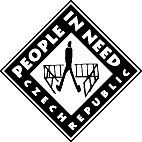


**Establishment of sustainable drinking water supply systems in small towns in the district zone of Sidama, SNNPR, Ethiopia, II**

**Sanitation and Hygiene Knowledge, Attitudes, and Practices (KAP) Baseline Survey**

**ALETA CHUKO – TESO KEBELE**





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# Executive summary

**Introduction**

The baseline survey has been conducted for the project “Establishment of sustainable drinking water supply systems in small towns in the district zone of Sidama, SNNPR, Ethiopia, II’’ funded by Czech Development Agency. The project includes the development of new water supply infrastructure, rehabilitation of the existing water supply accompanied by awareness-raising and educational campaigns focused on ensuring the long-term sustainability of the water supply systems usage, strengthening hygienic habits, increasing awareness on water-related health issues, and building capacity for the technical maintenance of the system. **The report summarizes the key findings related to the WASH sector in Teso Kebele ( Aletachuko woreda) in Sidama Zone.** Information from other targeted areas, Huluka Kebele ( Bensa woreda) and Bargo Kebele (Aletawondo woreda), are covered in separated reports. The results are based on information from quantitative household structured interviews, FGDs, observations and secondary data analysis.

**Summary of project objectives and expected results**

The baseline field data collection took place 23rd April to 13th May 2015 in 3 kebeles of Sidama Zone. It provides data on community access to and practices related to water, sanitation and hygiene. In Teso, 165 households were interviewed, and 18 community members participated in the focus group discussions.

The overall objective of the project is to create a sustainable system for supplying drinking water to the inhabitants of Teso, Bargo and Huluka. Main findings on hygiene and sanitation awareness, access to water, sanitation and hygiene practices **in Teso** are summarized in the table below:

|  |  |
| --- | --- |
| Teso kebele | |
| Household water supply and practices | **Main source of water in dry season**  Improved/protected: 67%  **Water collection time in dry season**  30 min and less: 81 %  **Water for cooking and drinking per day per person**  15l+/d/p (total/safe water) 5%/4%  8l+/d/p (total/safe water) 30%/20% |
| HYGIENE AND SANITATION PRACTICES | **Hand washing**  Hand washed after using toilet: 93%  Hands washed before eating: 96.5%  Hand washing facility in the HH (total/with water + soap or ash):18% / 2%  Hands washed with water /water+soap: 4%/85%  **Safe water storage**  Containers clean & closed: 22%  Water is poured: 87%  **Safe child faeces disposal**: 96%  **Treatment of unsafe water**: 4%  **HHs with toilet**: 88%  Latrines kept well & clean: 14%  Latrines used by all HH members: 98%  Latrines with solid super structure: 32%,  l. with solid sub structure: 48%,  l. with functional door: 12%,  l. with solid slabs: 60% |

**Conclusions & Recommendations**

**Access to water**

* On average, households in the target areas have 7l of water for each member per day used for drinking, cooking and personal hygiene, 67 % have access to safe water.
* 55 % HHs declare they don’t pay anything during dry season. 45 % say that they pay 25 ETB in rainy season, 12 ETB in dry season in average per month.

**Willingness to pay**

* Woman FGD participants are willing to pay on average 0.17 cents and men FGD participants 0.30 cents for 20 liters jerrycan. The prices offered are in line with the current pricing, there is limited willingness to pay more. People would probably switch to unprotected sources more. **Limited financial capacity is mentioned as the most common reason.**

**Knowledge and practices on water, hygiene and sanitation**

* Hand washing messages remembered lead the trail with 98% followed by disposal of garbage (88%). Other frequently mentioned messages include messages about proper use of latrine (83%), use of safe water source (59%), and jerry can cleaning (52%).
* Community Conversation is preferred by more than half (68%) of the respondents while others prefer to receive hygiene messages through radio (60%). **Therefore, the project should implement an effective community conversation session to address water hygiene and sanitation issues. Awareness seems not to influence real behavior especially in cases of hand washing, water storing, and water treating or latrine quality. Therefore usage of CLTS and other intensive participatory approaches is recommended.**

**Water treatment**

* 35 % of unsafe water users declare they remember messages on water treatment but only 4% are treating their water. **From this it can be concluded that the awareness of the problem doesn’t necessarily lead to behavior change.**
* **As the project is planning to construct new schemes in the kebele, in the area where unprotected spring and hand pump are used it is recommended to focus on water treatment as a complementary activity. But for those accessing improved water sources, promotional activities should focus more on safe water handling instead of water treatment.**

**Handling water**

* Only 22 % of the households surveyed store water in clean and closed container, 15 % of households store water in clean but not closed container, another 48 % of households use closed containers, but which are not clean**. It is recommended that promotional activities on safe handling of water should be conducted continuously, especially on proper care of and proper condition of water containers.**

**Hand washing**

* Most respondents declare that they wash their hands before eating (96 %) and after using latrine (93%).85% of the respondents usually wash their hands with soap and water using both hands. But in 82 % of households, data collectors haven’t observed any hand washing facility. It is therefore recommended that the **project focuses on activities that enable households to obtain and use hand washing facilities and access to soap or ash combined with marketing techniques to put greater social pressure on hand washing. Promotional messaging and education sessions alone will not be effective in changing this specific behavior.**

**Latrine coverage and quality**

* 88 % of households have a toilet facility at the compound described as traditional pit latrines with and without slab. 97% of the households constructed the latrine by themselves.
* Only 14 % of latrines could be described as being kept well and clean.
* The quality of latrines is quite low. For example, only 12 % of latrines have a functional door, therefore the vast majority of latrines do not ensure privacy; this has a negative impact especially on the comfort and dignity of women and girls.

**Latrine Improvement**

* A majority of households suggests they would improve their latrines by having a roof (64%), solid sub- structure (63 %), and stable slabs (63%). Suggestions for improvements reflect the observed weaknesses of existing latrines.
* The lack of financial sources is mentioned as the most common reason (75%) followed by lack of material (15 %) and inaccessibility of skilled artisans (21 %). **Therefore it is recommended to conduct barriers & motivations analysis (or formative research) which clearly indicates the barriers and also capacities of the community members to improve as well us build new latrine. Thus, through house to house visits and community conversation sessions, accessible cost latrines could be demonstrated and local skilled artisans could be promoted which initiate community members to get motivated to improve their latrines.**
* When the respondents were asked about potential amount of money they would be willing to pay for improvements, it was found out that the realistic estimations of how much the components or latrine could cost are missing. **Thus, also marketing research should be conducted to assess real prices of components and latrines’ construction.**

**Diseases: awareness and prevalence**

* 97 % of respondents consider dirty hands as a main cause of diarrhea, followed by contaminated food (78 %) and flies (72%) and bad water (72 %).
* The rate of diarrhea is 7 per 1000 people. Diarrhea affected 4% of households in the last 30 days. The highest proportion of affected children compared to the total number of affected people could be found in the case of parasitical diseases (40 %). **Therefore, it is recommended that, focus should be given in activities that enable households to obtain and use hand washing facilities and access to soap or ash combined with techniques to put greater social pressure on hand washing which will contribute to the prevention of diarrheal diseases.**

# Project Background

This survey was prepared in order to develop baseline data for the project “Establishment of sustainable drinking water supply systems in small towns in the district zone of Sidama, SNNPR, Ethiopia, II’’ funded by Czech Development Agency. The project is implemented by People in Need (PIN), in coordination with government stakeholders from Sidama Zone Finance and Economic Development, Sidama Zone Water, Mines and Energy Department (SZWMED) and Sidama Zone Health department.The project is implemented in Teso( Aletachuko woreda), Huluka ( Bensa woreda) and Bargo Kebele (Aletawondo woreda) of Sidama Zone, SNNP Region. The project is aimed at creating a sustainable system for supplying drinking water to the inhabitants of Teso, Bargo and Huluka.

The current project and its activities build upon a similar project in the Sidama Zone (Introduction of a sustainable drinking water supply system in small towns of the Sidama Zone, SNNPR, Ethiopia, I) conducted within the framework of the Programme for foreign development cooperation of the Czech Republic. The latter project has been in progress since September 2011 and is scheduled to be completed in November 2015 and also contributes to the achievement of the Millennium Development Goals, i.e. to decreasing the number of people without access to safe drinking water to 50% of the population by 2015 by creating a sustainable system for the supply of safe drinking water. The project has provided access to drinking water in the towns of Daye (Bensa Woreda), Bona (Bona zuriya Woreda) and Hagere selam (Hula Woreda).

This project plans to improve the supply of drinking water, management of water sources, and sanitation and hygiene situation of people in Sidama zone. Thus, Through the project contribution, it was forecasted that the number of people with access to safe drinking water will increase by at least 15 000 people in the target area with access to 20 litre water per day per person and public awareness of correct hygienic habits will Increase significantly in Teso, Bargo and Huluka kebeles on Sidama Zone.

# Baseline survey

**Methodology**

The study combines quantitative data collection (structured interviews and observations) together with qualitative approaches consisting of focus group discussions, key informant interviews and observations, and the secondary data review. The Knowledge, Attitude and Practice (KAP) survey approach has been selected to generate data on WASH related issues from the community, while FGDs, interviews with woreda official and kebele leaders and observations have provided additional information and a means for triangulation.

The target respondents for the community-based survey were household heads or other adult members of the households from the target areas with purposive emphasis on selection of women due to the significance of their role in WASH-related issues. Data collection took place between 23rd April and 13th May 2015.

**Data collection tools**

The questionnaire for the study was designed to capture a wide range of issues covering demographic characteristics, knowledge, attitude and practice towards hygiene and sanitation and Family planning. The questionnaire translated to Amharic and was programmed for Open Data Kit software so the data could be collected directly by using electronic devices (tablets). The questionnaire was tested during the piloting phase.

To assess hygiene level and sanitation equipment of health and education facilities in the targeted areas, an assessment questionnaire combining interview, secondary data collection and observation has been developed.

**Training and fieldwork**

Four data collectors (2 female and 2 male) and 1 supervisor, with prior experience of participating in similar WASH assessments, were selected to conduct the survey. All the data collectors were fluent speakers of Sidamigna language. They were provided with a one day training which included general briefing on the project, detailed discussion on standards of interviewing techniques and field survey procedures followed by review of each item in the questionnaires was carried out. A session was dedicated to working with tablets, which were the primary data recording device of the data collectors. Following this, a pre-test was carried out in Aletachuko woreda – Teso kebele and an in-depth discussion was held during the feedback session which then led to modification of some questions based on the challenges experienced during pre-testing.

**Sampling Technique**

The target population was considered as the habitants of kebeles were any of PIN’s WASH activities were planned. As project consists of intervention in 3 different geographic areas, sample size was calculated separately for each of them. A household is considered as the main cluster unit representing its members and final beneficiaries. Using the total number of targeted HHs, a final sample size has been calculated (see table 3) for a 95% confidence level and 7 % confidence interval according to the formula below.

**Sample Size**

Where:

Z = Z value (e.g. 1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal

(.5 used for sample size needed)

c = confidence interval, expressed as decimal

(in our case .**07 = ±7**)

Correction for Finite Population

Where: pop = population

The samples were calculated: for Teso 154, for Bargo 158 and for Huluka 162. The samples were then extended by 10 % (to cover potential non-response rate).The final number of questionnaires collected could be seen in the table below. With considering 95% confidence level, this decreased the confidence interval to 6.7 % in case of Teso and Bargo and 6.8 % in case of Huluka.

**Tab.1 Distribution of population in targeted kebeles**

|  |  |  |  |
| --- | --- | --- | --- |
| Woreda | Aletachuko | Aletawondo | Bensa |
| Kebele | Teso | Bargo | Huluka |
| Total Population of the Kebeles/ towns | 4000 | 4070 | 7153 |
| No. of Males | 2400 | 2118 | 3448 |
| No. of Females | 1600 | 1952 | 3705 |
| Total no. of HHs | 721 | 798 | 926 |
| No. of questionnaires | 165 | 168 | 170 |

**SAMPLING PROCEDURE**

The survey used a two-stage cluster sampling approach. The entire population in all 3 target kebeles was divided into smaller clusters, so called Development Teams (already existing, relatively small units of 15-60 households, commonly used by the kebele administration). The number of clusters per kebele was calculated by using a sampling with "probability proportional to population size" (kebeles with a larger population have a higher number of clusters selected, while considering the number of clusters per kebele and their actual size). Specific clusters were then randomly selected (from the lists of all clusters per each kebele) by using Excel’s RAND function. In the second step, for the final selection of interviewed households, a systematic random sampling from lists of HHs from each cluster was used. Given that female headed households are an important target group and source of information, it was purposively decided to interview all female headed households with in the selected clusters which make the proportion be 30 %, where it was possible.

The survey included the following randomly selected clusters:

|  |  |  |
| --- | --- | --- |
| **Woreda** | **Kebele** | **Name of clusters** |
|
| **Aleta Chuko** | Teso | Digalo, Dafursa Gasha, Kakawo, Shisho , Chanchicha |
| **Bensa** | Huluka | Fardano , Usamo, Murshano, Haro, Ayimo, Sega, Megeni balcho, Borenita, Sodicha, Chicho |
| **Aleta Wondo** | Bargo | 1st Butula, 2nd butula, Sisha, Gudicho, Baloshe Gosaliwa, Baloshe Hamumo, Dufa Bedeso, 1st Dufa, Dufa Dagucho |

# Main findings (Teso kebele)

# Demographic profile of the respondents

From the total of 165 respondents from Teso kebele, both men and women are quality represented (50% each).Majority of these respondents (87%) are married; only a small fraction of the respondent are single, widowed and separated or divorced. The average age of the respondents is 39. A majority of the respondents falls under the age of 50.

Most of the families are patriarchal by leadership with 83% male-headed household. Female-headed households account for the 17% of the population.

**Tab.2: Age and marital status of interviews HH representatives**

|  |  |
| --- | --- |
| **Age Distribution** |  |
| up to 25 | 19% |
| 26-35 | 38% |
| 36-50 | 26% |
| >51 | 18% |
| **Total** | 100% |
| **Marital status** |  |
| Single | 5% |
| currently married | 87% |
| separated | 1% |
| divorced | 0% |
| widowed | 7% |
| **Total** | 100% |
| **MHHH** | 83% |
| **FHHH** | 17% |
| **N** | 165 |

As indicated in the table below, in total about one quarter of population is illiterate, women significantly more often. In general, almost three quarters of population have very low or no education. Regarding occupation, majority of men (74%) are farmers. Women are also engaged in agriculture (40%), followed by business activities (27%) and a house keeper role (25%).

**Tab.3: Education and occupation**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | |  |
| **Education** | **Men** | **Women** | **Total** |
| Illiterate | 16% | 30% | 23.0% |
| Only able to read and write | 23% | 14% | 18.8% |
| First cycle (Grade 1-2) | 24% | 25% | 24.8% |
| Second cycle (Grade 5-8) | 27% | 23% | 24.8% |
| Secondary school(9-10) | 10% | 7% | 8.5% |
| Preparatory(11-12) | 0% | 0% | 0.0% |
| College and above | 0% | 0% | 0.0% |
| Total | 100% | 100% | 100% |
| N | 82 | 83 | 165 |
| **Occupation** | **Men** | **Women** | **Total** |
| Farmer | 74% | 40% | 57% |
| Merchant | 24% | 27% | 25% |
| House wife | 0% | 25% | 13% |
| Government employee | 0% | 2% | 1% |
| Private employee | 1% | 2% | 2% |
| NGO employee | 0% | 0% | 0% |
| Student | 0% | 0% | 0% |
| Daily laborer | 0% | 2% | 1% |
| Unemployed | 0% | 1% | 1% |
| Total | 100% | 100% | 100% |
| N | 82 | 83 | 165 |

The average family exceeds 5 members. Male headed households are usually larger in comparison with female headed households. In both male and female headed households, the proportion of women is approximately 50 % of the household members. In female headed household, on average there is a lower proportion of children under 5 (9%), in comparison with male headed household where the proportion of children dominates (15 %). In general, the proportion of children up to 15 years is about a half of the HH size.

When comparing monthly incomes, male headed households are able to earn on average 1085.23 ETB per month, 393 ETB more than female headed households. It remains higher even when income per HH member is calculated. The capability to save money is in general relatively low, see table below, but it is more problematic for female headed households. In general, there is about one third of HHs which are not able to save any money.

**Tab.4: Household characteristics**

|  |  |  |  |
| --- | --- | --- | --- |
| **Family size** | **MHHH** | **FHHH** | **Total** |
| **2 and less** | 5.1% | 17.9% | 7% |
| **3 to 5** | 51.1% | 46.4% | 50% |
| **6 and more** | 43.8% | 35.7% | 42% |
| **Average family size** | 5.45 | 4.93 | 5.36 |
| **% of women in the HH** | 48% | 54% | 49% |
| **% of children under 5 in HH** | 15% | 9% | 14% |
| **% of children 5-15 in HH** | 35% | 36% | 35% |
| **% of adults (16-49)** | 44 % | 41 % | 44 % |
| **% of elderly (50 and above)** | 6 % | 14 % | 7 % |
| **HH income** |  |  |  |
| **monthly average income** | 1085.23 | 691.96 | 1018.49 |
| **per HH member** | 244.12 | 165.51 | 230.78 |
| **Median for income** | 700 | 433 | 600 |
| **Average HH monthly savings** | 231 | 154 | 218 |
| **Median for saving** | 100 | 33 | 100 |
| **% of HH unable to save** | 28% | 36% | 30% |
| **N** | 137 | 28 | 165 |

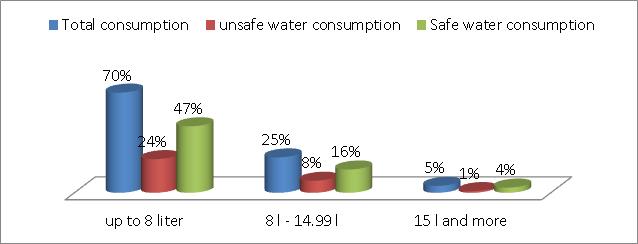
# Access to water

On average, households in the target area have 6.98l of water for each member per day used for drinking, cooking and personal hygiene. Men headed HH have slightly more water per HH member – 7.1l, in comparison with 6.3 liters in case of women headed HH. The median value is 5.7, which means that half of the population has 5.7 and less liters of water per person, other half has 5.7 liters and more.

As can be seen in the graph 1 show, 70% of population has less than 8 liters of water per person per day for cooking, drinking and personal hygiene purposes. 25 % of population use between 8 and 15 liters of water per day, and only 5 % of population use 15 liters of water per day. The FGD participants also mentioned that on average they access from 20 to 40 liters of water for their household. When it is calculated on average family size, all participants have less than 8 liters of water per person per day for cooking, drinking and personal hygiene.

When the data is filtered to consider only safe and protected water sources, the findings show that 47 % of the population has access to up to 8 liters of safe water per day, only 16 % use between 8 and 15 liters of safe water per day and 4 % have access to 15 and more liters of safe water per day.

**Graph 1: Water consumption per person per day**

****

**Water source for drinking, cooking and personal hygiene**

In order to compare the seasonal patterns in utilizing the sources of water, respondents were asked to specifically mention the water source during rainy and dry season. Table 7 below shows that majority of the households (68%/ 67%) use water for drinking, cooking and personal hygiene from safe/protected water sources irrespective of the season. The most common source of safe water is **protected hand pump/borehole**.

The FGD participants (100%) also confirmed the most often mentioned sources of drinking water as protected hand pump but the use varies in the two seasons as most of the FGD participants use the hand pump during rainy season but during dry season in addition to the hand pump they also use river water, water running from coffee factory in the area and unprotected spring as an option. The reasons mentioned were the shortage of water from hand pumps especially during dry season and respondents’ believe that the surface water is clean and can be used for household consumption during dry season. From this it can be concluded that the population has more than one main source of water for drinking, cooking and personal hygiene. Thus, they fetches water mainly from protected hand pump but in some cases when there is a shortage of water from the hand pump they use surface water, open dug well, unprotected spring and water from unprotected roof catchment. During the FGD sessions, the use of piped line, public tabs and protected spring was not mentioned.

**Tab.5: Source of water for drinking, cooking and personal hygiene**

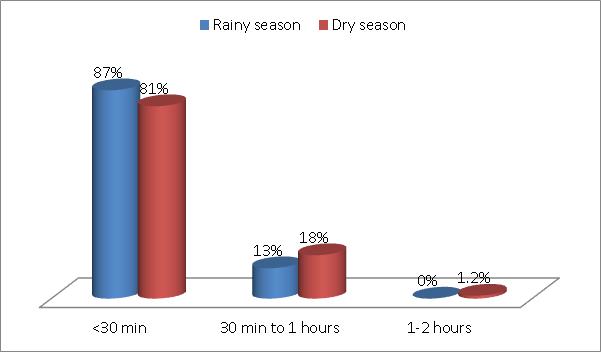
|  |  |  |
| --- | --- | --- |
|  | **Rainy season** | **Dry season** |
| piped line | 1% | 2% |
| public taps/tapstand/standpipes | 0% | 1% |
| protected hand pump/borehole | 37% | 35% |
| protected dug well | 16% | 13% |
| protected spring | 15% | 16% |
| **Improved/ safe water source** | **68%** | **67%** |
| unprotected hand pump/borehole/tube well | 10% | 9% |
| unprotected / open dug well | 2% | 2% |
| unprotected spring | 10% | 12% |
| unprotected rain catchment | 1% | 0 |
| surface water ( river, dam, lake, ponds, creeks, canal, etc) | 8% | 10% |
| **Unimproved/ unsafe water source** | **32%** | **33%** |
| **N** | **165** | **165** |

FGD participants’ satisfaction with the water sources’ availability (protected hand pump) and water quality varied. From the female FGD participants, only one quarter of the respondents were fully satisfied. In case of male FGD participants, all were unsatisfied. Respondent raised concerns ranging from the quality of the water source itself as it is not functional sometimes to the amount of water accessed by the community. According to the participants, the hand pump provides insufficient amount of water for the whole community and the shortage of water gets worse as the amount decreases during dry season. The second major concern was that the water turns muddy and they find insect in it as rain water mix with it during rainy season.

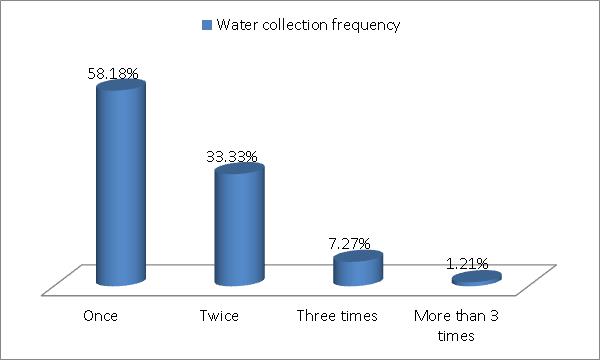
**Water collection time and responsibilities**

About 81 % of households spend less than 30 minutes during dry season for one-round trip to collect water. For 18% of households, the trip takes between 30 minutes and one hour. Only 1.2 % of HHs members spend over 3 hours collecting water. From FGDs it was find out that, for majority of the respondents, the most comment source of safer water is found within 10 to 30 minutes distance from the household and for one round trip it takes a maximum of 30 minutes.

**Graph 2: Time spent collecting water for drinking, cooking and personal hygiene**

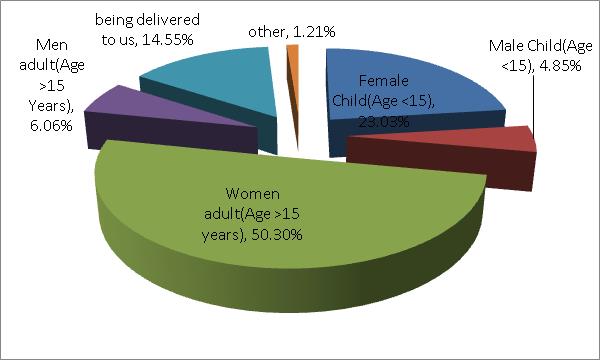
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**Graph 3: Frequency of water collection**

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More than half of households (58.2%) collect water only once a day, 33% of households go usually for water twice a day. Only a minority collects water more often: 7.27 % of HHs three times a day, 1.2 % of HH more often.

**Graph 4: Responsibility for water collection**

****

Collecting water is a major household task in the rural locations irrespective of what distances are covered and the water source types. The burden of collecting water is mostly with women, who form more than half of the household members responsible for water collection (50.30%) followed by girls at 23.03%. Boys and men who do help with collecting water stand at only 4.9% and 6% respectively.

During the FGD session with women and men groups, none of the discussion groups mentioned men as collectors of water. Instead, women are listed as the one most responsible for collecting water.

During the FGDs, the participants also report that they often fight at the water points especially when queues are long. FDG participants also disclosed that during dry season there is insufficient water from the hand pump which creates conflict among those who try to collect more than one jerry can and those who are waiting on the lone queues for one jerry can only.

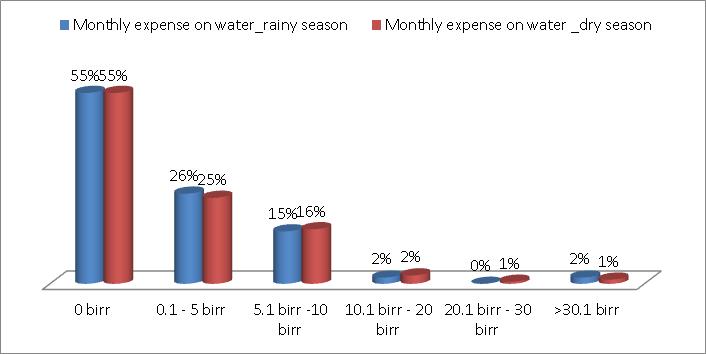
**Payment for water**

**Tab.6: Payment for water according to water sources**

|  |  |  |  |
| --- | --- | --- | --- |
| water source dry season | Yes- Pay | No- Don’t pay | Total Count |
| piped line | 1.82% | 0.00% | 3 |
| public taps/tap stand/standpipes | 0.00% | 0.61% | 1 |
| protected hand pump/borehole | 32.73% | 2.42% | 58 |
| unprotected hand pump/borehole/tube well | 4.85% | 4.24% | 15 |
| protected dug well | 1.21% | 12.12% | 22 |
| unprotected / open dug well | 0.61% | 1.82% | 4 |
| protected spring | 1.21% | 14.55% | 26 |
| unprotected spring | 0.00% | 11.52% | 19 |
| surface water ( river, dam, lake, ponds, creeks, canal, etc) | 2.42% | 7.88% | 17 |
| Grand Total | 44.85% | 55.15% | 165 |

When asking about price for water paid by households during dry season, 55 % HHs declare they don’t pay anything. From those not paying, 29.7% are using protected sources and the remaining 25% are using unprotected water source. From the total respondents, 45 % say that they pay some amount in average per month.

**Graph 5: Monthly expenses on water**

****

If we focus only on paying HHs (45 % of total), they pay monthly 25.7 ETB in rainy season and 11.3 ETB in dry season. But as the average is influenced by extreme values, the median could be used instead, which is 4.5 ETB for both seasons. But the most often mentioned value is 0 ETB, hence most of households get water free of charge irrespective of whether it is from safe water source or not.

**Tab.7: Payment for water in ETB**

|  |  |  |
| --- | --- | --- |
| **Payment for water per jerry can** | **Rainy season** | **Dry season** |
| **Average** | 0.2 | 0.3 |
|  |  |  |
| **Payment for water per month** | **Rainy season** | **Dry season** |
| **Average** | 25.7 | 11.3 |
| **Max** | 960 | 300 |
| **Median** | 4.5 | 4.5 |
| **N (HHs paying for water)** | 74 | 73 |

**Willingness to pay**

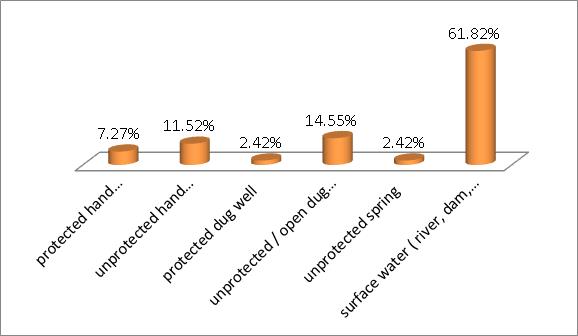
As can be seen in the project background part in the above chapter, a clear objective is set which focus on providing access to safe drinking water to residents of Teso Kebele. Thus, technical work including drilling of a new hydrogeological wells and establishment of new water supply systems for public places of delivery is planned. As this water points will be availed to community with a small fee, willingness to pay of the community members was assessed as part of this baseline research.

Accordingly, it was found out that for 20 liters jerry can woman FGD participants are willing to pay on average 0.17 cents and men FGD participants 0.30 cents, which is on the same level as the currently paid prices. The maximum amount mentioned by the women and men FGD participants is 0.50 cents and the minimum amount was 0.10 cents for women and 0.25 cents for men FGD participants. When probing the reasons behind proposed amounts, majority declared that it is the maximum they can afford. Additionally, experience with prices (used as benchmark) from other kebeles was mentioned.

**Water source for laundry and food utensils**

About 62% of households reported that they use surface water for laundry and food utensil. Thus only 10% use water from protected sources. When the data is filtered into safe and unsafe water users, only 2% wash their utensils with warm water but the majority (66%) using unsafe water source use cold water with soap and 31% use cold water only.

**Graph 6: Source of water for laundry and food utensils**

****

**Tab.8: How utensils are washed**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Total | Unsafe water users | Safe water users |
| warm water with soap | 2% | 2% | 0% |
| cold water only | 28% | 31% | 0% |
| cold water with soap | 70% | 66% | 100% |
| cold water with detergent | 1% | 1% | 0% |
| Grand Total | 100% | 100% | 100% |
| Frequency of washing utensils | | |  |
| Every day | 96% | 96.64% | 94% |
| three times a week | 1% | 0% | 6% |
| twice a week | 2% | 2.68% | 0% |
| once a week | 1% | 0.67% | 0% |
| Grand Total | 100% | 100% | 100% |
| N | 165 | 149 | 16 |

# Knowledge and practices on water, hygiene and sanitation

Regarding access to water hygiene and sanitation information/ messages, 98% of respondents declare that they have received some information/messages mainly from Heath extension workers (87%), Radio (61%) and Community sessions (32%) respectively. From FGD participants, the three main channels mentioned were Heath Extension Workers, volunteer messengers from NGO followed by radio and TV.

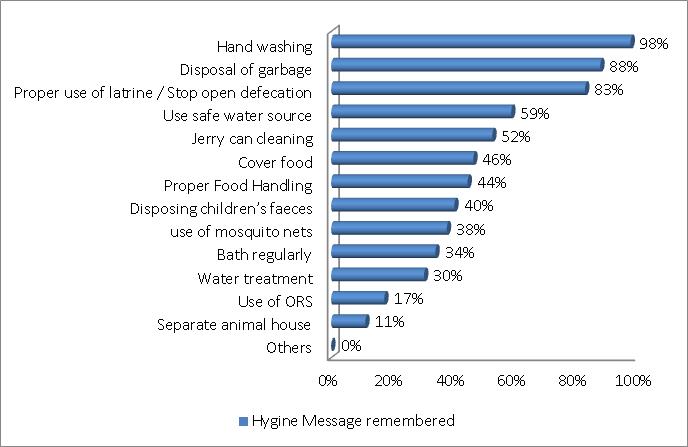
**Tab.9: General hygiene and sanitation awareness**

|  |  |
| --- | --- |
| **Have you ever received information on water, sanitation and hygiene?** | |
| **Yes** | 98.18% |
| **No** | 1.82% |
| **Grand Total** | 100.00% |
| **N** | 165 |
| **Source of Information** |  |
| **Health Extension workers/VHP** | 87% |
| **WASHCO** | 11% |
| **Kebele Leader** | 30% |
| **Religious Leader** | 7% |
| **Family and friends** | 17% |
| **NGO staff** | 9% |
| **Radio** | 61% |
| **Television** | 9% |
| **Church/mosque** | 6% |
| **clinic/hospital / health posts** | 21% |
| **Leaflets /broachers/magazines/newspapers** | 1% |
| **community events** | 32% |
| **school children** | 1% |
| **SMS/phone** | 1% |
| **Others** | 1% |

According to the respondents, the messages widely spread are on different themes. Thus hand washing messages leads the trail with 98% followed by disposal of garbage (88%). Other frequently mentioned messages include messages about proper use of latrine (83%), use of safe water source (59%), and jerry can cleaning (52%). Other messages though important in preventing WASH-related diseases were only mentioned by few respondents.

FGD participants also affirmed having heard messages on Hand washing, using a well-constructed latrine, having a wash facility near latrine and keeping personal hygiene. Compared to men, women FGD participants were able to list out more messages they heard including the importance of using clean water for drinking, washing jerry cans and food utensils, body washing twice a week, cleaning children regularly and cleaning the house and sleeping area (bed room).

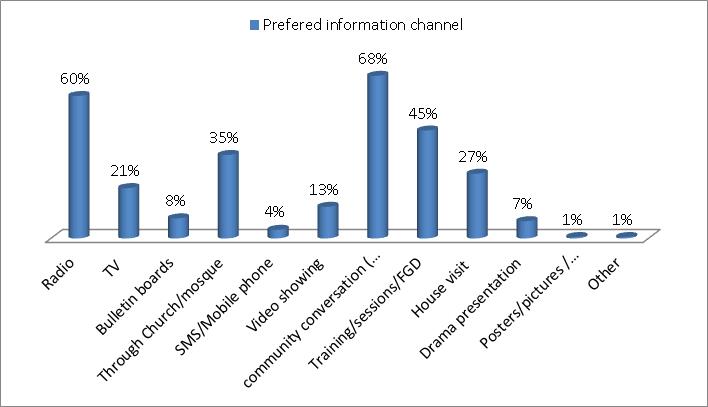
**Graph 7: Hygiene messages remembered**

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Community Conversation is preferred by more than half (68%) of the respondents while others prefer to receive hygiene messages through radio (60%). Trainings and FGDs (45%) and through church and mosque (35%) were also mentioned.

FGD findings also confirmed that community discussion are the preferred channel for hygiene messages as participants mentioned this kind of sessions create an environment to better learn from each other. FGD participants also mentioned the use of the existing community level development groups to disseminate hygiene messages.

**Graph 8: Preferred channel for Hygiene Message**

****

**Water treatment**

Water treatment is not very common practice with only 5% of the population practicing this as shown in table 11. When looking at unsafe water source users, in 96% of cases they don’t treat their water. This illustrates that respondents behave in similar way regardless if they use water from a safe or unsafe source. For those treating their water (5%), Water guard is the most common method, scoring 100%.

**Tab.10: Knowledge and practices on water treatment**

|  |  |  |
| --- | --- | --- |
| Do you treat water? | Total | unsafe water users |
| Yes | 4.85% | 4% |
| No | 95.15% | 96% |
| Grand Total | 100.00% | 100% |
| N | 165 | 55 |
| How do you treat it? | | |
| Water guard | 100.00% | 100.00% |
| Message on water treatment remembered |  |  |
| Yes | 30% | 35% |
| No | 70% | 65% |
| N | 162 | 54 |

As can be seen in the above table only 30% of respondents declare that they remember message/information focused on how and why water should be treated. But only 5 % declare that they treat the water. When it is filtered from the unsafe water user point, 35 % of unsafe water users declare they remember messages on water treatment but only 4% are treating their water. From this it can be concluded that the awareness of the problem doesn’t necessarily lead to behavior change.

**Tab.11: Reasons why water is not treated**

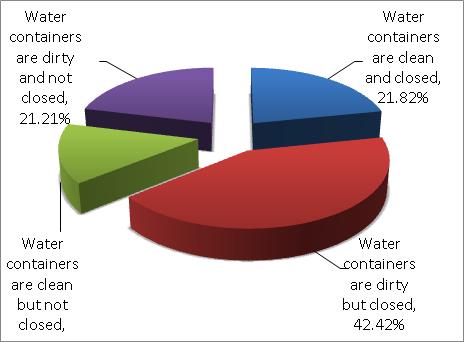
|  |  |  |
| --- | --- | --- |
| Why don’t you treat water? | Safe water source users | Unsafe water source users |
| it is clean/source is protected | 86.54% | 45.28% |
| we can't afford treatment chemicals | 7.69% | 15.09% |
| traditional treatment methods take time | 0.96% | 3.77% |
| we don't know any treatment method | 4.81% | 26.42% |
| Other | 0.00% | 9.43% |

From the 95% that disclosed they do not treat water, unsafe water source users give the reason that the water source is protected (45%) and 26 % states their lack of knowledge of how to treat water. 15% states the cost of treatment as the major reason. Generally, for unsafe water users, lack of awareness about treatment methods and about the water quality as well is significantly decisive.

**Water storage**

At the household level, members do not always clean and cover water containers. Only 22 % of the households surveyed store water in clean and closed container, 15 % of households store water in clean but not closed container, another 48 % of households use closed containers, but which are not clean.

**Graph 9: Condition of water containers**

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**Tab.12: Handling water**

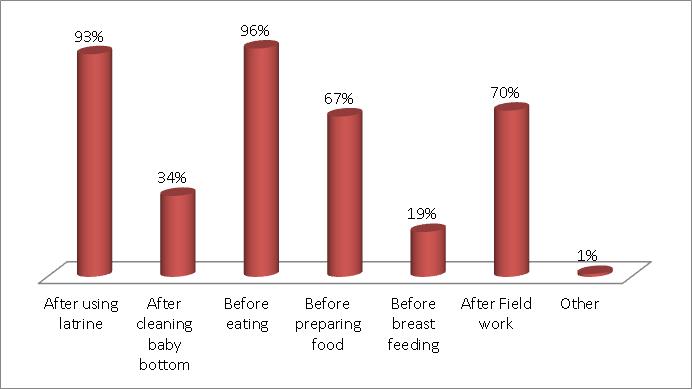
|  |  |
| --- | --- |
| **How water is taken from container** | |
| **Pour** | 87% |
| **Dip** | 13% |
| **Appropriate behavior: container clean & closed, water is poured** | |
| **Yes** | 18% |
| **No** | 72% |

The survey notes that the risk of contamination may be high given that 36 % of the respondents don’t close their containers. But their behavior related to extracting water which shows that 87% of households tilt and pour water into a cup reduce the risk. The combination of data on the condition of water containers and the behavior related to extracting water, shows that 18% of households have proper behavior that adequately minimizes the risk of contamination.

**Hands washing**

Most respondents declare that they wash their hands before eating (96 %) and after using latrine (93%). The survey notes that, after handling baby faeces (34%) and before breast feeding (19%) the hand washing occasions registered low.

**Graph 10: Occasions when people wash hands**



The most commonly mentioned among the FGD groups is washing hands before cooking food and before eating followed by after latrine use. Others also mention other critical times like after cleaning their house and also before going to market. All participants think that hand washing is well practices in their community.

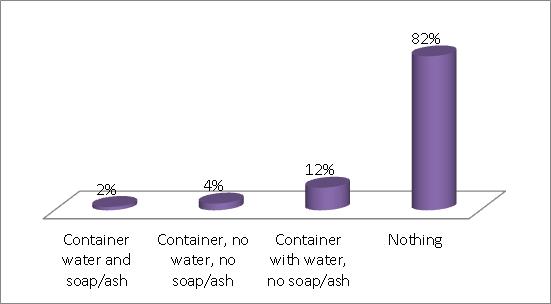
**Tab.13: Knowledge and practice on hand washing**

|  |  |
| --- | --- |
| using water only | 4% |
| using soap on 1 hand | 8% |
| using soap on 2 hands | 85% |
| With Ash | 2% |
| N | 165 |
| Hygiene and Sanitation Message remembered | |
| Hand washing | 98% |
| Proper use of latrine | 83% |
| Proper Food Handling | 44% |

As Table 12 shows, 85% of the respondents declare that they usually wash their hands with soap and water using both hands. FGD participants also mentioned the use of soap while washing their hands but sometimes they use only water to clean their hands due to unavailability of soap or sometimes even though soap is available they simply wash with water.

But in 82 % of households, data collectors haven’t observed any hand washing facility and a proper hand washing facility with water and soap or ash has been observed in only 2 % of HHs. This indicates that the awareness regarding the importance of hand washing practices (98% remember messages related to hand washing) doesn’t necessarily lead to behaviour change.

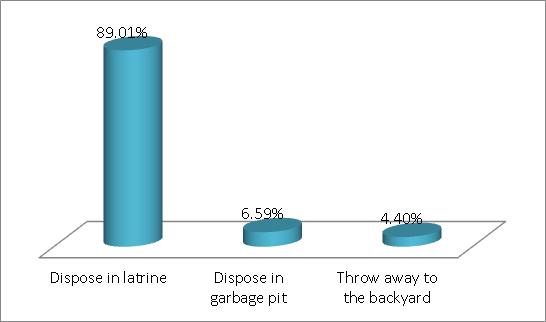
**Graph 11: Availability of hand-washing facility in the household**



**Children feaces disposal**

About half of respondents (55%) declare that there are child/children under 5 years old in the household. When these respondents were asked how they dispose their child’s faeces, almost 89 % said that they would dispose it in a latrine; about 7 % of households dispose it in the garbage pit and 4 % of the households throw it in the backyard. From this, it can be concluded that 96 % of the respondents are practicing a proper behavior and are safely disposing their child’s faeces.

**Graph 12: Children faeces disposing**

****

**Menstrual Hygiene**

This section deals with menstrual hygiene and how women and their daughters deal with their menses. The discussions were done exclusively with women respondents facilitated by female FGD facilitator. From the FGD it was observed that, women were a bit shy to discuss menstrual issues.

Participants regard menses as a sign of maturity and a natural process but they used to hide themselves when they experience their menses and don’t want their husbands / family members to know about it as they feel embarrassed. But now family members are better aware and discuss on such issues.

The most common practices for managing menstruation include the use of a piece of cloth and wearing more than two under wears. Sanitary pads are not common as it is not locally available in the local shops.

One issue mentioned by FGD participants is that there are still communication gaps between mothers and their daughters. The girls don’t discuss such things with their mothers which affects their education as they tend to be absent from school during that time and also discriminate themselves from others.

# Sanitation facilities

**Availability and quality of latrines**

In total, 88 % of households have a toilet facility at the compound. All the toilet facilities have been described as traditional pit latrines with and without slab. 97% of the households constructed the latrine by themselves.

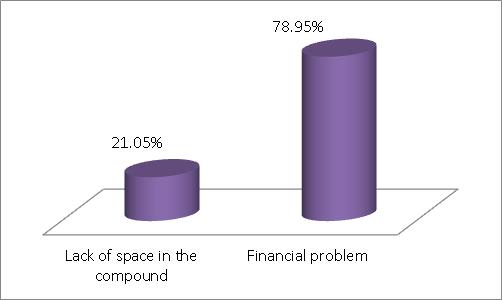
**Tab.14: Latrines’ availability, condition and usage**

|  |  |
| --- | --- |
| Latrine present at the HH compound |  |
| Yes | 88% |
| No | 12% |
| N | 165 |
| Latrine Type |  |
| Pit Latrine with slab | 75% |
| Pit latrine without slab | 25% |
| Total | 100% |
| Latrine's condition |  |
| kept well and clean | 14% |
| Kept poor and unclean | 86% |
| HH with clean latrine (of total respondents) | 12% |
| Latrine usage |  |
| Yes | 98% |
| No | 2% |
| Who helped you construct the latrine |  |
| Self | 97% |
| NGO | 1% |
| Other | 2% |

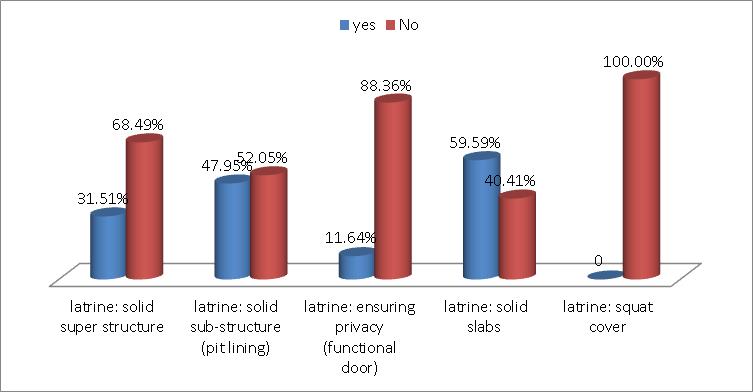
In total, only 14 % of latrines could be described as being kept well and clean. When recalculated on total number of households, it could be said that there are only 12 % of households with a clean and well-kept latrine.

Respondents living in households without a latrine stated that the reason for not having a toilet facility is a lack of finances/ financial problems (79%) and lack of space (21%). Some of FGD participants also pointed that, open defecation is practiced in their area by the people who don’t have own latrine and also other people passing by their kebele during market days.

**Graph 13: Why HHs don’t have latrine**



**Graph 14: Latrines’ components quality**

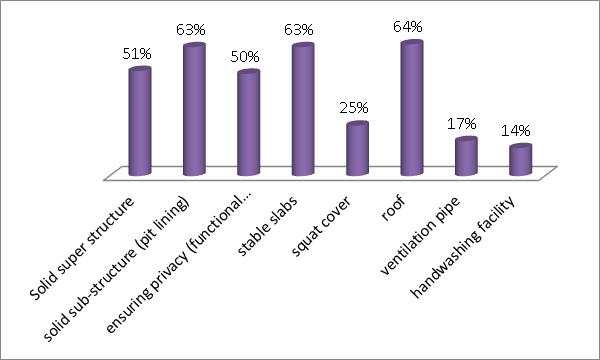
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In general, the quality of latrines is quite low. For example, only 12 % of latrines have a functional door, therefore the vast majority of latrines do not ensure privacy; this has a negative impact especially on the comfort and dignity of women and girls.

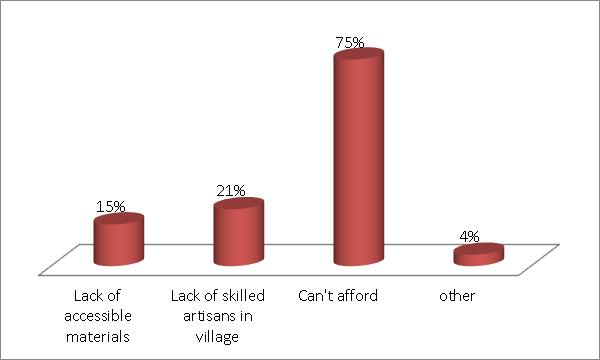
The condition of the latrines doesn’t correspond to the awareness of proper use of a latrine. The majority of respondents (83%) declare that they remember such a message, but the data doesn’t show that it influences their related behaviour significantly.

**Latrines’ improvements suggested**

**Graph 15: Improvements suggested**



A majority of households suggests they would improve their latrines by having a roof (64%), solid sub- structure (63 %), and stable slabs (63%). Suggestions for improvements reflect the observed weaknesses of existing latrines.

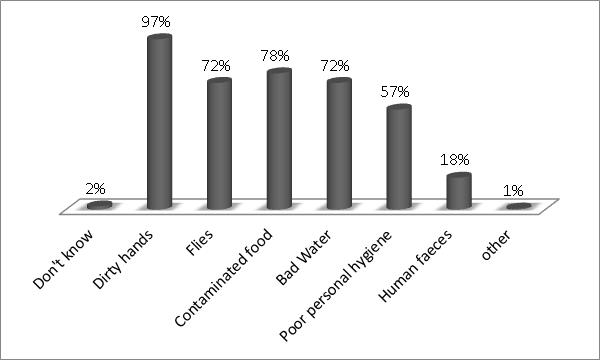
**Graph 16: What has prevented HHs to make any changes so far** 

When respondents were asked why nothing has been done so far, most respondents (75%) declare that they can’t afford the improvements. For 15 %, the problem was a lack of material, 21 % complained about accessibility of skilled artisans. But when the respondents were asked about potential amount of money they would be willing to pay for improvements, it was found out that the realistic estimations of how much the components or latrine could cost are missing.

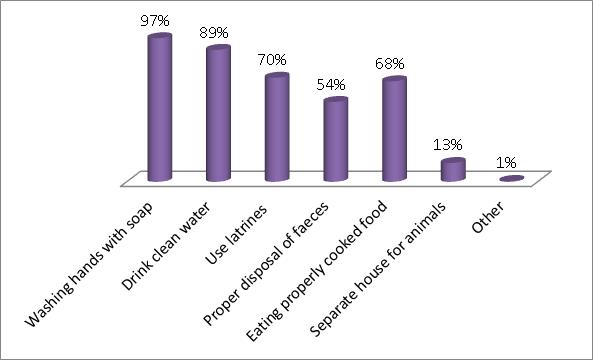
# Diseases: awareness and prevalence

When respondents were asked what could cause diarrhea, 97 % of them consider dirty hands as a main cause, followed by contaminated food (78 %) and flies (72%) and bad water (72 %).

**Graph 17: Perceived causes of diarrhea**

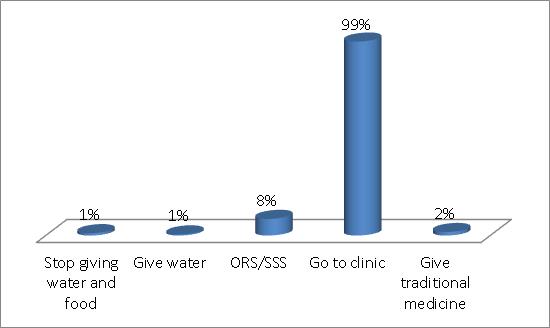


**Graph 18: How diarrhea could be prevented**



For diarrhea prevention, the vast majority (97 %) mentioned washing hands with soap, 89% drink clean water and use latrines (70%).However comparing to observations of actual hygiene and sanitation behavior mentioned in previous chapters, awareness doesn’t necessary lead to appropriate action. This also puts into question whether the diarrhea is considered as such a serious problem that it could motivate people to adopt suitable preventive behaviors.

**Graph 19: How is diarrhea treated**



Regarding diarrhea treatment, almost all households would take the patient to a clinic; some (8%) would provide ORS and 2% give traditional medicine.

**Prevalence of diseases in last 30 days**

As can be seen in the table below, there is no high prevalence of disease but compared to the 4 diseases, diarrheal diseases is registered as high. The rate of diarrhea is 7 per 1000 people. Diarrhea affected 4% of households in the last 30 days. Considering how children were affected, the highest proportion of affected children compared to the total number of affected people could be found in the case of parasitical diseases (40 %).

For under-5 child morbidity, the highest levels are observed for parasitical diseases (4 %) and diarrheal diseases (4 %)

**Tab.15: Prevalence of diseases in last one month**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | % of population with disease | % of sick children under 5 from total sick | % of HHs with disease | % of sick children under 5 from children pop |
| Diarrhea | 0.7% | 17% | 4% | 0.8% |
| Parasite | 0.6% | 40% | 3% | 1.6% |
| Malaria | 0.6% | 0% | 3% | 0% |
| Typhoid | 0.5% | 0% | 2% | 0% |
| Skin diseases | 0% | 0% | 0 | 0% |

# Conclusion and recommendation

**Access to water**

* On average, households in the target areas have 7l of water for each member per day used for drinking and cooking. Thus only 47 % of the population has access to up to 8 liters of safe water per day, only 16 % use between 8 and 15 liters and 4 % have access to 15 and more liters of safe water per day.
* Majority of FGD participants are not satisfied with the available water source.
* About 62% of households reported that they use surface water for laundry and food utensil. Thus only 10% use water from protected sources. Only 2% wash their utensils with warm water but the majority (66%) using unsafe water source use cold water with soap and 31% use cold water only. **Therefore, it is recommended that continuous awareness raising activities and demonstration should be conducted for families regarding the how they should wash their utensils especially when using unsafe water.**
* 55 % HHs declare they don’t pay anything during dry season. From these, 29.7% are using protected sources and the remaining 25% are using unprotected water source. From the total respondents, 45 % say that they pay 25 ETB in rainy season, 12 ETB in dry season in average per month.

**Willingness to pay**

* More than a half of households get water free of charge irrespective of whether it is from safe water source or not. But woman FGD participants are willing to pay on average 0.17 cents and men FGD participants 0.30 cents for 20 liters jerrycan. The maximum amount mentioned by the women and men FGD participants is 0.50 cents and the minimum amount was 0.10 cents for women and 0.25 cents for men FGD participants. The prices offered are in line with the current pricing, there is limited willingness to pay more. People would probably switch to unprotected sources more. **Limited financial capacity is mentioned as the most common reason.**

**Knowledge and practices on water, hygiene and sanitation**

* 98% of respondents declare that they have received some information/messages mainly from Heath extension workers (87%), Radio (61%) and Community sessions (32%) respectively.
* Hand washing messages leads the trail with 98% followed by disposal of garbage (88%). Other frequently mentioned messages include messages about proper use of latrine (83%), use of safe water source (59%), and jerry can cleaning (52%).
* Community Conversation is preferred by more than half (68%) of the respondents while others prefer to receive hygiene messages through radio (60%). **Therefore, the project should implement an effective community conversation session to address water hygiene and sanitation issues but these sessions should not be standalone events as it will not be effective in changing this specific behavior.**
* **Awareness seems not to influence real behavior especially in cases of hand washing, water storing, and water treating or latrine quality. Therefore usage of CLTS and other intensive participatory approaches is recommended.**

**Water treatment**

* Water treatment is not very common practice with only 5% of the population practicing this.
* When looking at unsafe water source users, in 96% of cases they don’t treat their water. This illustrates that respondents behave in similar way regardless if they use water from a safe or unsafe source.
* 35 % of unsafe water users declare they remember messages on water treatment but only 4% are treating their water. **From this it can be concluded that the awareness of the problem doesn’t necessarily lead to behavior change.**
* From the 95% that disclosed they do not treat water, unsafe water source users give the reason that the water source is protected (45%) and 26 % states their lack of knowledge of how to treat water. 15% states the cost of treatment as the major reason.
* **As the project is planning to construct new schemes in the kebele, in the area where unprotected spring and hand pump are used it is recommended to focus on water treatment as a complementary activity. But for those accessing improved water sources, promotional activities should focus more on safe water handling instead of water treatment.**

**Handling water**

* Only 22 % of the households surveyed store water in clean and closed container, 15 % of households store water in clean but not closed container, another 48 % of households use closed containers, but which are not clean**.**
* The combination of data on the condition of water containers and the behavior related to extracting water, shows that 18% of households have proper behavior that adequately minimizes the risk of contamination. **It is recommended that promotional activities on safe handling of water should be conducted continuously, especially on proper care of and proper condition of water containers.**

**Hand washing**

* Most respondents declare that they wash their hands before eating (96 %) and after using latrine (93%).85% of the respondents usually wash their hands with soap and water using both hands.
* In 82 % of households, data collectors haven’t observed any hand washing facility and a proper hand washing facility with water and soap or ash has been observed in only 2 % of HHs. This indicates that the awareness regarding the importance of hand washing practices (98% remember messages related to hand washing) doesn’t necessarily lead to behavior change. It is therefore recommended that the **project focuses on activities that enable households to obtain and use hand washing facilities and access to soap or ash combined with marketing techniques to put greater social pressure on hand washing. Promotional messaging and education sessions alone will not be effective in changing this specific behavior.**

**Child faeces disposal**

* 96 % of the respondents are practicing a proper behavior and are safely disposing their child’s faeces.  **Even though this is not a priority, during house to house monitoring visits a reminder messaged and follow up should be conducted in this matter.**

**Latrine coverage**

* 88 % of households have a toilet facility at the compound described as traditional pit latrines with and without slab. 97% of the households constructed the latrine by themselves.
* Only 14 % of latrines could be described as being kept well and clean.
* Respondents living in households without a latrine stated the reason for not having a toilet facility is a lack of finances/ financial problems (79%) and lack of space (21%).

**Latrine quality**

* The quality of latrines is quite low. For example, only 12 % of latrines have a functional door, therefore the vast majority of latrines do not ensure privacy; this has a negative impact especially on the comfort and dignity of women and girls.
* The majority of respondents (83%) declare that they remember a message on proper use of latrine, but the data doesn’t show that it influences their related behavior significantly.

**Latrine Improvement**

* A majority of households suggests they would improve their latrines by having a roof (64%), solid sub- structure (63 %), and stable slabs (63%). Suggestions for improvements reflect the observed weaknesses of existing latrines.
* The lack of financial sources is mentioned as the most common reason (75%) followed by lack of material (15 %) and inaccessibility of skilled artisans (21 %). **Therefore it is recommended to conduct barriers & motivations analysis (or formative research) which clearly indicates the barriers and also capacities of the community members to improve as well us build new latrine. Thus, through house to house visits and community conversation sessions, accessible cost latrines could be demonstrated and local skilled artisans could be promoted which initiate community members to get motivated to improve their latrines.**
* When the respondents were asked about potential amount of money they would be willing to pay for improvements, it was found out that the realistic estimations of how much the components or latrine could cost are missing. **Thus, also marketing research should be conducted to assess real prices of components and latrines’ construction.**

**Diseases: awareness and prevalence**

* 97 % of respondents consider dirty hands as a main cause of diarrhea, followed by contaminated food (78 %) and flies (72%) and bad water (72 %).
* The vast majority (97 %) mentioned washing hands with soap, 89% drink clean water and use latrines (70%) as ways to prevent diarrhea. However comparing to observations of actual hygiene and sanitation behavior mentioned in previous chapters, awareness doesn’t necessary lead to appropriate action.
* The rate of diarrhea is 7 per 1000 people. Diarrhea affected 4% of households in the last 30 days. The highest proportion of affected children compared to the total number of affected people could be found in the case of parasitical diseases (40 %). **Therefore, it is recommended that, focus should be given in activities that enable households to obtain and use hand washing facilities and access to soap or ash combined with techniques to put greater social pressure on hand washing which will contribute to the prevention of diarrheal diseases.**