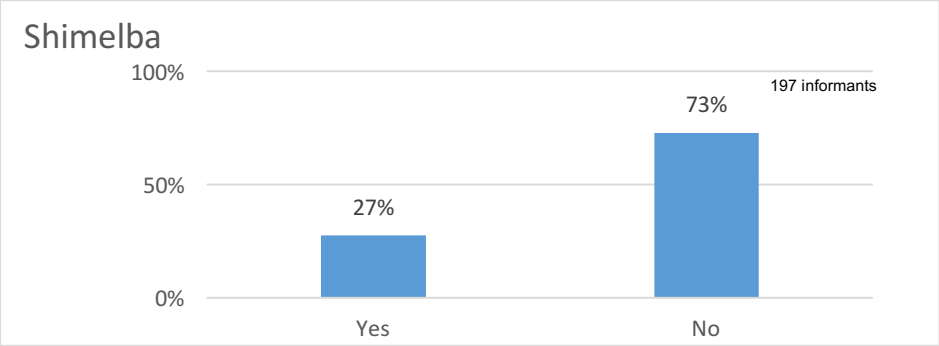
Graph 29: Showing the result of, In the last month have you or anyone in your household attended a community meeting on hygiene with community health worker(s) or other community worker(s)?



Graph 30: Showing the result of, Are you able to read?



Graph 31: Showing the result of, do you have a functioning radio in your household?



CHAPTER SIX; Discussion

In this study efforts have been made to asses KPC of the refugee community on water, sanitation, and hygiene. This study showed that average water consumption is 26.9 liter per person per day. And it has increased by 9.2 liter when compared to the last year result of 17.7 L/P/D. 79% of the households mentioned water is sufficient, and the result has increased by 8 % when it is compared from last year respective result of 71 % and 21 % of the respondents have mentioned that water is not sufficient . The core reasons for water insufficiency or shortage were ; due to lack of water storage and collection container , waiting time, shortage of water , distribution time not convenient , respectively .of water collection rand storage container, inconvenient water opening schedule and competing work burden in the household which are almost similar to last year findings .However, 80% of the respondents cleans water container at least once a week and this results when it is compared with last year KPC result it was declined by 14% . in addition , 100% of the respondents wash their hands at least on the three of the critical hand washing moments and it is almost similar when it is compared with last year result of 98%.

Regarding to latrine coverage, 2 % of the HHs defecating in open field, and the result has decreased by 10% when it is compared from last year KPC survey, and the rest 97% and 1% using family and group latrine respectively and out of which, 80% of the households who have family latrine at least 33% were with fill privacy while using it and the remaining 67 fill un-private while using it. Even though, people who disposed excreta safely were 97 %, the 17 % of the HH use shared latrine and the latrine conditions are with poor quality and when it is compared with last year KPC survey result, these result shows that, majority of the latrines are in bad condition. 70 % the house holds got hygiene education in the past month and 43% preferred community /group (women group gatherings), 24% of the respondents prefer mention HH visit, 16% of the respondents mentioned community meetings , 12% of the respondents mentioned school or health center, as a better way of receiving massages in their HH respectively.

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CHAPTER SEVEN; Conclusion and Recommendation

7.1 Conclusion

The study revealed that, majority (100%) of the respondents has good Knowledge of at list three critical moments of hand washing. But, only few respondents has permanent functional hand washing facility in their HH. This shows that, strong behavioral change effort is required to get their knowledge in practice. In general the gravity of the identified problems, which are high demand of latrine maintenance and addressing privacy of users , availability of few hand washing facility in the HH ,safe water management at home level, hand washing practice, and the risk of diarrhea disease.

- Hand washing at the five critical times: even though high number of the respondents reported washing their hands at the critical times, still focus need to give for the sustainability of the practice and increasing the number of HHs who have separate hand washing facility with detergents.
- Even though there is standard average per capita water in the camp, most of the HHs are collecting less than the standard and in few Zones the quantity of water is not enough. Which shows that there is inequity in water distribution in the camp this is caused by lack of water collection and storage container and inconvenient water distribution schedule and long queening time.
- The water distribution schedule is not convenient for significant amount of beneficiaries. Latrine coverage: the study showed that huge number of HH's who have latrine do not fill privet while using the latrine significant percentage of the HHs do not have HH latrine, defecating in the open field which is due to low latrine coverage and it demands more focus to increase the quality of latrine
- Even if, majority of the respondents responded they don't use open defecation. Still 17 % the HH do not have HH latrine and majority of the HH latrines need maintenance.

7.2 Recommendations:

Based on the result the study has recommended the following.

1. WATER

- Equity of water distribution has to be concerned, as some of the refugee community are collecting a lots of water where as others are collecting less than the standard. Hence Zone level water committee, being with ARRA representatives and IRC EH team, has to increase their effort so as to make the water evenly distributed to the beneficiaries.
- Agreed Water opening schedule should be seated By consultation with refugee representatives or by organizing focused group discussion
- Water collection and storage containers have to be distributed as per the sphere standard demand
- The type of water collection containers for distribution have to be narrow naked

2. Hygiene Promotion

- Hygiene education about Safe water management have to be strengthened
- Hygiene education on tippy taps have to be strengthen
- For every house holed with latrine permanent Hand washing facilities have to be constructed
- Easy monitoring system of the house to house visit have to be developed
- House to house hygiene education have to be strongly monitored
- To improve the quality of hygiene promotion ,regular training should be given for EHA,s
- **3.Sanitation**
- New family latrines have to be constructed
- The quality of family latrine construction have to be improved
- The high demand of latrine maintenance have to be addressed
- latrine should be constructed along with hand washing facility