

COMMUNITY-LED ACCELERATED WASH (COWASH) PHASE III PROJECT

BASELINE SURVEY REPORT



Effective and sustainable
WaSH services

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RAMBOLL

NIRAS

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List of acronyms

BSG	Benishangul-Gumuz
CAPI	Computer Assisted Personal Interviewing
CMP	Community Managed Project Approach
COWASH	Community-led Accelerated WASH
CSA	Central Statistical Agency
EA	Enumeration Area
EDHS	Ethiopian Demographic and Health Survey
EFY	Ethiopian Fiscal Year
FinnWASH-BG	Bi-lateral Finnish funded project in Benishangul-Gumuz Region
FTAT	Federal Technical Assistance Unit
GPS	Global Positioning System
GTP	Growth and Transformation plan
HEW	Health Extension Worker
HH	Household
HHWT	Household Water Treatment
MFI	Micro Finance Institution
M&E	Monitoring and evaluation
O&M	Operation and Maintenance
PPS	Probability Proportional to Size
PSU	Primary Sampling Units
RSU	Regional Support Unit
RWSEP	Rural Water Supply and Environmental Program
SNNPR	Southern Nations', Nationalities' and People's Region
SPSS	Statistical Package for Social Sciences
TCS	Temesgen Consultancy Services
UAP	Universal Access Plan
WASH	Water supply, sanitation and hygiene
WASHCO	Water, Sanitation and Hygiene Committee
WIF	Water Implementation Framework
WSP	Water Safety Plan
WWT	Woreda WASH Team

EXECUTIVE SUMMARY

Community-led Accelerated WASH (COWASH) Phase III is a bilateral development cooperation project financed by Government of Finland and Ethiopia. COWASH works at 76 rural woredas in 5 regions namely in Amhara, Oromia, Tigray, SNNPR and Benishangul-Gumuz Region (BSG). COWASH phase III started in August 2016 and it is expected to run until the end of July 2019.

The baseline data survey is the first phase of the impact study to be conducted during the lifespan of COWASH phase III. The survey was conducted from 29 December 2016 to 25 January 2017 in selected project implementation areas. The data collection will be repeated at the end of the COWASH III in order to analyze the changes brought due to the project activities. It is expected that the COWASH III midterm evaluation in April 2018 will provide instructions on what time the endline data to be collected.

The overall objective of the baseline survey is to establish benchmark figures for the water, sanitation and hygiene status in COWASH Phase III intervention areas. Specific data needs that relate to the management practices, inclusion of women and persons with disabilities in water management and equal access to water services were also covered in the baseline survey. The analytical scope of this baseline survey report is descriptive focusing on providing a broad understanding of the WASH status on the ground based on cross sectional data.

The baseline survey was conducted by collecting primary qualitative and quantitative data as well as secondary data for contextualizing and augmenting the household level findings using a multistage clustered sampling and census methods. The main survey data is a large scale household survey that is statistically representative of the project woredas. For other data needs and triangulation of data the following questionnaires for the primary and secondary data collection were used: School WASH Assessment Tool; Health Facility WASH Assessment Tool; Community Water Supply Scheme Assessment Tool; Woreda Key Informant Questionnaire; and Kebele Key Informant Questionnaire. The same data collection tools will be used for the endline survey.

Overall, WASH data was collected from 1,941 rural households covering a total of 560 sample rural households in Amhara, 350 for Tigray, 420 for Oromia, 250 for SNNPR and 350 for BSG. Accordingly, 93 rural schools, 52 health facilities and 232 community water supply schemes in the 46 sample kebeles of 24 sample woredas of the five project regions were inspected.

Findings of the household survey revealed that 58.9% of the surveyed households are using improved water source for drinking water at the time of the survey. The average amount of liters of water collected per family member per day was 13.82 liters. Out of the 232 community water supply schemes inspected 83.2% were functional during the time of inspection. Average time spent for water collection from improved water sources in COWASH woredas is 20.4 minutes excluding queuing and 53.2 including queuing at the water source.

The baseline status in terms of rural household's access to improved toilet facilities was 7.4% on average. The definition of improved household toilet facility covers ventilated improved pit latrines or pit latrine with a slab. Pit latrines with open pit are not considered as improved facilities.

Concerning hand washing at critical times with soap or alternative, 50.9% of the households surveyed had a hand washing facility in their dwelling, but only 1.2% of the facilities had water and cleaning agent available during the time of the observation. Only 20.0% of the respondents were able to name the 4 critical times for hand washing (before eating and

feeding others, before cooking, after using the latrine, after cleaning a latrine or a baby's or adult's bottom)

WASH management and O&M was one focus area of the survey. The baseline data concerning the WASHCO composition showed that 33% of the WASHCO members were women. In 4.3% of the WASHCOs, the chairperson was a woman. 47.7% of women responded they would have the confidence to accept WASHCO leadership position such as a chairperson or cashier if elected.

In terms of O&M, in 33.4% of the water schemes visited the WASHCOs reported that some O&M had been undertaken. 63.4% of the community respondents understand that the community is the owner of the water supply scheme. 47.5% understand that WASHCOs are responsible for the O&M and 44.4% understand that tariff is collected for O&M. On average the WASHCOs managing the 232 community water schemes inspected had generated 1,868 ETB/water scheme of savings at the time of the survey taken.

In the area of institutional WASH, only 26.9% of schools surveyed had access to improved water supply and only 40.9% of those schools perceived the amount of drinking water available adequate during peak times of the school day. The student per tap ratio in surveyed schools was 453 students per one tap. 25% of the health institutions had access to improved water source.

In terms of sanitation status in institutions the baseline data revealed that only 15.1% of the schools surveyed had improved toilets separated by gender. 51.6% had at least one improved toilet block which was not separated by gender. The student for improved toilet seat ratio was 64 students per toilet seat for girls and 59 for boys. 45.8% of the toilet blocks inspected by the surveyors were observed to be in use. In health institutions 63.5% had access to improved toilets and 96.8% of them were observed to be in use.

The survey included a section about menstrual hygiene management status and practices in schools which has held as a focus group discussion among a group of girls. 36% of the respondents reported that if they are menstruating while at school, they would leave school and go home. 64% of the girl students mentioned that currently their schools do not provide any kind of facilities or support to manage their menstruation. 73% of the respondents reported they had been receiving information on menstruation before and in 70.4% of those cases this source was their teacher. The key recommendation by the respondents to support them during menstruation would be to arrange a designated private room/toilet block for cleaning and changing pads during their menstruation.

1 INTRODUCTION TO COWASH PHASE III

1.1 PROJECT INTRODUCTION AND GENERAL OBJECTIVES

Community-led Accelerated WASH (COWASH) Phase III is a bilateral development cooperation project financed by Government of Finland and Ethiopia in 76 woredas in 5 regions in rural Ethiopia. It is part of the long continuum of Finland-Ethiopia water sector cooperation. Targeted impact of COWASH Phase III is to contribute to achieving Ethiopia's Growth and Transformation Plan II targets for the WASH sectors in terms of water, sanitation and hygiene access coverage and quality of service delivery in selected rural areas following Community Managed Project (CMP) approach.

Finland's support to the Ethiopian WASH sector started with the introduction of Rural Water Supply and Environmental Program (RWSEP) in Amhara region in 1994. In the last 22 years, RWSEP, COWASH and FinnWASH-BG projects - all bilateral WASH projects between the two governments, have provided safe water supply to 4.12 million people in five regions. From this, COWASH Phase I and II alone in the last 5 years have contributed to provision of safe water to more than 2.29 million Ethiopians in rural areas of the 76 woredas.

In COWASH, investment funds are generated from the regional government budget coffin and these funds flow directly to the target communities through local micro-finance institutions (MFIs). Government of Finland's support is mainly channeled to capacity building activities at kebele, woreda, zonal, regional and federal levels. The model has been found to be innovative, transparent and effective.

COWASH phase III started in August 2016 and it is expected to run until mid-2019. Impressive achievements has been made during the implementation of COWASH Phase I and II but there is a growing demand to generate more in-depth and longitudinal data on the longer term impacts and changes safe water supply and sanitation has brought to the rural communities.

Therefore, this project phase III includes a separate impact study to demonstrate and provide evidence on the health, socio-economic and capacity related impacts of the project. The baseline data collection is the first phase of the impact study and it was conducted 29 December 2016 to 25 January 2017 in selected areas of the project. The data collection will be repeated at the end of the project to analyze the changes brought due to the intervention of the project activities.

1.2 COWASH PHASE III RESULTS FRAMEWORK AND PERFORMANCE MONITORING PLAN

Monitoring of COWASH Phase III is result-based, focusing on progress made on achieving the outcomes and impacts. The results framework and performance monitoring plan of project have been established during the inception phase of the project taking into consideration the targets and relevant aspects of the Growth and Transformation Plan II (GTP II), WASH M&E Framework, WIF and UAP as well as qualitative data needs.

The expected outcomes of COWASH Phase III are as follows:

1. Increased community and institutional water supply coverage according to the GTP II standards including water quality;
2. Increased community and institutional sanitation and hygiene coverage and usage according to GTP II standards;

3. Increased functionality and sustainability of built WASH facilities through improved service delivery;
4. Women's empowerment through WASH related activities; and
5. Project implementation effectively managed.

In the performance monitoring plan a source of baseline information for each outcome, output and impact level indicator has been defined. The baseline survey collected the baseline data for the following outcome and impact indicators listed in COWASH Phase III:

- Mortality rate of under 5 year olds in COWASH target woredas;
- Diarrhea incidences of under 5 year olds in COWASH target woredas;
- Average time spent for water collection (round trip/person) from improved water sources;
- % of mothers able to mention at least four critical times for washing hands with soap;
- % of community members who are aware who is responsible for the O&M of water supply schemes by beneficiary community
- % of women who have the attitude and confidence to accept WASHCO leadership position; and
- % of people who have received information on need for organizing water and sanitation services for people with disabilities and elderly people

1.3 IMPACT STUDY

As per the COWASH Phase III project document, an impact study is expected to be carried out during the implementation period of COWASH III to give information about the quantitative and qualitative results such as clean water and sanitation coverage, and the possibility for them to translate into long term impacts such as improvements in the health and socio-economic status of the beneficiary communities. The impact assessment requires two major surveys – the baseline and endline to be carried out before the actual impact level analysis can be made.

The preparations for the first step of the impact study - baseline survey started during the inception phase of COWASH Phase III. The overall objective of the baseline survey is to establish benchmark figures for the water, sanitation and hygiene status in COWASH Phase III intervention areas. Specific data needs that relate to the management practices, inclusion of women and vulnerable groups in water management and equal access to water services are covered in the baseline survey. The baseline questionnaires covered thematic areas of water supply, sanitation and hygiene management of:

- Drinking water sources, availability, adequate and use;
- Water supply schemes functionality;
- Water supply scheme operation and maintenance;
- Household water treatment;
- Sanitation and hygiene;
- Access to awareness raising and WASH promotion;
- Water management at the community level;
- Inclusion and role of women in the water management;
- WASH status in schools including menstrual hygiene management;
- WASH status in health facilities; and
- WASH management at woreda and kebele levels.

The analytical scope of this baseline survey report is mainly descriptive focusing on providing a broad understanding of the WASH status on the ground based on cross sectional data.

Thorough analysis on the impact brought will be produced after the end line data collection is made in 2019.

2 METHODOLOGY OF THE BASELINE SURVEY

2.1 SURVEY DESIGN

The baseline survey was conducted by collecting primary qualitative and quantitative data as well as secondary data for contextualizing and augmenting the household level findings using a multistage clustered sampling and census methods. The main survey data is a large scale household survey that is statistically representative of the project woredas. For other data needs and triangulation of data, institutional assessment, water scheme assessment and woreda and kebele level data (primary and secondary) were collected in the selected survey areas. The data collection tools will be used for the endline survey.

To maximize comparability of the data collected through different data collection tools, the structure and the questions of the different data collection tools were following the same structure as much as possible.

2.2 DATA COLLECTION INSTRUMENTS

The baseline survey used six questionnaires for the primary and secondary data collection: (1) Household Questionnaire; (2) School WASH Assessment Tool; (3) Health Facility WASH Assessment Tool; (4) Community Water Supply Scheme Assessment Tool; (5) Woreda Key Informant Questionnaire; and (6) Kebele Key Informant Questionnaire.

The *Household Questionnaire* was used to list all the usual members of selected households in sample Enumeration Areas (EAs). Basic information was collected on the characteristics of each household member, including age, sex, education, responsibility in fetching water and main occupation. The data on the age and sex of household members obtained in the Household Questionnaire were used to identify women who were eligible for some specific interviews on fertility and under-five mortality.

The *School WASH Assessment Tool* and *Health Facility Assessment Tool* were used to collect data on the WASH situation of schools and health facilities, respectively in the sample kebeles. Furthermore, the WASH situation and specific aspects of WASH management of community water supply schemes in the sample Enumeration Areas were collected using the *Community Water Supply Scheme Assessment Tool*. The *Woreda Key Informant Questionnaire* and *Kebele Key Informant Questionnaire* were used to collect primary and secondary data on the WASH condition of the sample woredas and kebeles, respectively.

These data collection tools were prepared in English language based on Ethiopian Demographic and Health Survey (EDHS) and other surveys' questionnaires. All the questionnaires were translated into Amharic, Afaan Oromo and Tigrigna languages. Accordingly, data collection in three regions (Amhara, BSG and SNNPR), Oromia and Tigray was conducted in Amharic, Afaan Oromo and Tigrigna questionnaires.

2.3 SAMPLE DESIGN

In order to achieve the objectives of the baseline survey, a multistage-clustered sampling approach detailing sampling plan laying out the target sample size and the sample selection procedures was prepared to draw the household survey sample to provide statistically representative sample of the group of project woredas. This approach was made in such a way that the sample is representative of each project region¹ containing the group of project woredas.

The sample frame for each region was based on the population of the 2007 Population and Housing Census of Ethiopia. To capture the diverse information of the woredas, the project woredas of the regions were grouped into different strata based on their Rural Water Supply Access Coverage at the end of 2008 EFY and woredas selected with Probability Proportional to Size (PPS) of the stratum. The stratification of the woredas, which are the Primary Sampling Units (PSUs) for the survey, was made as follows:

Table 1 Stratification of the woredas for the sample frame

Project Region	No. of Project Woredas	Stratum	Rural Water Supply under GTP II Service Level	No. of Woredas in Each Stratum
Amhara	40	I	59 - 60	11
		II	56 - 58	8
		III	50 - 55	14
		IV	27 - 49	7
Subtotal				40
Tigray	7	I	52 - 54	3
		II	31 - 44	4
Subtotal				7
SNNPR	8	I	26 - 43	3
		II	17 - 22	5
Subtotal				8
Oromia	12	I	53 - 57	7
		II	34 - 49	5
Subtotal				12
BSG	9	I	53 - 60	3
		II	30 - 48	6
Subtotal				9
Total	40			40

A stratified sample of 1,930 rural households was targeted for the baseline survey. All households with women family members of age above 15 years were eligible to be interviewed in the baseline survey. The household sample was drawn in four stages. In the first stage, 24 Woredas or Primary Sampling Units (PSUs) were selected in proportion to the size of the rural population in the Stratum of Woredas in each region.

The second stage involved random selection of 46 rural Kebeles (2 Kebeles per sample Woreda) under each PSU selected in the first stage. At the third stage, 87 Enumeration Areas² (EAs), which is 1 to 2 per Sample Kebele depending on the size of EAs in the Kebeles, were selected with Probability Proportional to Size (PPS) of households with the support of Central

¹ Region refers to groups of COWASH Phase III working woredas in Amhara, Oromia, Tigray, SNNPR and Benishangul-Gumuz region

² Enumeration Area (EA) is a unit of land delineated for the purpose of enumeration housing units and population without omission and duplication. An EA usually consists of 150 to 200 households in rural areas and 150 to 200 housing units in urban areas.

Statistical Agency (CSA) experts. In the last stage, an equal probability systematic selection of 20 rural households was made per EA from afresh list of rural households of the sample EAs.

2.4 SAMPLING FOR HOUSEHOLD SURVEY

The minimum sample size of rural households for the baseline survey was estimated for each project region using the following formula.

$$n = \frac{deff \times \left[Z_{\alpha/2} \sqrt{2P(1-P)} + Z_{1-\beta} \sqrt{P_1(1-P_1) + P_2(1-P_2)} \right]^2}{(P_2 - P_1)^2}$$

Where

- n is a required minimum sample size of rural households
- P₁ & P₂ represent average rural water supply access coverage of group of project woredas in the five regions at the end of 2008 EFY & 2011 EFY, respectively based on GTP II service level (P₁ is 65% in Amhara, 54% in Tigray, 60% in Oromia, 35% in SNNPR and 54% in Benishangul Gumuz regions; P₂ is 78%, 70%, 75%, 55% and 70% GTP II targets, respectively in Amhara, Tigray, Oromia, SNNPR and Benishangul Gumuz group of Woredas).
- P = (P₁ + P₂)/2
- P₂-P₁ is the magnitude of change in Rural Water Supply Access Coverage desired to be achieved at the end of 2011 budget year (13% in Amhara, 16% in Tigray, 15% in Oromia, 20% in SNNPR and 16% in Benishangul Gumuz region)
- α is the level of statistical significance or Probability of committing Type I error (α = 10% for this survey)
- β is the probability of committing Type II error (β = 2% for this survey)
- Z_{α/2} is the standard normal score (Z-score) corresponding to the degree of confidence with which it is desired to be able to conclude that an observed change of size (P₂- P₁) would not have occurred by chance
- Z_{1-β} is the standard normal score (Z-score) corresponding to the degree of confidence with which it is desired to be certain of detecting a change of size (P₂-P₁) if one actually occurred; 1-β is the Power of the Test, which is taken to be 80% for this survey.
- deff is the design effect for replacing the Simple Random Sampling by Multi-Stage sampling (deff is taken to be 3 for this sample computation).

Considering refusals, the sample size should be inflated by a factor of 1/P_i where P_i is the proportion of individuals actually interviewed among those selected for the survey. Given the security situation and other factors in the survey areas during the survey period, P_i was taken to be 85% for Amhara and Oromia, 98% for Tigray, 90% for SNNPR and 95% for BSG. Based on these values, a total of 560 sample rural households were estimated for the survey in Amhara, 350 for Tigray, 420 for Oromia, 250 for SNNPR and 350 for BSG. Overall, WASH data was collected from 1,941 rural households. The actual sample exceeded the estimate as enumerators interviewed additional 5 households each in Oromia and Benishangul Gumuz regions and 1 household in an Enumeration Area of Amhara region.

2.5 COMMUNITY WATER SCHEME INSPECTION AND INSTITUTIONAL ASSESSMENT

To get insight into the WASH situation of institutions and community water supply schemes in the base year, quantitative data was collected from all the schools and health facilities in all the sample kebeles and all community water supply schemes in the sample Enumeration Areas (EAs) of the sample kebeles. Accordingly, 93 rural schools, 52 health facilities and 232 community water supply schemes in the 46 sample kebeles were inspected. The schools inspected constituted of 38 from Amhara, 17 from Tigray, 15 from Oromia, 13 from Benishangul Gumuz and 10 from SNNP region. The 52 health facilities inspected comprised of 17 from Amhara, 10 from Tigray, 9 from Oromia and 8 each from Benishangul Gumuz and SNNP region. The census of the community water supply schemes comprised of 77 in Amhara, 31 in Tigray, 50 in Oromia, 53 in Benishangul Gumuz and 21 in SNNP region.

2.6 ENUMERATOR TRAINING AND PRE-TESTING

The baseline data collection was outsourced to a private Consulting Firm called “Temesgen Consultancy Service (TCS)”. TCS recruited enumerators/data collectors and supervisors in Addis Ababa taking into consideration the working languages of the five survey regions. TCS prepared a training manual in English language and distributed to the trainees. The COWASH FTAT and TCS staff trained a total of 42 people (36 data collectors and 6 supervisors) for 4 days (24-28 Dec. 2016) on the data collection tools, computer/mobile-assisted personal interviewing (CAPI) and procedure of collecting the baseline data.

On the fifth day, the CAPI system was tested in all the three local languages (Amharic, Afaan Oromo and Tigrigna) in a nearby kebele in Basona Worana Woreda of Amhara Region to make sure that the questions were clear and could be understood by the data collectors and respondents and the mobiles were properly functioning. The kebele where the pre-testing was conducted was outside the baseline survey sample areas. Debriefing session was held with the pre-test field staff, and use of the mobiles was further clarified and the questionnaires were modified based on lessons drawn from the pre-test exercise.

2.7 DATA COLLECTION PROCESS

For simplicity of data collection and saving resources, the survey areas were grouped into six: (i) Tigray; (ii) East Amhara; (iii) West Amhara including Mandura woreda of Benishangul Gumuz; (iv) Benishangul Gumuz; (v) Oromia; and (iv) SNNPR. Subsequently, the data collection was carried out by six teams from 29 December 2016 to 25 January 2017.

Each survey team consisted of one supervisor and six enumerators (3 of them females). The whole data collection process was coordinated by one Statistician and data administrator based in Addis Ababa. Besides, COWASH FTAT made quality checks in some selected woredas of SNNPR and Oromia regions and provided technical assistance to TCS. The data collection teams had got technical assistance from the Regional Support Unit (RSU) staff of the project regions. In all, the six teams collected WASH data from 1,941 rural households, 93 schools, 52 health facilities and 232 community water supply schemes in 46 sample kebeles of 24 sample woredas of the five project regions. The teams also managed to collect secondary and primary data on the WASH situation of the 46 rural kebeles and 24 woredas.

Table 2 List of sample woredas and sample households planned to be interviewed

Project Region	Sample Woreda	No of Sample Rural Kebeles	No of Sample Enumeration Areas (EA)	No. of Sample HHs per EA
1. Amhara				
1	Yilmana Densa	2	3	65
2	Guangua	1	2	40
3	Bibugn	1	2	40
4	Borena	1	2	40
5	Bahir Dar Zuria	2	4	85
6	Meket	2	3	65
7	Kalu	1	2	40
8	Dembia	2	3	65
9	Alefa	1	2	40
10	Enebsie Sarmidir	1	2	40
11	Chilga	1	2	40
Subtotal	11	15	27	560
2. Tigray				
1	Endamehoni	3	6	150
2	Seharti Samre	2	4	100
3	Nader Adet	2	4	100
Subtotal	3	7	14	350
3. SNNPR				
1	Chencha	3	6	120
2	Duna	2	3	65
3	Tocha	2	3	65
Subtotal	3	7	12	250
4. Oromia				
1	Nonobenja	2	4	100
2	Jidda	2	4	100
3	Jeldu	3	6	120
4	Tole	2	4	100
Subtotal	4	9	18	420
5. BSG				
1	Mandura	3	6	120
2	Bambasi	3	6	150
3	Belojiganfoye	2	4	80
Subtotal	3	8	16	350
Total	24	46	87	1 930

2.8 QUALITY ASSURANCE

The numerous factors that affect the quality of survey data collection necessitated putting in place safe guard measures. A combination of quality control measures were implemented for this baseline survey starting with the development of clear data collection tools. The main ones include the following:

- Quality Skip Rules developed in the CAPI for questions in the data collection tools;

- Intensive training provided to the enumerators and supervisors on the data collection tools and use of the mobiles including the approaches of data collection;
- Maps of the Enumeration Areas (EA) obtained from CSA provided to the supervisors for listing of the sample frames for the household sample selection;
- A detailed guideline, including household sample selection technique, was developed for the training of data collectors and supervisors;
- All of the questionnaires filled had been checked by the supervisors and feedback provided to the enumerators before the next day data collection commences;
- The data collection team was organized in a way that 50% of them were females; and female enumerators were made to interview only female respondents in the sample households;
- Errors identified in any corner of the data collection sites had been communicated to the rest of the data collection team so as to reduce the chance of appearing similar problems in other areas;
- Cleaning of the baseline data was made with the collaboration of TCS experts and COWASH M&E Specialist to significantly reduce the errors on the analysis of the baseline data; and
- Tabulation plans for presenting the survey findings were made harmonized with other researches made in the WASH sector so as to see possible comparison of findings.

2.9 DATA PROCESSING

All the baseline data were collected using CAPI method using Smart Phones. The data entry structures were developed in CSPro software by an experienced Statistician in collaboration with the COWASH M&E Specialist. Whenever there was internet access in the areas, the field level data had been transferred to the federal level coordinator, where they were stored in a separate protected computer and specific feedback was given to the teams to improve their performance on the field.

The raw data in CSPro was then exported to SPSS software and all the inconsistency and error screening were made in February 2017.

Accordingly, all the necessary cleaning was made back to the CSPro data. Finally, data processing was accomplished using SPSS software based on the tabulation plan prepared by the write up team. Due to the non-proportional allocation of the sample households to the different Enumeration Areas, sampling weights are used for analyzing the Household data to ensure the actual representativeness of the household survey results at the group of project woredas in the five regions. All WASH data collected except the household data are not representative of the group of woredas and are not weighted, but they can help in getting insight into the WASH situation of the sample areas and institutions: schools, health facilities and community water supply schemes.

2.10 ETHICAL CONSIDERATIONS

The purpose of the baseline survey was explained to each participant in their local language and willingness of respondents to participate to the survey was obtained before proceeding with any data collection.

Female enumerators were used for the household survey questionnaire as there were certain sections in the questionnaire to be conducted with the female member of the household that touched on sensitive matters such as menstrual hygiene.

Approval for conducting the research was obtained from the Ministry of Water, Irrigation and Electricity and all the regions and woredas were informed accordingly by letters about the research taking place.

When the enumerators entered certain area they first introduced themselves to kebele leaders or elders, who then facilitated their interaction with the communities if needed. The enumerators assured the confidentiality of information and privacy of research participants. All data was being stored securely on the consultant's database after which it was handed over to COWASH FTAT.

2.11 CHALLENGES AND LIMITATIONS

The overall process of the assignment was very good. Adequate time was given to the training of the enumerators, and the COWASH team was doing intensive supervision especially during the first few days of data collection. All possible steps were taken to ensure data quality by both the COWASH team and the consultants. However, during the data collection process, some challenges were faced by the data collectors.

Changes in the borders of kebeles and woredas: After CSA had developed the Enumeration Area map, some changes in the kebele and woreda borders had taken place due to splitting of kebeles into two. Also, there was a case where a woreda had been transferred from Benishangul-Gumuz region to Oromia region through a referendum. The measures were taken to identify comparable EA to substitute the areas.

Lack of organized secondary data from kebeles/woredas: A number of target kebeles were lacking organized secondary data due to staff turnover and other challenges.

Limitations observed with data collection application: During the first few days of data collection, few limitations were observed related to skip rules and slow processing of the CAPI in recording and GPS reading. The issues were corrected as soon as possible and in the meantime paper based survey forms were used. Data collected by paper based survey forms were entered to CAPI system after the bugs were promptly corrected.

Social desirability bias: Some social desirability bias were observed in the household survey responses concerning the questions mapping the attitudes of people towards persons with disabilities, different ethnicity or religion using the same water source with the respondent. The enumerators observed a tendency to give an answer that the respondents expected to be the correct answer instead of the answer necessarily reflecting reality. This data was not used in the final data analysis as it was considered biased.

Ambiguity of some question: Despite the careful questionnaire preparation process and the pre-testing of the data collection tools the enumerators found out that there was some ambiguity in the questions concerning the hand washing practices of the family members, definition of the improved toilets. There may have been misunderstandings and this may have had impact on the reliability of the answers in those questions.

3 BASELINE SURVEY FINDINGS

3.1 SAMPLE CHARACTERISTICS

3.1.1 Demographic characteristics of the household survey

This section describes the general demographic characteristics of the household sample such as information concerning family size, age, educational level and health status of the household members. The actual findings in terms of water supply, sanitation and hygiene status will follow in the next chapters. A total of 1,941 households were included in the baseline survey. The regional distribution of households surveyed, including information on household characteristics, are listed in Table 3 below.

Table 3 Household (HH) characteristics per region³

Household characteristics	Tigray	Amhara	Oromia	BSG	SNNPR	Total
Sample size (HHs)	350	561	425	355	250	1941
Average HH size	5	5	5	5	6	5
Average age of head of HH (in years)	46.8	43.2	41.4	40.2	43.0	43.5

Improved health is one impact, safe water and sanitation is expected to bring to the rural communities. Below are presented the health related characteristics of the households interviewed first covering the whole household (Table 4) and then children below 5 years old (Table 5).

Around 11% of the household members had suffered from some kind of health problem during the last 2 weeks preceding the survey. It was found out that 4.5% of them were suffering from diarrhea.

Table 4 Health characteristics of the family members by region

% of HH members who have suffered during the last 2 weeks on the following health problems:																
	Tigray			Amhara			Oromia			BSG			SNNPR			Total
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	T
Any health problem	11.7	11.9	11.8	11.9	13.4	12.7	4.9	4.3	4.6	16.5	18.7	17.6	10.7	11.3	11.0	11.5
Diarrhea	7.6	5.6	6.6	3.9	4.0	4.0	2.4	1.6	2.0	6.4	8.9	7.7	2.1	2.5	2.3	4.5
Eye infection	4.0	5.3	4.7	3.2	2.7	3.0	0.7	0.8	0.8	2.9	2.3	2.6	2.0	1.9	1.9	1.3
Out of those HH members who've suffered health problems during the last two weeks, the average number of days absent from work or school:																
No of days absent	6			5			8			6			9			7

Children under 5 years are the ones affected the most by unsafe water and inadequate sanitation. Nearly 10% of the under 5 year old household members had suffered from diarrhea during the last 2 weeks before the survey (Table 5). It is notable that significant amount (35.6% of the diarrhea cases) of children suffering from diarrhea were reported having blood in their stools which can be indicative of a specific disease requiring medical attention. The

³ By region the report refers to group of COWASH project woredas (40 Amhara, 7 Tigray, 12 Oromia, 8 SNNPR, 9 BSGR)

baseline figure for diarrhea prevalence of children under 5 is not directly comparable with the latest Demographic Health Survey Data from Ethiopia due to methodological differences. However it seems to be in scale with the EDHS that reports the diarrhea prevalence for children under 5 being 12%.⁴

Table 5 Health characteristics of the children under 5 years old by region

	Tigray	Amhara	Oromia	BSG	SNNPR	Total
% of under 5 years old HH members who have suffered diarrhea⁵ during the last 2 weeks before the survey:	16.8	10.3	3.0	18.4	5.7	9.9
% of under 5 years old HH members having diarrhea having blood in their stool:	41.7	36.0	33.2	32.1	22.4	35.6

Under 5 mortality is one of the impact level indicators of COWASH Phase III. The below table presents the baseline situation in terms of under 5 mortality in COWASH working areas. In all surveyed regions the under 5 mortality was reported to be 37 deaths per 1000 live births. According to EDHS 2016, the national under 5 mortality rate was 67 deaths per live births but these figures are not comparable due to methodological differences. It should also be noted that the prevalence of diarrhea during the time of death is based on a mother's perception without validation by medical personnel.

Table 6 Under 5 mortality in surveyed woredas

	Tigray	Amhara	Oromia	BSG	SNNPR	Total:
Under 5 mortality in surveyed woredas (per 1000 live births)	62	31	23	26	74	37
% of under 5 deaths that were having diarrhea during the time of death by region	5.7	4.4	0.0	8.0	0.0	3.4

Data on the prevalence of disability was for the first time collected from COWASH intervention areas. The percentage of household members with a disability or multiple disabilities are listed below in table 7. In total, 3.9% of the household members covered in the survey were having a disability with the disability prevalence varying between 6.2% (Tigray) and 2.4%. Approximately half of the household members with a disability had multiple types of impairments. The most common types of disabilities mentioned were sensory (visual and hearing impairments) and physical impairments. Detailed distribution of different impairments among the household members can be found in Annex 2.

In 2011, the World Health Organization, together with the World Bank, published the first World Report on Disability. Based on field research conducted in several countries including Ethiopia, the Report estimated that more than 15% of the world's population has a form of disability. For Ethiopia, the estimate of disability prevalence was 17.6%. There is generally a lack of reliable data on disabilities in many countries, including Ethiopia. The 2007 census puts disability prevalence in the country at 1.2%.

These differences are probably due to some different data collection methods, the setting of the questionnaires, the level of understanding of the data collectors, the invisibility of some

⁴ Source: Ethiopia Demographic Health Survey 2016. September 2016.

⁵ Diarrhea is the condition of having at least three loose or liquid bowel movements each day. It often lasts for a few days and can result in dehydration due to fluid loss. Diarrhea with blood in the stool can be indicative of cholera or other specific diseases and needs to be treated somewhat differently than diarrhea without blood.

impairments, and the willingness of people to openly disclose the information due to the stigma attached.

Table 7 Percentage of household members with a disability⁶

	Tigray			Amhara			Oromia			BSG			SNNPR			Total
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	
Prevalence of disability (%)	6.2	6.3	6.1	4.5	3.8	4.1	3.3	3.1	3.0	3.4	4.4	4.0	2.7	2.2	2.4	3.9

The educational level, school attendance and absenteeism from school are other important background information that were covered in the baseline survey and that may be linked to the water and sanitation status either at household or school level.

The educational level of household heads by the region is presented in Table 7 below. In all the surveyed regions, 61.3% of the household heads interviewed didn't have any formal education.

Table 8 Educational Level of Household Heads by Region

	Tigray	Amhara	Oromia	BSG	SNNPR	Total
Less than one year⁷	48.6	63.5	64.3	49.8	58.1	61.3
Primary (1-8)	30.3	22.1	30.9	34.3	33.9	25.4
Secondary (9-12)	5.7	4.6	4.8	9.7	4.8	5.0
Technical/vocational	0.0	0.2	0.0	0.0	0.3	0.2
Higher (Diploma or above)	1.3	0.8	0.0	3.7	2.9	1.1
Religious/Non-formal education	13.5	8.7	0.0	2.5	0.0	7.0

Out of the children in school age (between 6 and 18 years old), majority were attending school during the time of the survey in all the regions. Only Oromia was found to have lower school attendance percentage. In Oromia, the school attendance rate was only 69.1% compared to above 80% in all other project regions. This may be explained by the political unrest taken place in 2016 in many of the surveyed areas in Oromia region. Attendance rates were collected through a household survey not from the institutions directly. Therefore they are not comparable with school enrollment rates but they measure the proportion of school age children attending to school at the time of the survey.

When compared the school attendance between girls and boys it was found out that on average, 78.1% of the school age girls are attending school compared to 82.2% among the boys.

⁶ For this survey, *Disability* was defined as having at least one of the following impairments: A lot of difficulties in seeing even with eye glasses; A lot of difficulties in hearing; A lot of difficulties in walking or climbing steps; A lot of difficulties in washing or getting dressed independently; A lot of difficulties in remembering; A lot of difficulties in understanding or talking/speaking; Use any assistive devices (crutches, wheelchair/artificial limb); Others(epilepsy, paralysis or leprosy)

⁷ Dropping out before completing grade one and not able to read and write

Table 9 Percentage of school age children attending school by region

% of school age⁸ children in school						
	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Male (%)	83.5	84.2	68.4	85.0	84.6	82.2
Female (%)	85.9	76.7	69.3	83.5	87.9	78.1
Total(%)	84.8	80.5	68.9	84.2	86.3	80.1

Table 10 below shows that, overall, 12.4% school age children had for some reason been absent or dropped out from school for more than a week during the last academic year. The differences in absence rates were really small between male and female students. In general male students were found to be absent slightly more than female students as 12.5% of the male students were reported to have been absent from school for more than a week in a preceding year compared to 11.9% among female students.

Table 10 School age children absent from school for more than a week during the past year

School age children absent from school for more than a week during the year preceding the interview? (%)						
	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Male (%)	4.0	14.4	13.2	12.4	8.4	12.5
Female (%)	5.3	12.7	11.9	9.3	13.5	11.9
Total (%)	4.7	13.6	12.6	10.9	10.9	12.2

The most common reasons mentioned for absenteeism are presented below. Sickness and priority of household chores over education are mentioned as top 3 reasons in all the five project regions.

Table 11 Most common reasons mentioned for drop out from school for more than a week

	Amhara	Oromia	Tigray	SNNPR	Benishangul-Gumuz
1	Sickness	Journey to school is unsafe	Sickness	Child is needed for household chores	Sickness
2	No interest/ No value to education	Child is needed for household chores	Child is needed for household chores	Sickness	Child is needed for household chores
3	Child is needed for household chores	Sickness	Child needed for Farming Activities	Financial problem	Child needed for Farming Activities

3.1.2 Water supply scheme inspection

A total of 232 community water supply schemes were inspected during the baseline survey. Majority of them (222 or 96%) were inspected in the presence of the Water, Sanitation and Hygiene Committee (WASHCO) members which allowed data to be collected also on the operation and maintenance practices of the water supply schemes.

⁸ School age children are children within the age bracket of 6 years and 18 years and one day

Schemes inspected by type by region is presented in Table 12 below. Majority of the water supply schemes visited were protected wells (73.7%). Protected springs visited consisted of 25% of the water supply schemes visited.

Table 12 Types of water supply schemes inspected by region

Project Region	Piped water ⁹	Protected well	Protected spring
	%	%	%
Tigray	0.0	80.6	19.4
Amhara	1.3	79.2	19.5
Oromia	0.0	64.0	36.0
BSG	3.8	94.3	1.9
SNNPR	0.0	14.3	85.7
All regions	1.3	73.7	25.0

A single community water supply scheme visited benefits, on the average, 43 rural households in the sample Enumeration Areas of sample kebeles of the 24 woredas selected for the baseline survey. The average number of beneficiary households benefitting from a community water supply scheme inspected stood at 43 in Tigray, 42 in Amhara, 37 in Oromia, 56 in BSG and 39 in SNNP region.

3.1.3 Institutional WASH assessment

Altogether, 93 schools were visited in the project regions. On the average, 521 students were enrolled and 536 school community in a school visited for the baseline survey. On average, the highest number of students per school was recorded in Oromia region with average of 700 students per school while the least was in BSG region with 334 students per school. On average 0.6% of the students were having some kind of disability.

Table 13 Number of schools visited by region

Region	No. of schools visited	Average No. of students per school	Average No. of school community per school	Average No. of student/teacher per school	Average No. of students with some kind of disability per school	% of Students with Some Kind of Disability
Tigray	17	431	447	26	3	0.8
Amhara	38	518	534	32	2	0.3
Oromia	15	700	715	47	2	0.2
BSG	13	334	345	30	2	0.6
SNNPR	10	677	693	47	13	1.9
All regions	93	521	536	34	3	0.6%

52 health facilities were inspected during the baseline survey having on average 7 staff members each.

⁹ Piped water refers to piped water scheme

Table 14 Number of health facilities inspected in the sample kebeles

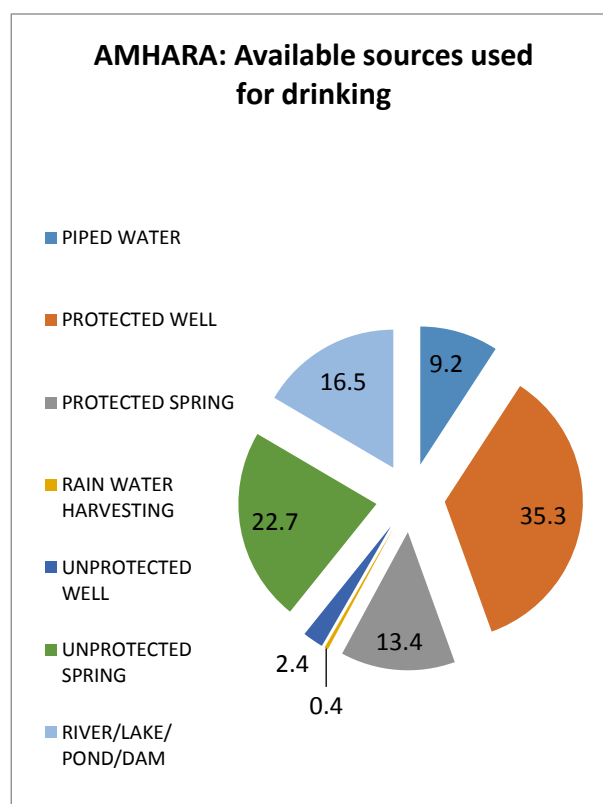
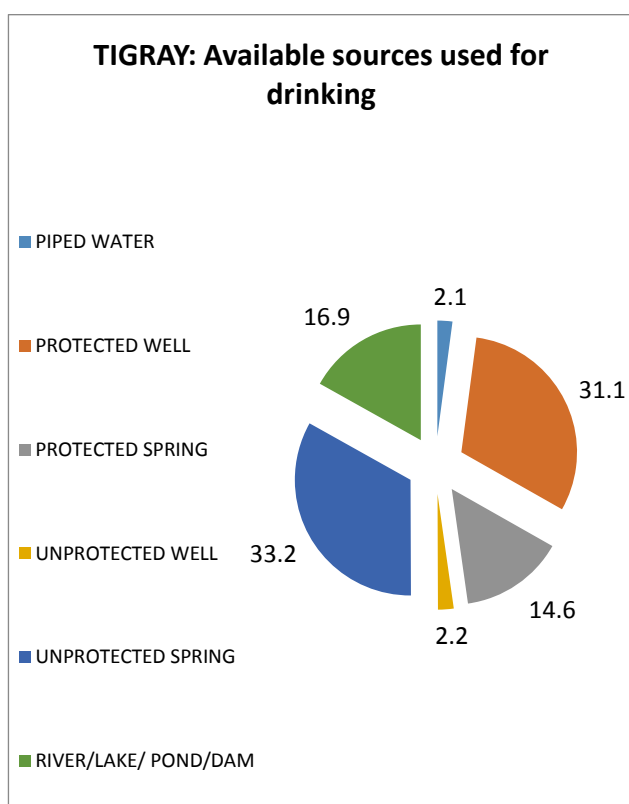
Region	No. of Health Facilities visited	Average no. of staff per health facility	% of staff with a disability
Tigray	10	3	0.0
Amhara	17	11	2.6
Oromia	9	8	0.0
BSG	8	6	0.0
SNNPR	8	3	0.0
All regions	52	7	1.4

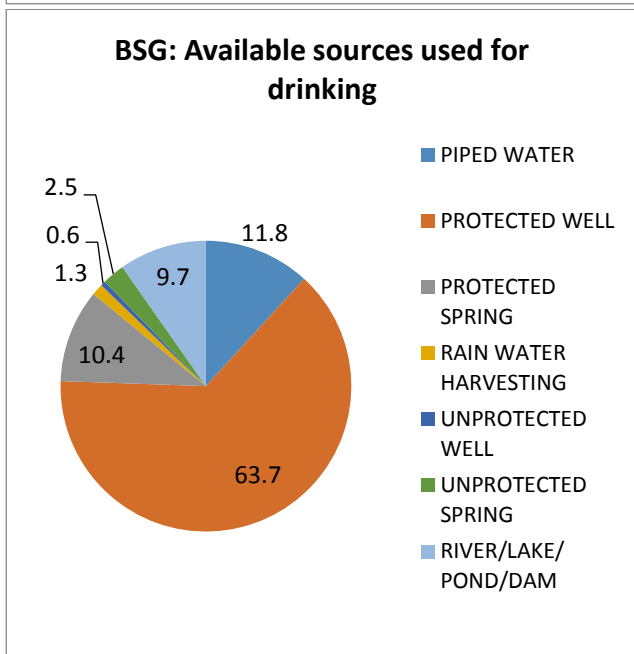
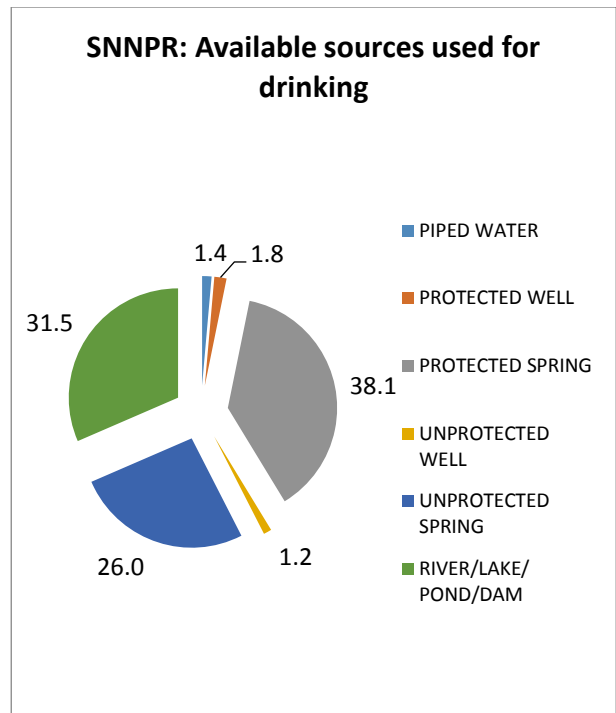
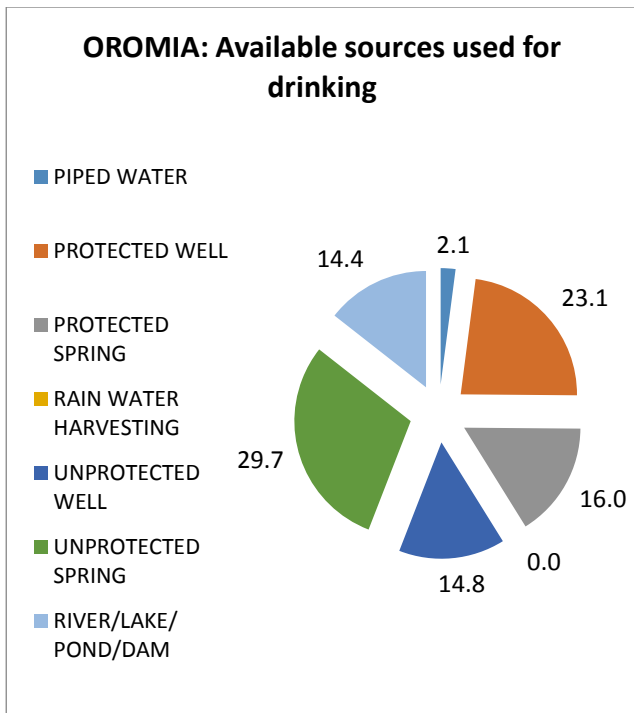
The most common diseases reported by the health institutions for the reason of visit were: diarrhea, malaria and pneumonia.

3.2 DRINKING WATER STATUS AT COMMUNITY LEVEL

This section presents the main findings concerning the drinking water sources, water safety, functionality, adequacy and availability of drinking water for households.

The variety of sources for drinking water vary between piped water, protected and unprotected well and protected and unprotected spring. Minimal proportion of households are using rainwater harvesting as a source of drinking water. The households were asked to list their available sources both during rainy and dry season. However, the results were nearly identical between the two seasons, so for the purposes of this report, the results reflecting the situation during the dry season are being used.





Findings of the household survey revealed that 58.9% of the surveyed households are using¹⁰ improved¹¹ water source for drinking at the time of the survey.

Definition for improved water source includes users getting drinking water from piper water source, protected well, protected spring or rain water harvesting. Proportion accessing drinking water through rainwater harvesting was minimal in the surveyed areas.

It is to be noted that the above baseline figure cannot be directly compared to access figures presented by the government of Ethiopia or directly compared against GTP II standards due to the methodological differences. This survey is cross-sectional and household based, where as GTP II monitoring is continuous and facility based. However the survey has also collected data on the actual amount of water collected and the time spent for fetching water, which will be presented later in the chapter.

In Benishangul-Gumuz region the percentage of households getting drinking water from improved sources is exceptionally high – 96.31%. This is due to the fact that most of the sampled areas in Benishangul-Gumuz were from Bambasi woreda resettlement areas where water supplies were constructed during the resettlement Programme in the previous regime. Moreover, FinnWASH-BG Programme had been constructing water supplies in Mandura woreda

¹⁰ The question to assess the access was to probe the water sources available at household level, and whether they were using it for drinking or not. Therefore it refers to actual usage and access at the same time due to the nature of the question

¹¹ In this survey the following were considered as improved water source: piped water, protected well, protected spring and rainwater harvesting

contributing to a high water supply access coverage. In general, secondary data sources support that the water supply access coverage of the rural areas of the project woredas in Benishangul-Gumuz is very high.

Table 15 Percentage of HHs getting drinking water from improved sources

Region	% of accessing drinking water from improved source
Tigray	50.10
Amhara	62.22
Oromia	44.26
BSGR	96.31
SNNPR	45.31
All regions	58.92

Households' perceptions of the water safety of the improved water sources are presented in Table 16 below. More than 92% of the households in all the surveyed regions consider the water they are drinking either very safe or safe.

Table 16 Perception of rural households on the safety of their drinking water

Project region	Perception on the safety of drinking water	
	Safe	Unsafe
Tigray	96.2	3.8
Amhara	95.6	4.4
Oromia	91.4	8.6
BSG	91.1	8.9
SNNPR	92.9	7.1
All regions	93.4	6.6

In addition to households' perception, a very basic assessment concerning the characteristics possibly giving indication on the water quality (such as smell, taste, visual appearance) was done as part of the water scheme inspection. The quality of the water was assessed by the enumerator based on visual appearance, smell and taste. These do not give adequate indication on the biochemical contamination of the water but can be used as a proxy indicator on the quality of the drinking water.

In the 232 water points visited, the following were the perceptions of the WASHCOs and family members

- 79.6% of the water supply schemes were clear
- 74.4% of the water supply schemes were free from visible particles
- 82.0% of the water supply schemes didn't have any abnormal color
- 83.4% of the water supply schemes didn't have any abnormal smell
- 85.3% of the water supply schemes were reported to be not salty

In Ethiopia, fetching water is traditionally the responsibility and burden of women in the rural households. In nearly 80% of households surveyed, women are usually responsible for fetching water for their families. However, significant number of households responded that males are also participating in fetching water for their families. The percentage of males participating in

fetching water varies from 50.6% in Tigray region to 17.0% in Amhara region. The boys fetching water for their families is most likely explaining these figures.

Out of girls aged 14 and below, 52.9% are usually responsible fetching water for their families. This is highest in SNNPR where 73.2% of the girls 14 and under covered in this survey were told to be usually in charge of fetching water for the household members.

Table 17 Participation of family members in fetching water for their families

% of female and male HH members usually ¹² fetching water						
	Tigray	Amhara	Oromia	BSGR	SNNPR	Total
Female (%)	85.1	75.5	77.9	73.9	84.7	79.4
Girls 14 and under (%)	68.6	46.3	59.7	40.5	73.2	52.9
Male (%)	50.6	17.0	49.9	15.4	40.5	34.6
Boys under 13 (%)	52.7	16.6	42.8	15.0	51.6	27.3

One key assumption of any WASH related project is that by decreasing the amount of time especially women and girls spend daily on fetching water, they will be able to spend more time on other productive activities. Such information has not been systematically collected before in COWASH. Average time spent for water collection from improved water sources in COWASH woredas according to the baseline data is **20.4 minutes excluding queuing** and **53.2 including queuing**.

Table 18 Average time taken to fetch water from improved sources

Region	Minutes (excluding queuing)	Minutes (including queuing)
Tigray	23	36
Amhara	13	30
Oromia	22	58
BSG	16	48
SNNPR	28	94
All regions:	20.4	53.2

Amount of water collected per day is another key parameter to be monitored during COWASH III especially in order to be able to report in line with the standards set in GTP II. Below is presented the average amount of liters collected per day by region. It shows that the baseline situation in none of the COWASH regions has yet reached the GTP II standard and not even GTP I standard in terms of amount of water collected.

The data was collected by asking the household members to estimate the number of jerrycans of water they collected daily for their drinking and domestic purposes. This was then converted into liters by the enumerators.

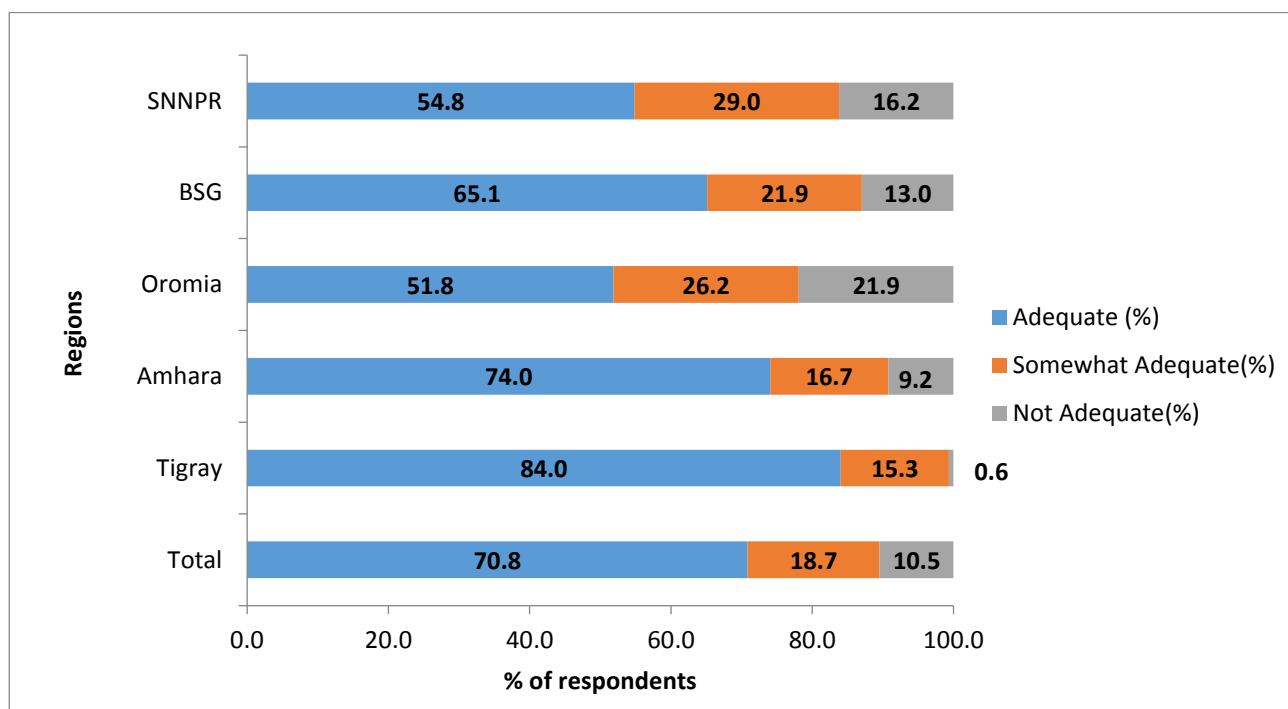
¹² The respondents were asked whether each household member is "usually" in charge of fetching water. Therefore it was possible to answer "yes" for multiple family members.

Table 19 Amount of water collected per day for drinking and domestic purposes

Region	Average amount of liters of water per HH per day	Average amount of liters of water per family member per day
Tigray	47	9.71
Amhara	65	14.91
Oromia	60	12.70
BSG	68	14.97
SNNPR	44	7.65
All regions	62	13.82

However, more than 70% of the households consider that the amount they fetch daily is adequate for their household.

Table 20 Adequacy of water collected in terms of quantity



The functionality of the water points was assessed by two separate data collection tools. The household survey and the water scheme inspection tool. The two tools presented little bit different type of results from the situation on the ground. While the functionality rates measured through the household survey were on average 95.3%, the average functionality rate measured through the scheme inspection was only 83.2%. This difference can be explained by a different understanding of the concept of functionality and the representativeness of the samples.

Table 21 Functionality¹³ of the community drinking water supplies inspected

	Tigray	Amhara	Oromia	BSG	SNNPR	Total
Yes, Functional (%)	77.4	88.3	88.0	75.5	81.0	83.2

¹³ Functionality refers to water point giving service (gives water, pump working, water point in use)

3.3 SANITATION AND HYGIENE AT HOUSEHOLD LEVEL

In COWASH III, support to sanitation and hygiene is mainly aimed through supporting the on-going efforts of the health extension program including sanitation and hygiene promotion through CLSTH approach.

Also the CMP approach includes aspects that aim to improve sanitation and hygiene status in COWASH woredas. As part of the CMP project cycle, all the communities in the beneficiary households commit to build a basic latrine (if they don't have one already). COWASH III aims to put more efforts to sanitation marketing which is expected to improve the functionality and use of the facilities, as well as to support moving "up" in the sanitation ladder for basic services to improved ones.

The baseline status in terms of rural household's access to improved toilet facilities was 7.4% on average. The situation is weakest at Oromia region where only 1.2% of the rural households surveyed had access to improved toilet facility. The definition of improved household toilet facility covers ventilated improved pit latrines or pit latrine with a slab. Pit latrines with open pit are not considered as improved facilities.

Table 22 Access to improved toilet facility at household level

	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Access to improved toilet facility at household level (%)	3.1	8.6	1.2	11.1	9.4	7.4

Handwashing with soap or cleaning agent in order to reduce transmission of diseases is widely agreed to be the top hygiene priority for improving health outcomes. While around 50% of the households in average had a hand washing facility located in their dwelling, only 1.2% of the households had both water and cleaning agent available at the facility.

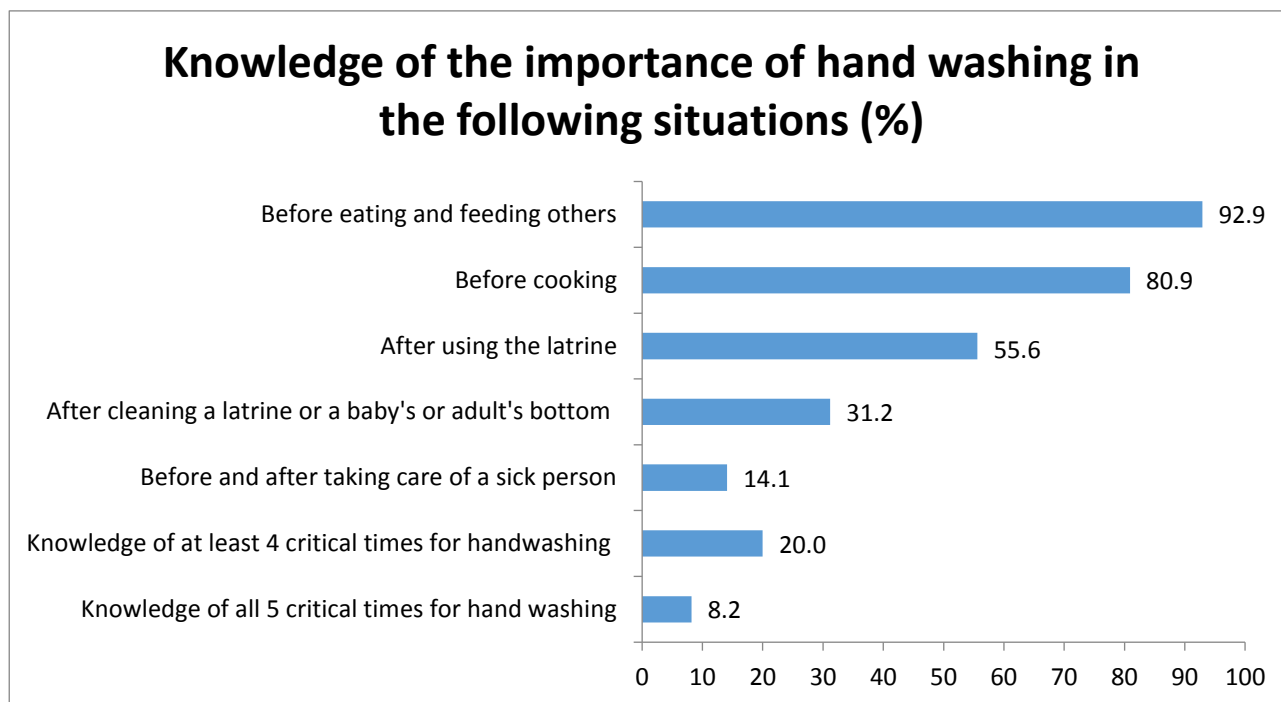
Table 23 Facilities observed for hand washing at household level

	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Availability of hand washing facility in the dwelling/yard	30.2	63.3	36.8	49.1	0.0	50.9
Water available	5.0	2.9	6.2	7.4	0.3	3.4
Cleaning agent¹⁴ available	31.1	18.9	6.9	20.3	1.8	16.2
Both water and cleaning agent available	4.4	1.0	0.5	2.8	0.0	1.2

There are five critical times during the day where washing hands with soap is important to reduce transmission of disease: Before eating and feeding others, before cooking, after using latrine, after handling human feces, before and after taking care of a sick person. 92.9% of the respondents were aware of the importance of washing hands before eating or feeding others. However, levels of awareness were significantly lower when it came to the importance of handwashing after using latrine (only 55.6% of the respondents mentioned). All in all, only 8.2% of the respondents were able to mention all the 5 critical times for hand washing being. When the amount of critical times were reduced to 4 (all but before and after taking care of a sick person) 20.0% of the respondents were able to name them.

¹⁴ Cleaning agent refers to soap or substitute such as ash

Table 24 Knowledge on the importance of hand washing in different situations



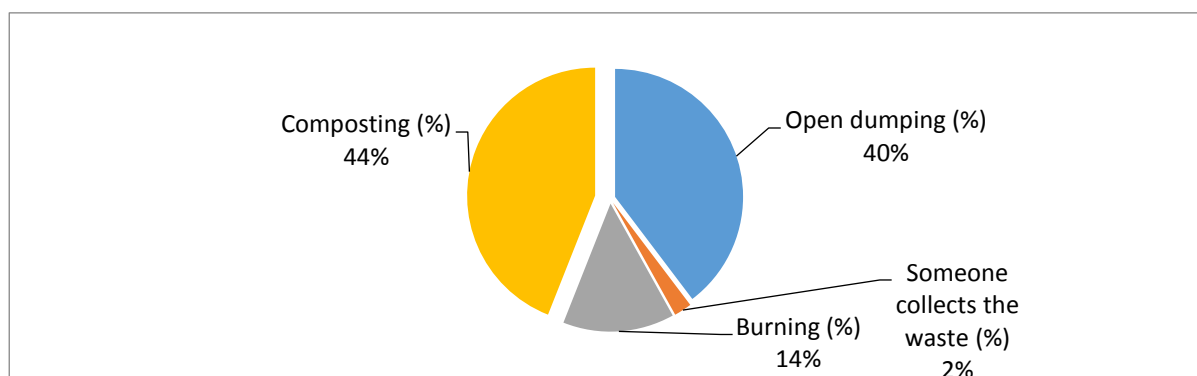
The practice of household water treatment was also measured in the survey. Total of 12.8% of households surveyed reported that they do something to their water to make it safer to drink. Out of those respondents who treat their water, the most common ways practiced was either boiling (14.7%), adding disinfecting chemicals (18.6%) or straining through a cloth (22.6%). Majority of those not doing anything to their drinking water to make it cleaner, explained it by their understanding that the water is already safe to drink (77.6%). Some 13.5 % of respondents who do not practice household water treatment say that they do not know how to treat and that's why they are not practicing it.

Table 25 Practice of household water treatment (HHWT)

Practice of household water treatment at COWASH regions:						
	Tigray	Amhara	Oromia	BSGR	SNNPR	All regions
% of HHs practicing HHWT	13.5	12.4	19.8	21.9	3.6	12.9

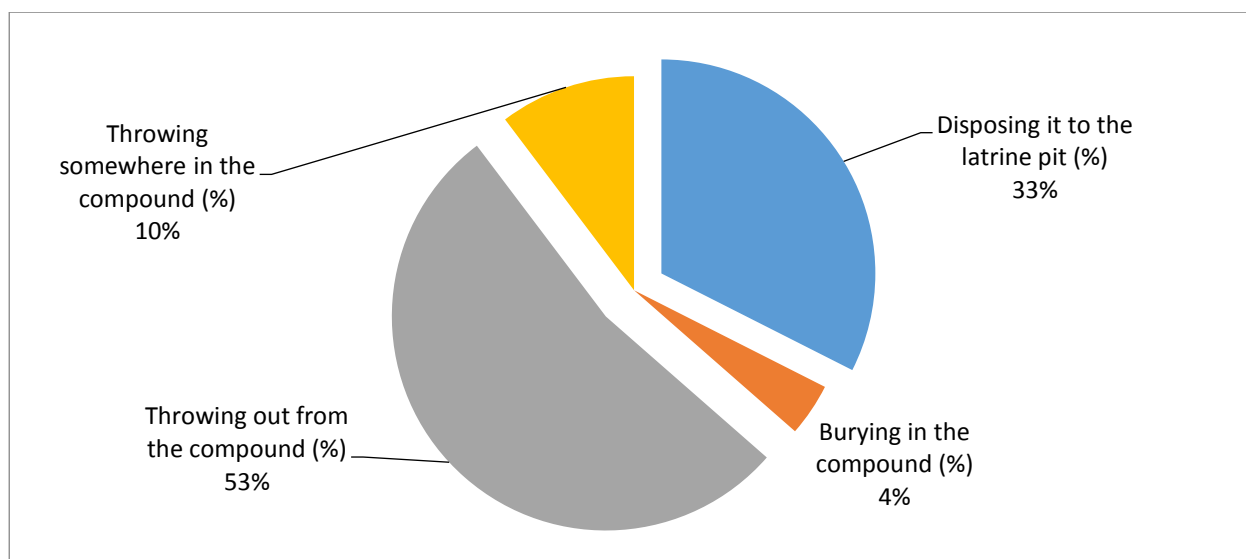
Safe disposal of household waste and especially safe management of faecal waste are important in ensuring the environmental health as well as protecting the water sources from contamination. Solid waste disposal at household level relies mainly on composting (44%) and open dumping (40%).

Table 26 Household solid waste disposal practices



Waste disposal of baby's feces took place mainly by throwing the feces out from the compound (53%) or by disposing the feces to the pit latrine.

Table 27 Waste disposal of baby's feces



3.4 MANAGEMENT OF COMMUNITY WATER SUPPLY SCHEMES

3.4.1 Operation and maintenance

Operation and maintenance (O&M) is essential for the delivery of reliable, safe and affordable water supply. In CMP approach, special attention is given to O&M from the very beginning of the planning process through the requirement of the up-front cash contribution, WASHCO CMP management training, training of care takers and pump attendants and encouragement of WASHCOs for regular tariff collection.

In order to ensure the functionality and long-term sustainability of the water services, including environmental, water quality and social point of view - operation and maintenance needs to receive adequate attention. This includes that processes such as regular tariff collection and preventive maintenance needs to be in place at scheme level.

There are a group of outcome indicators in COWASH III concerning the community awareness of O&M and management of water supply schemes. This includes three indicators 1) % of respondents who know the purpose of tariff collection 2) % of respondents who know who is responsible for the O&M of the water supply 3) % of respondents who know who owns the water supply. Measuring this type of knowledge provides a good baseline on general awareness in terms of O&M and water point management.

In terms of understanding the ownership of the water supply scheme, the household survey shows that the ownership is quite strong among the respondents. On average in all surveyed regions, 63.4% of the community members correctly understand that community is the owner of the water point and its service as is stated in the Ethiopian Water Resources Management Policy. This understanding is strongest in Oromia region where 90.7% of the HHs answered that they are the owners of the water point. The household surveyed and water points inspected are located in COWASH working areas but included people also benefitting from water points constructed by other WASH actors.

Table 28 Community level understanding on the ownership of the water point

Who do you think owns the water point and is responsible for its service?						
Owner of the water point	Regions					
	Tigray	Amhara	Oromia	BSG	SNNPR	Total
Government (region, woreda, kebele) (%)	10.9	15.5	6.7	16.4	23.7	15.1
Committee/WASHCO (%)	31.2	22	1.1	24.4	2.4	19.6
Pump attendant/Caretaker (%)	1.2	0.3	0	0.5	0	0.3
Community (%)	54.7	61	90.7	53.9	71.8	63.4
Nobody (%)	0.4	0.3	1.5	0.8	0.9	0.5
Don't know (%)	1.7	0.9	0	3.9	1.1	1.1

Concerning the responsibility over operation and maintenance (O&M), 47.5% of the respondents answered that WASHCO is responsible on the O&M and 33.1% say that it is the community themselves. Only 14.2% think it is the responsibility of the government (woreda water office or kebele administration).

Table 29 Community level understanding on the responsibility of O&M of drinking water supplies

Who do you think is responsible for the operation and maintenance of the water point?						
Responsible bodies for O&M	Regions					
	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Government (region, woreda, kebele) (%)	17.1	13.5	2.1	12.1	34.3	14.2
WASHCO (%)	1.4	51.1	42.1	57.6	39.8	47.5
Pump attendant/ Caretaker (%)	1.4	4.5	0	5	0	3.6
Community (%)	63.5	29.4	54.7	21.1	24.9	33.1
Nobody (%)	0	0.2	0.6	0	0	0.2
Don't know (%)	0.6	1.4	0.5	4.2	1.1	1.4

Purpose of the tariff collection is also well-known for the communities. More than 90% of the responses (94%) state that they know the tariff is collected for the guard or/and O&M of the water points. 44.4% of the respondents knew that the tariff is collected for operation and maintenance.

Table 30 Community level understanding on the reasons why tariff is collected

Do you know why tariff is collected?						
Options mentioned for tariff use	Regions					
	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
For Guard (%)	51.3	49.3	26.7	17.2	21.6	44.3
For the operation & maintenance (%)	48.2	40.7	47.2	65.4	69.9	44.4
For expansion (%)	0	2	17.8	4.4	0	3.6
For building a new water point (%)	0	1	8.3	1.2	0	1.7
Don't know (%)	0.5	7	0	11.7	8.5	6

Based on the community water supply scheme inspection of the O&M status, the results show that in 33.4% of the water points inspected has been maintained. In 41.0% of the cases, it

had been conducted by the woreda and 26% of the cases by WASHCOs themselves. 53% of all O&M done has been done by the government (woreda and kebele).

Table 31 O&M conducted by responsibility

	Tigray	Amhara	Oromia	BSG	SNNPR	Total:
% of inspected water points having O&M done	42	25	20	63	17	33.4
- by WASHCO	36	27	33	23	0	26
- by pump attendant or caretaker	0	14	0	11	0	9
- by artisan	0	27	0	0	25	9
- by kebele	18	0	11	20	0	12
- by woreda	36	32	44	43	75	41
- Others	9	0	11	3	0	3

Important aspect of the long term sustainability of the water services is water safety. This includes aspects such as proper protection of the water source and management of the water point.

Table 32 Water point safety at community level

	Tigray	Amhara	Oromia	BSG	SNNPR	Total:
% of inspected water points fenced	58.0	62.0	50.0	61.0	47.0	57.0
% of inspected water points having a formal guard	76.9	28.8	13	2	23.5	24.6
% of inspected water points having a trained care taker/pump attendant	65.4	27.4	23.9	38.8	23.5	33.6
% of inspected water points exposed to immediate risks	86.3	82.5	96.0	52.7	97.7	83.9

It was observed that 83.9% of the water points inspected were exposed to some kind of immediate danger. However, the level of danger is subject to interpretation of the enumerators and cannot be considered as objective measure. List top 5 immediate danger observed as per the perception of the enumerators were the following:

1. Risk of flooding (26.6%)
2. Nearby farming land (14.0%)
3. Big eucalyptus trees nearby (14.0%)
4. Nearby gully development (11.3%)
5. Feces around the water point (9.9%)

3.4.2 Tariff collection

The WASHCO members interviewed during the water point inspection reported that on 61.6% of the water points visited the tariff was being collected. On average, the accumulated savings per WASHCO was about Birr 1,868.

Table 33 Tariff collection practices in community water points

Region	Tigray	Amhara	Oromia	BSG	SNNPR	Total
Tariff is collected (%)	69	51	52	94	29	61,6
Average tariff/HH/year	108	66	147	15	3	66
Average accumulated savings (in Birr)	1,766	1,586	3,457	1,199	1,093	1,868

According to the household survey, 80.3% of the households considered the tariff collected affordable. When asked about the reasons for not paying tariff, it was mainly explained due to lack of service (28.5%) or exemption (21.6%). However, also issues such as no trust to the tariff collector (17.9%) or disagreement in the community (16.3%) were mentioned as reasons for not paying the water tariff.

3.4.3 Water, Sanitation and Hygiene Committee (WASHCO)

Water, Sanitation and Hygiene Committee (WASHCO) is the core of the CMP approach. It is also the key institution at community level to engage the community members in the water related decision-making and to promote good and sustainable management of the water services.

In the national proclamations and regulations of regions on establishment of WASHCOs, it is indicated that at least 50% of the WASHCO members should be women. CMP approach encourages that at least one of the leadership positions of WASHCO should be held by a women.

The baseline data concerning the WASHCO composition indicated that only 33% of the WASHCO members were women. In 4.3% of the WASHCOs, the chairperson was a woman. There were no persons with disabilities found to be as WASHCO members.

Table 34 Composition of WASHCOs

Region	Tigray	Amhara	Oromia	BSG	SNNPR	Total:
Average no of WASHCO members	6	5	7	6	4	6
% of women in WASHCO members	50.0	20.0	28.6	33.3	50.0	33.3
% of WASHCOs with a woman as a chairperson	11.5	2.7	2.2	6.1	0.0	4.3
% of WASHCOs with a bylaw¹⁵	76.9	42.5	67.4	2.0	23.5	41.2

The level of organization among WASHCOs varies quite a lot but was found to be good in COWASH working areas. On average 79.1% of the WASHCOs met had had at least one WASHCO meeting during the past year. 71% had held a general assembly including the community members during the past year.

¹⁵ Existence of bylaws were not observed during the survey, only asked.

Table 35 Practice of WASHCO and general assembly

Region	Tigray	Amhara	Oromia	BSG	SNNPR	Total:
% of WASHCOs who didn't have any WASHCO meetings during the past year	11.5	19.2	19.6	16.3	58.8	20.9
% of WASHCOs who organized a general assembly meeting during the past year	91.0	76.0	94.6	34	60.0	71.0
% of WASHCOs who prepared minutes of meeting ¹⁶ from the general assembly meeting	40.9	40.7	10.8	10.0	0.0	24.8

The relations between the households and the WASHCOs were also covered in the survey. On average, 74.8% of the respondents were aware there is a WASHCO for the water point they are using as their main drinking water source. All of them also reported that they have participated to a formal meeting about the water point.

WASHCO – community meeting is an important forum where all the aspects of the water point management should be discussed and agreed upon. The most common issues discussed on such meetings at all regions were on maintenance of the water point (19.7%), sanitation (17%), water safety (13%), by-laws (11%) and cleanliness of the water point (11%).

The results of the household survey show that community level water management is rather transparent. It was found out that 85.4% of the households know how WASHCO members have been using the tariff money. However, only 20.1% of them knew how much money or kind contributions have been collected in tariffs.

More than half of the respondent households trust their WASHCO members to a great extent (58.3%). Well over 90% of the households (93.8%) trust (greatly or to some extent) their WASHCOs.

3.4.4 Challenges to community WASH

In addition to the household survey, more detailed interviews were conducted with the relevant WASH institutions in the woreda level. The discussions were focusing especially on the barriers and challenges to WASH.

Top 4 barriers mentioned for community water supply according to woreda and kebele WASH teams were: 1) shortage of budget; 2) not enough facilities to serve the population; 3) poor quality of facilities; and 4) lack of spare parts.

Concerning sanitation, the main barriers mentioned by woreda officials were: 1) Low level of knowledge and awareness among the community members; 2) Lack of budget; 3) Low priority of sanitation and hygiene; and 4) overloaded Health Extension Workers (HEWs).

3.5 AWARENESS RAISING AND ATTITUDES

Awareness raising through different campaigns, meetings and other modes of information dissemination is considered as an important component in creating behavior change and changing attitudes. Especially when it comes to rights and role of women, persons with disabilities and other vulnerable groups, awareness raising efforts are still needed.

¹⁶ Existence of minutes of meeting were not observed during the survey, only asked

One important outcome indicator for COWASH III is on awareness of communities on gender and the needs and rights of persons with disabilities in WASH. Baseline data for this indicator was collected and the results show that 68.1% of the respondents report they have received information on the importance of engaging women into water, sanitation and hygiene management, and 48.0% on importance of organizing water and sanitation services for people with disabilities and elderly people.

The regional disparities are quite big in this regard. Whereas 80.7% of the respondents in Oromia report receiving information on gender and 68.0% of persons with disabilities, only 61.0% of respondents in SNNPR reported receiving information on gender and WASH and only 28.0% on persons with disabilities.

Table 36 Awareness raising received on WASH

	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
% of HHs who have received information on						
WASH issues	72.5	69.6	27.1	69.7	51.3	63.2
Importance of engaging women in WASH management	78.2	66.5	80.7	72.4	61.1	68.1
Need for organizing water and sanitation services for people with disabilities and elderly people	60.6	47.3	68.2	47.2	28.5	48.1

As expected the main source of WASH related information in all the regions were found to be the health extension workers (HEWs). Households also reported receiving such information from churches or mosques, from WASHCO members, kebele staff and schools and health centers. Radio is reported to be quite a minor source of information as only 2.9% of the respondents mention radio as a source of WASH information.

Table 37 Source of WASH related information

From where did you or your family receive the information on WASH (% by source)						
	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Health extension workers	50.7	61.3	50.0	72.8	59.3	59.7
Church/mosque	4.3	7.8	0.5	5.4	1.4	6.4
WASHCO	9.9	3.9	17.2	3.5	5.4	5.5
Kebele WASH office	9.5	3.4	11.9	3.7	5.0	4.8
School or health center	8.0	4.1	0.0	2.2	4.9	4.3
Radio	2.1	2.5	5.5	5.4	4.9	2.9
Development agent	8.3	2.8	0.0	1.7	0.4	3.1
Kebele associations	2.2	2.7	0.5	0.4	2.8	2.4
Others (such as family member, neighbor, woreda WASH offices)	5	11.5	14.4	4.9	15.9	10.9

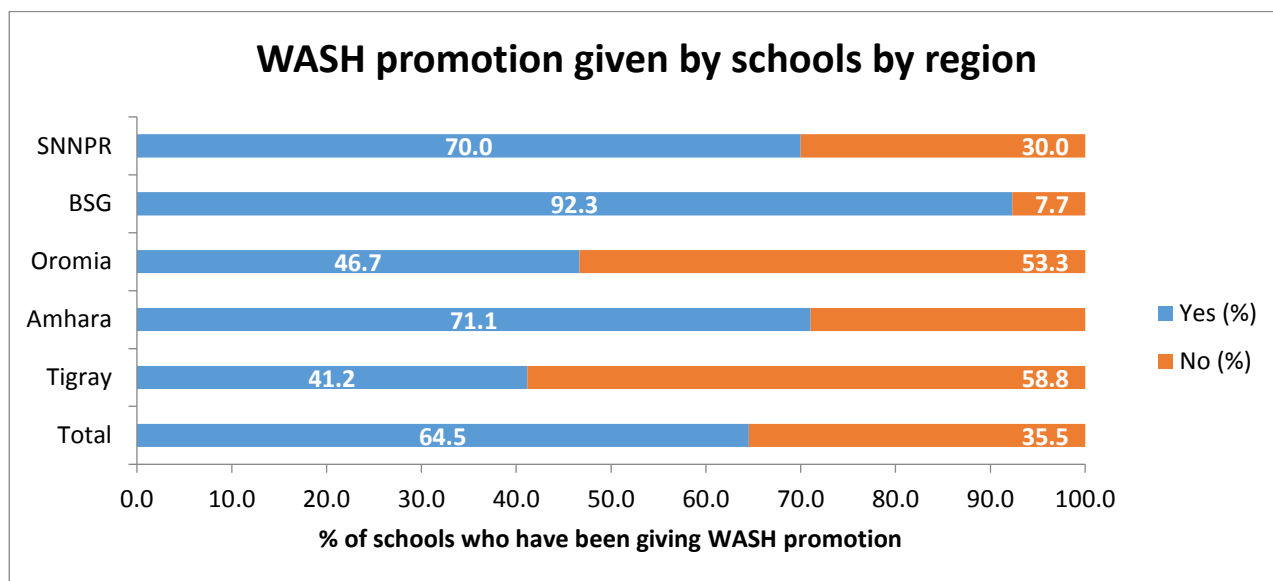
The household survey showed that the main modes of information dissemination on WASH were public meetings (43.7%) and household visits (48.3%). Other modes of information

dissemination such as training, drama, celebration, etc. were also mentioned but not in larger scale.

Practice of WASH promotion was also scrutinized at the institutional level. Baseline data was gathered on WASH promotion conducted by different WASH sector institutions such as schools, health facilities and woreda and kebele WASH teams.

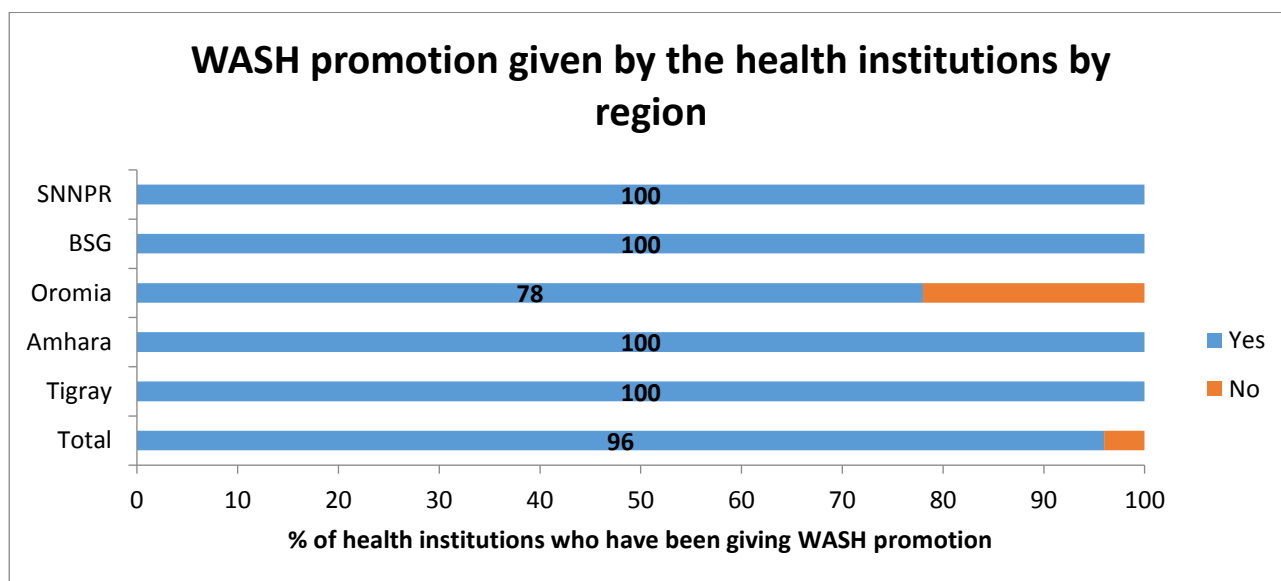
Schools are playing an essential role in hygiene and sanitation related awareness raising through their WASH clubs and integrating WASH education to their daily routines. The survey found out that 64.5% of the schools interviewed reported they've been giving WASH promoting to their school community namely students, teachers and administration staff.

Table 38 WASH promotion given by schools by region



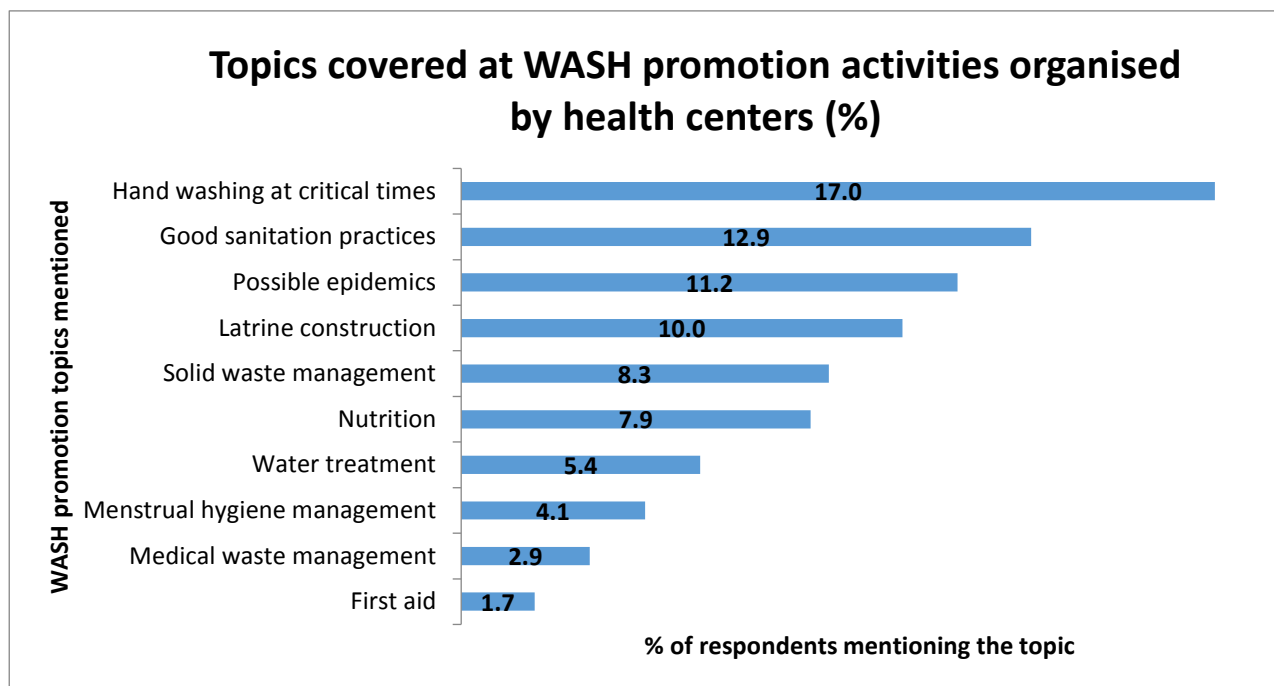
At health institutions, WASH promotion is even more active, as 96% of health institutions visited reported giving WASH promotion to their patients and staff members.

Table 39 WASH promotion given by the health institutions by region



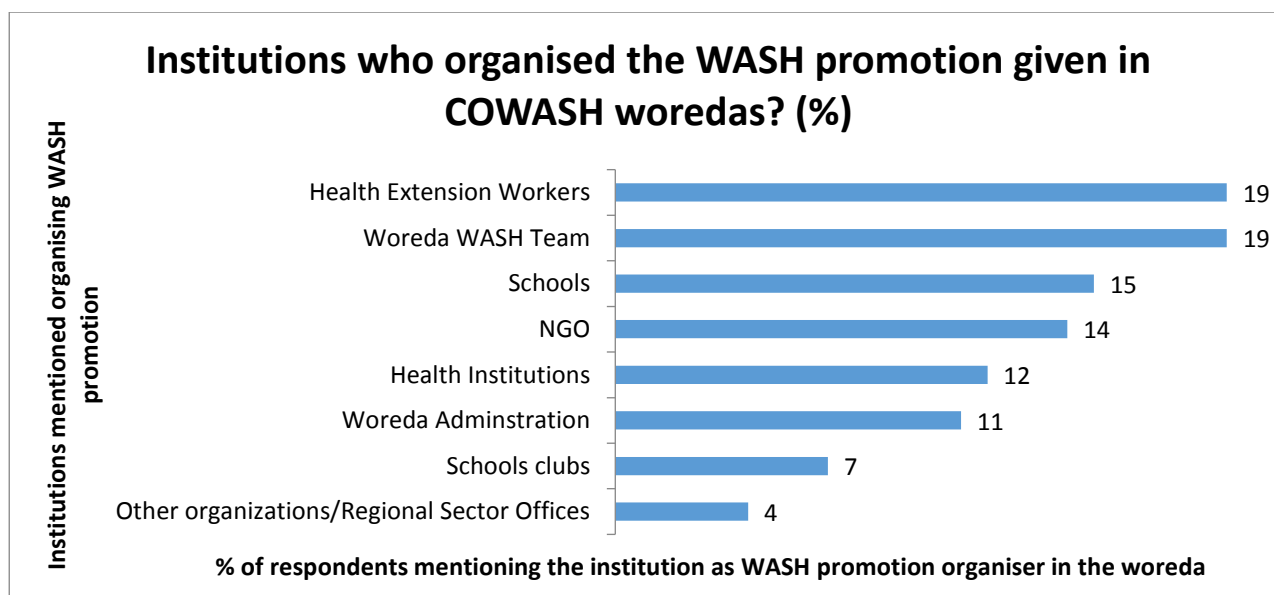
The most common topics covered in the WASH promotion activities were hand washing, sanitation practices and possible epidemics.

Table 40 Topics covered at WASH promotion activities at health centers



All woreda administrations interviewed reported that WASH promotion is being conducted in their woredas. The institutions in charge of the promotion activities were mainly health extension workers, woreda WASH team members and schools.

Table 41 Institutions who implemented the WASH promotion activities



3.5.1 The role of women in WASH

Women are the main users of water supply facilities in their communities and it is essential to include them fully to the WASH related decision-making in their communities. This is also well in line with the national proclamations and policies as well as with COWASH guidelines that all strongly state that minimum 50% of the members of WASHCOs should be women and that at least one of the key leadership positions in the WASHCOs should be given to women.

However, there is still work to be done in the full inclusion of women to WASH management and one area of work is to increase the confidence of women to accept WASHCO leadership positions.

As part of the baseline survey, one female family member per household was asked separately about women in WASH management. Overall, 1941 interviews were conducted with the women on WASH management in their families and this was weighted to represent the group of woredas in the project regions.

On the question on who decides in the household whether a woman would become a WASHCO member, the regional disparities were found to be big. More than 58% of the female respondents say that it would be either their own decision or joint decision with the husband. 30.6% answered that it would be their husbands who decides on such a matter but the responses vary between 3.3% in Tigray and 63.6 in SNNPR who feel that it is up to the husband to decide on such matters, not the women themselves.

Table 42 Decision on women to become member of WASHCOs

Who usually decides for women to become a member of a water committee?						
Region	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Myself (%)	17.6	14.5	10.2	25.0	12.6	14.5
Husband (%)	3.3	32.3	15.3	23.0	63.6	30.6
Joint decision (%)	60.1	40.6	71	51.1	15.2	43.6

The survey found out that only 47% of the women interviewed replied that they would be willing to take up a leadership position in a WASHCO if they would be elected. This reveals that more confidence and capacity is to be built before the national targets on women’s role in WASH can be met.

Table 43 Confidence of women to take leadership positions in WASHCO

If you have got the chance to be elected, do you think you can take chairperson or other leadership position in WASHCO?						
Region	Tigray	Amhara	Oromia	BSG	SNNPR	Total
Yes (%)	25.7	46.1	59.4	63.3	54.7	47.4
No (%)	63.4	49.6	40.3	32.0	41.9	48.4
Don't know (%)	8.9	4.3	0.3	4.7	3.5	4.3
Total (%)	100	100	100	100	100	100

The biggest single reason mentioned for not being willing to take up such a position was lack of education. Nearly 49% of the women respondents felt that lack of education would hinder their participation in WASHCO works. This is a clear signal that awareness raising and encouragement is needed to empower women to become active part of WASHCOs despite the lack of formal education. Some 32.6% responded that they are too busy with household chores.

Table 44 Reasons why women feel they cannot assume leadership position in WASHCO (%)

Why you feel you could not assume a leadership position in WASHCO?						
Reasons mentioned:	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
No education (%)	52.3	47.2	61.4	43.7	46.5	48.8
Busy with household chores (%)	31.1	32.7	31.2	29.2	37.1	32.6
Partner is not willing (%)	2.2	7.9	6.0	12.6	6.1	7.2
Other reason (%)	9.5	3.6	1.1	6.3	9.7	4.5
No full cooperation of men (%)	1.9	3.7	0.4	4.3	0.5	3.0
Not allowed in our culture (%)	0.4	2.5	0.0	1.5	0.0	1.9
No full cooperation of women (%)	0.4	2.2	0.0	1.2	0.0	1.7
Don't know (%)	1.9	0.2	0.0	0.0	0.0	0.3
Refused (%)	0.3	0.0	0.0	1.1	0.0	0.1

An important outcome level assumption in WASH related interventions is that if people could save up time from fetching water, the time saved could be used to other productive activities.

It was found out that 48.3% of the women responded that they would spend the time saved to other household activities such as cooking food, washing clothes and collecting firewood. A little more than 21% replied that they would spend more time in social issues and relaxing.

Table 45 Responses on how to spend the time saved from fetching water

What would you do if you would be able to save time from your daily chores?						
Activities mentioned:	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
Washing clothes (%)	15.3	17.6	15.7	21.1	10.1	16.8
Cooking food (%)	22.6	16.0	19.4	18.0	3.0	16.3
Collecting firewood (%)	16.1	14.8	24.0	13.5	3.5	15.3
Participating in social issues (%)	13.8	12.4	9.3	6.1	6.8	11.5
Participating in agricultural activities (%)	9.8	9.1	20.8	8.3	9.0	10.5
Relax/doing nothing (%)	1.7	9.8	3.8	15.5	32.9	9.9
Sleeping (%)	6.1	7.5	1.1	7.4	18.5	7.3
Participating in community issues (%)	10.7	5.3	0.5	3.0	6.8	5.3
Others (%)	0.9	4.7	0.8	2.2	6.2	3.9
Engaging in petty trade (%)	0.7	0.9	3.7	3.8	1.8	1.4
Sending students to school/study (%)	1.3	1.2	0.9	0.5	0.4	1.1
Study (%)	0.6	0.7	0.1	0.6	1.1	0.6
Don't know (%)	0.2	0.1	0.0	0.2	0.0	0.1

3.6 INSTITUTIONAL WASH

3.6.1 Water supply in institutions of surveyed areas

Many schools still lack safe and adequate access to water and sanitation which negatively contributes to absenteeism and high drop-out rates especially for girls in the age of puberty. Improved access to safe drinking water and sanitation facilities in the institutions including for menstrual hygiene management, will also contribute to more women and girls being able to attend schools and work outside of their home.

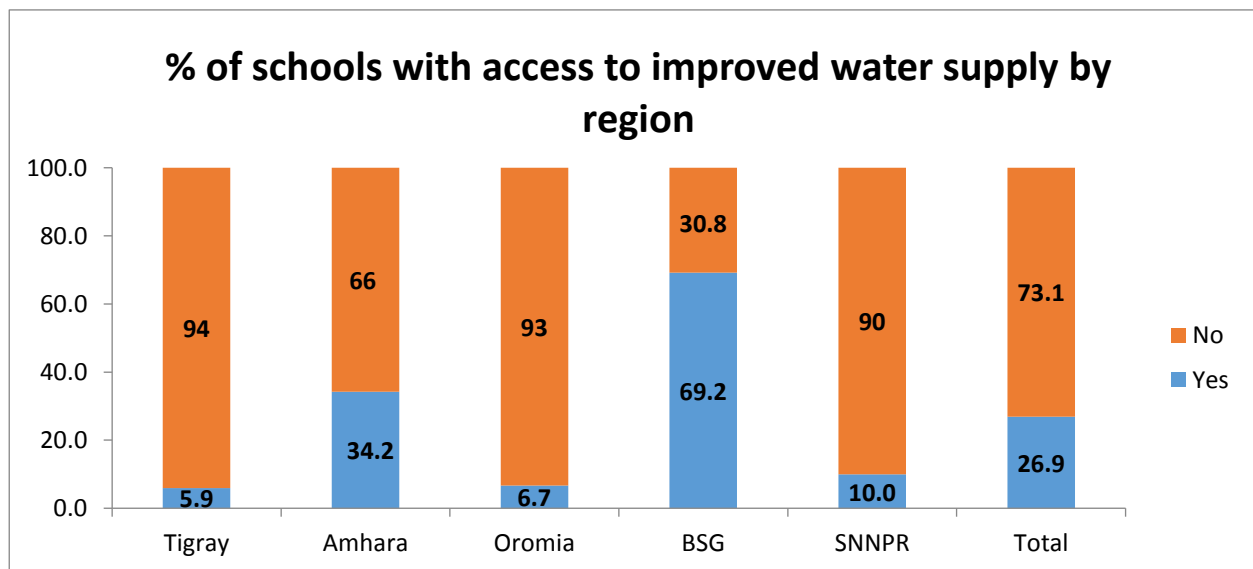
Water supply status was assessed in 93 schools and 52 health institutions as part of the baseline survey. The gathered sample is not statistically representative of the whole woredas, but it can provide some good indication on the School and Health WASH situation of the sample kebeles in COWASH working areas.

National School WASH Implementation Guideline of the Federal Ministry of Education is going to set national standard for minimum technical and human resources components that are necessary to produce a healthy school environment.

The guideline is not yet officially endorsed but the minimum standard in terms of water supply is planned to be maximum 100 students per one tap/faucet. Also the minimum standard defines that the distance to the water supply should not be more than 100 m or 10 minutes return trip from the school compound.

The baseline survey data revealed that water supply access in the 93 assessed schools is not at adequate level. The average access to improved water supply in all the surveyed schools was reported to be 26.9%. The chart below is presenting the water supply access by region.

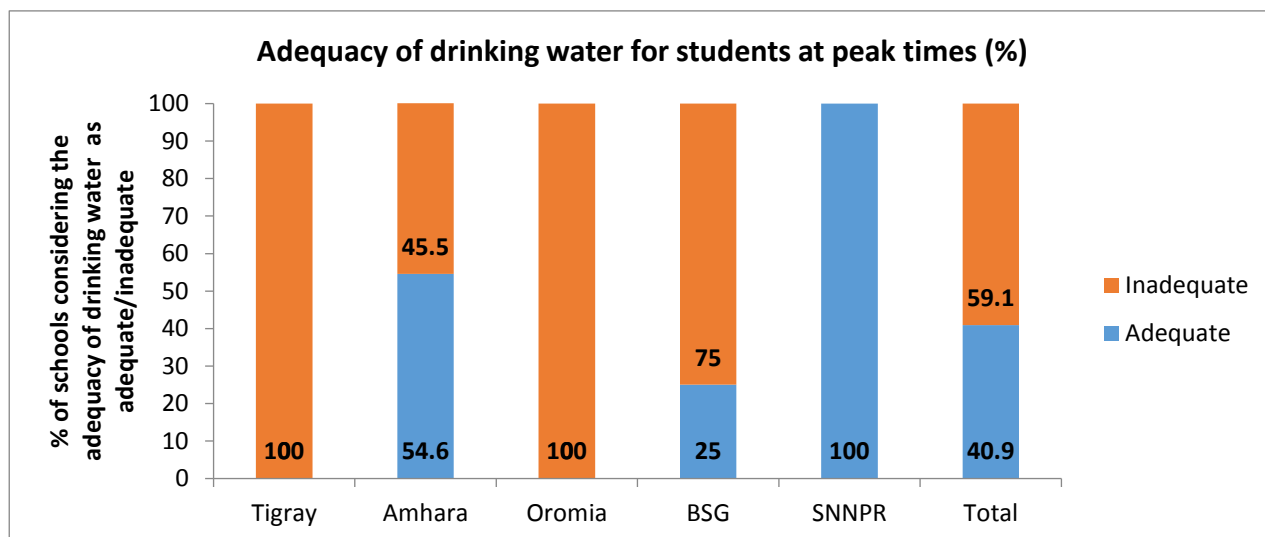
Table 46 Percentage of schools with access to improved water supply



The functionality of the school improved water supply schemes was 88% by average with no significant regional differences.

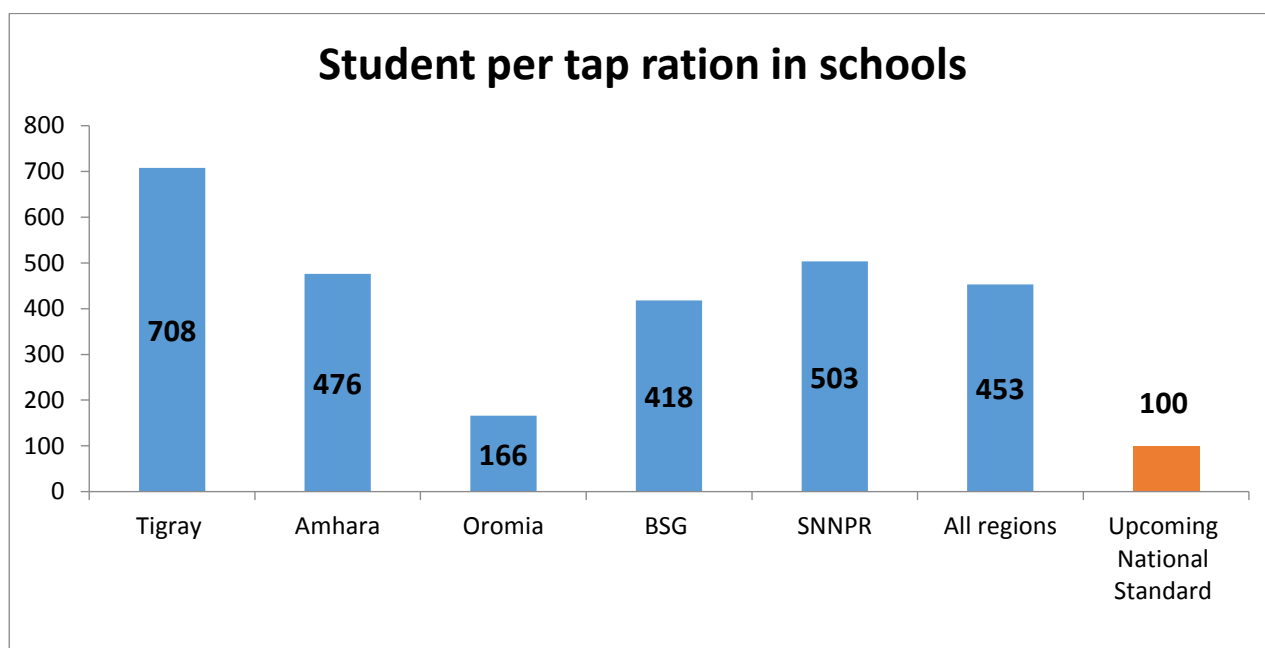
The drinking water adequacy is a critical aspect in school WASH as students and staff members of the school mainly drink during the breaks and the capacity of the scheme needs to be adequate to fill their needs during this short period of time. The perception of adequacy varies a lot between regions. On average, 59.1% of the schools assessed reported that they are not getting adequate quantity of drinking water for their students during peak times.

Table 47 Adequacy of drinking water for students at peak times (%)



In those schools with an improved water supply available, the student-tap/faucet ratio looked very challenging. On average, in the surveyed schools, student per tap ratio was 453 students/tap which is well above the upcoming national minimum standard of 100 students/tap. The situation by region is presented in table 48 below.

Table 48 Amount of student per water tap in surveyed schools



The management and the operation and maintenance of school WASH facilities is critical in ensuring the sustainable and hygienic use of the facilities. Need for good management and O&M is also recognized in the School WASH implementation guideline. Table 48 below summarizes the situation on practice of water treatment, operation and maintenance, availability of trained pump attendant and existence of water safety plans.

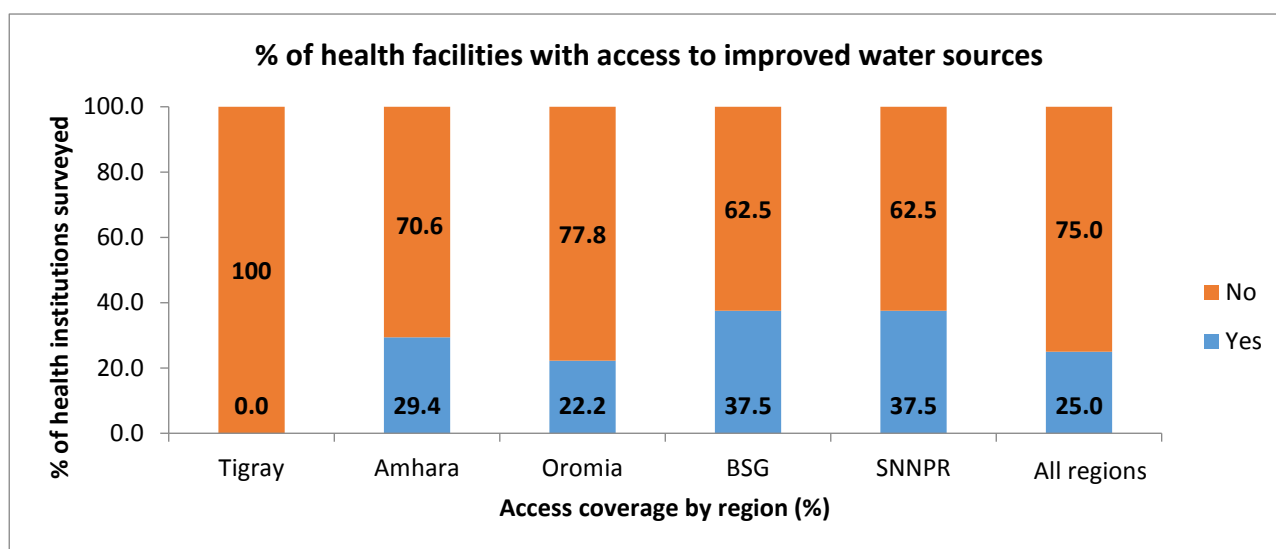
Around 35.3% of the schools treat their water before drinking to make it safer. It was reported that 48% of the schools have conducted O&M for their water supplies but only 24% of the schools have a trained caretaker or pump attendant. Water Safety Plans (WSPs) are a new practice in Ethiopia. Therefore, at the point of baseline data collection the practice of WSPs is expected to be very limited.

Table 49 Management practices of school water supplies

	Tigray	Amhara	Oromia	BSG	SNNPR
% of schools who treat their water	35.3	26.3	12.5	38.5	70.0
% of schools who have done O&M for the water supply	100	30.8	0.0	77.8	0.0
% of schools who have a trained pump attendant/care taker	0.0	30.8	0.0	11.1	100.0

For health institutions, similar kind of national minimum standard for the service levels in health facilities has not been developed as for schools. On average, out of the 52 health facilities surveyed, only one-fourth (25%) had access to improved water supply sources. Table 43 below shows the situation of the surveyed health facilities within the woredas surveyed in the five project regions.

Table 50 Health facilities with access to improved water sources (%)



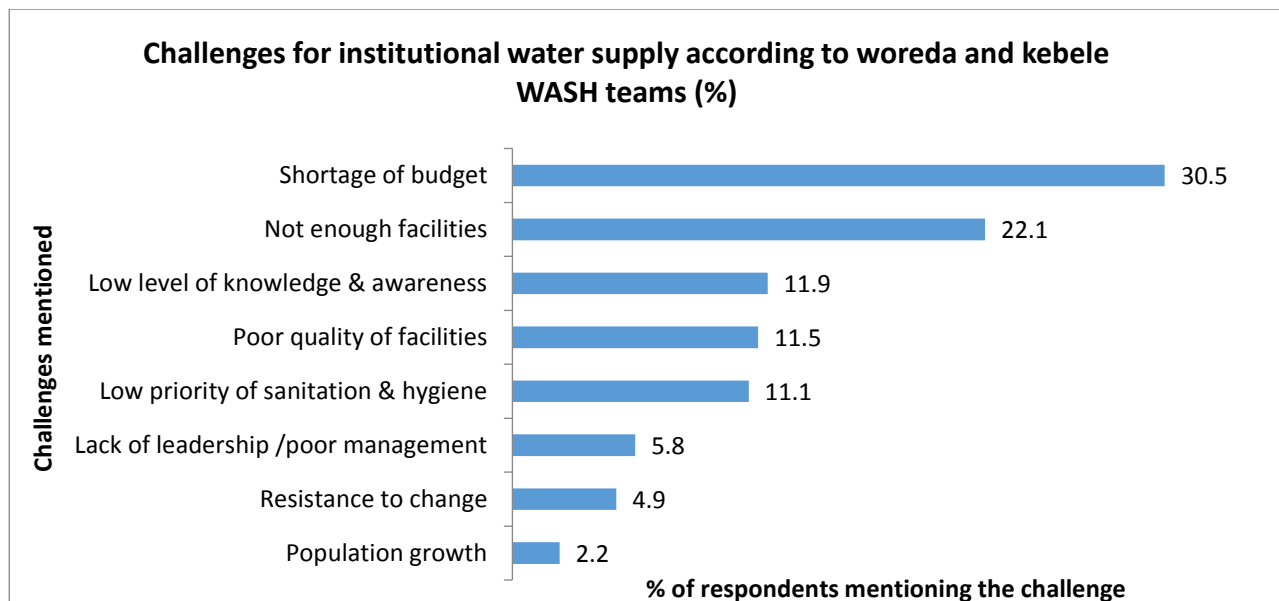
During the time of the visit, 69.2% of the visited health facilities reported that their water point was functional during the visit. Table 51 below table presents some indicative information on the O&M status in the health institutions visited.

Table 51 Water management practices in health institutions surveyed

	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
% of health facilities who treat their water	50.0	35.03	22.2	12.5	12.5	28.8
% of health facilities who have done O&M for the water supply	0.0	40.0	50.0	33.0	33.3	38.5
% of health facilities who have a trained pump attendant/care taker	0.0	20.0	0.0	0.0	0.0	7.7

In terms of barriers and challenges for achieving good water supply status at schools and health institutions, both kebele and woreda WASH teams reported that the main challenge is the shortage of budget. Other reasons mentioned were lack of facilities and poor quality of existing facilities. The most common challenges mentioned are presented in table 52 below.

Table 52 Challenges mentioned for institutional water supply according to woreda and kebele WASH teams (%)

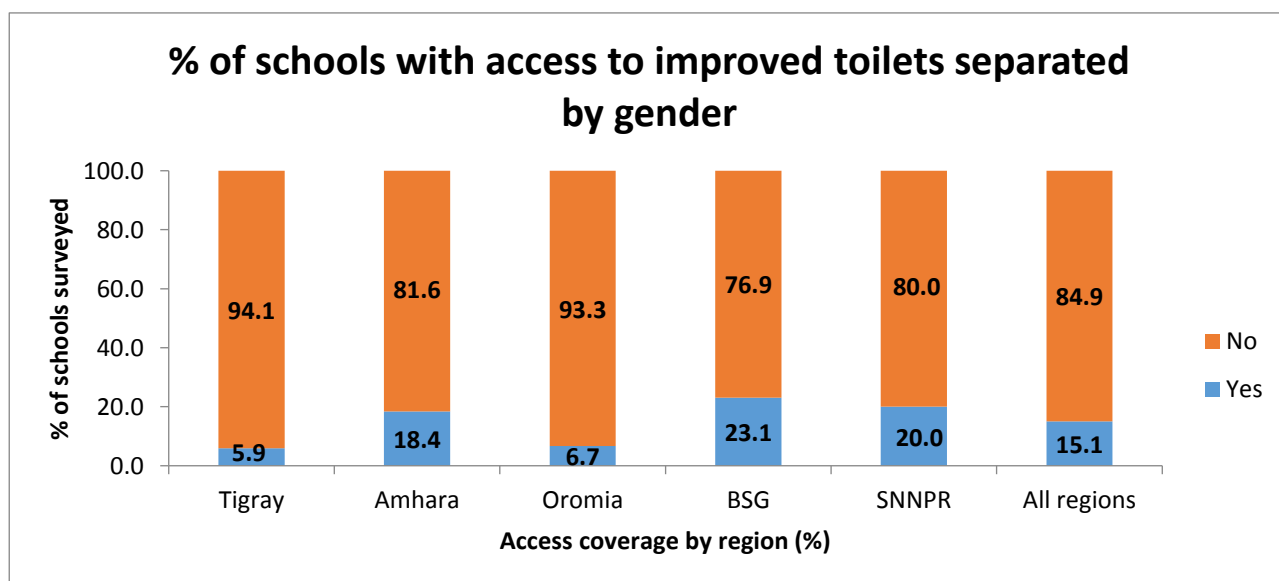


3.6.2 Sanitation and hygiene in institutions in surveyed areas

The upcoming National School WASH Implementation Guideline of the Federal Ministry of Education sets the national standard concerning access to sanitation facilities in schools. The guideline is not yet endorsed to be officially in force but the standards set in the guideline are used as a reference point in this baseline report. The upcoming standard has defined as student/toilet seat ratio. The student -toilet seat ratio should be one for every 25 girls and one for every 50 boys with physically separate facilities for girls and boys. Hand washing facilities should be always accessible with water available.

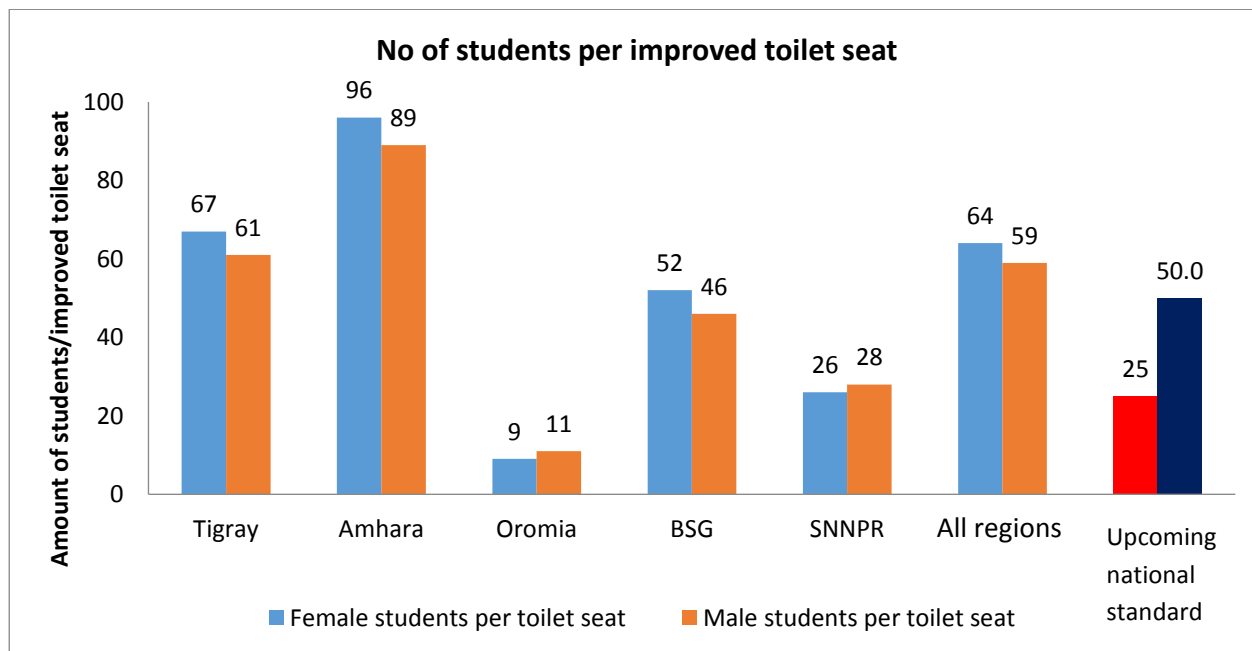
Only 15% of the schools visited had access to improved latrines that were separated for girl and boy students. However on average 51.6% of the visited schools had access to at least one improved toilet block, but not separated by gender. The regional figures are presented below.

Table 53 Schools with access to improved latrine separated by gender



In those schools where improved latrines are available, the student per toilet seat ratio is still far from the upcoming national standard especially in terms of the female access to toilet. For females the average student/toilet seat ratio in surveyed schools was 64, while the national standard is 25 students per toilet seat. For male students, the average from all COWASH regions was found to be 59 students per toilet seat which is already quite close to the national standard of 50 students per seat.

Table 54 Student per toilet seat ratio in surveyed schools



Sanitation situation of the schools was observed by the enumerators on site. Based on the observation, the actual sanitation and hygiene status of the schools in terms of usage, cleanliness, easy access and hygiene facilities looked as follows. Only 45.8% of the toilet blocks were observed to be in use, while 76% of them were considered open for use¹⁷. For persons with disabilities, only 21.1% of the toilet blocks were observed to be accessible¹⁸. None of the schools visited had a toilet block with handwashing station with water and cleaning agent available.

Table 55 School toilet block observation results

% of school toilet blocks observed are:	Total
In use (visible signs of use)	45.8
Open for use (not locked)	76.0
Clean (no feces on the floor)	58.06
Accessible for persons with disabilities	21.1
Proper physical structure	18.5 ¹⁹
Toilet block with urinal	4.0
Toilet block with handwashing station	11.3
Handwashing station with cleaning agent available	0.0
Handwashing station with water available	0.0
Handwashing station with water and cleaning agent	0.0
With water available inside the toilet for personal hygiene and cleaning	4.2

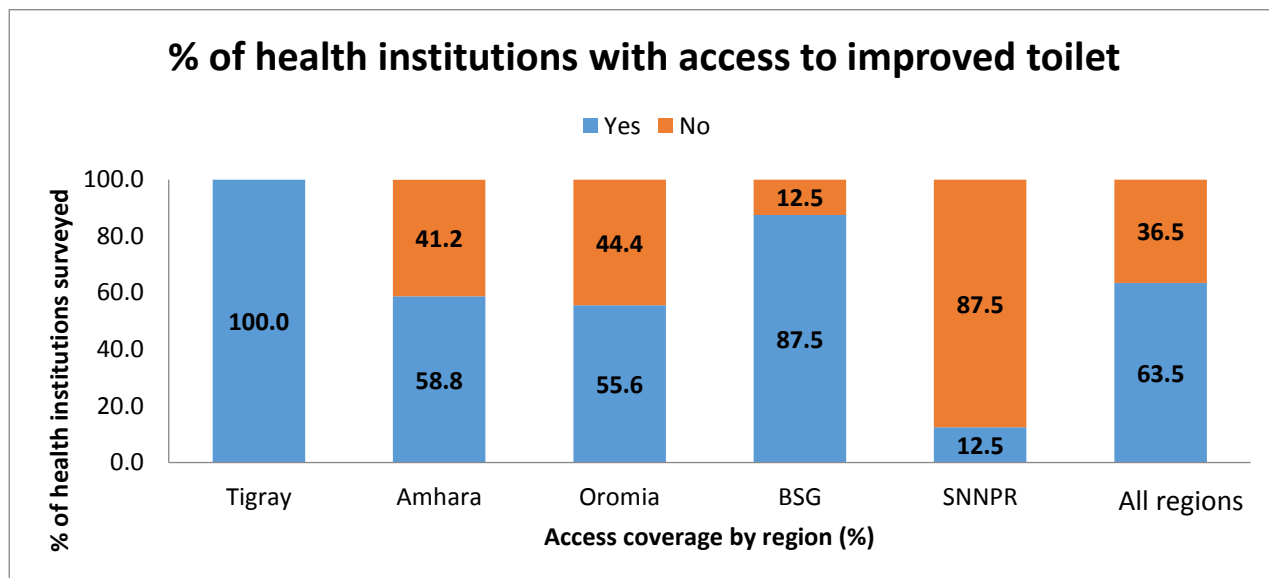
¹⁷ Open for use means facility is not flooded or locked, or key is provided and observer is able to see inside

¹⁸ Accessible for persons with disabilities means there is a wheelchair access, handles for support, water available to flush the toilet

¹⁹ 18.05% of toilets inspected had a proper door in place and gives adequate privacy

With regards to health facilities with toilets, 63.5% of the health facilities visited had access to improved toilets. However, only 6.0% of those facilities had separate toilet blocks for female and male staff and patients. Therefore, the actual figure for access to improved toilet in health facilities remains at only 6.0%

Table 56 Percentage of health institutions with access to improved toilet



The toilet situation observed was much better in health institutions than at schools. It was observed that 96.8% of the toilet blocks were having visible signs of use and 67.7% of them were considered clean. Besides, 15% of the toilet blocks had a handwashing station with water and cleaning agent available.

Table 57 Toilet block observation results in health institutions

% of health institution toilet blocks observed	Total:
In use (visible signs of use)	96.8
Open for use (not locked)	90.3
Clean (no feces on the floor)	67.7
Accessible for persons with disabilities	35.5
Proper physical structure	45.0 ²⁰
With urinal	6.4
With handwashing station	38.0
Handwashing station with cleaning agent available	15.0
Handwashing station with water available	69.0
Handwashing station with water and cleaning agent	15.0
With water available inside the toilet for personal hygiene and cleaning	17.06
Possibility to safely dispose septic waste inside the toilet	32.0

The main challenges for achieving sanitation and hygiene related targets in institutions were very similar to the challenges mentioned for water supply. Based on the interviews of schools, health institutions, woreda WASH teams and kebele WASH teams, the main barriers for institutional WASH were: lack of funds, lack of knowledge and awareness, not enough facilities to meet the needs of the institutions and low priority of sanitation and hygiene.

²⁰ 45% of the toilet blocks visited had a proper door in place and gives adequate privacy

3.6.3 Menstrual hygiene management in schools

Menstrual hygiene management is decisive for the health and dignity of the adolescent girls. Most importantly, menstrual hygiene management will contribute for girls at the age of puberty staying at school and minimizing absence from their education due to menstruation.

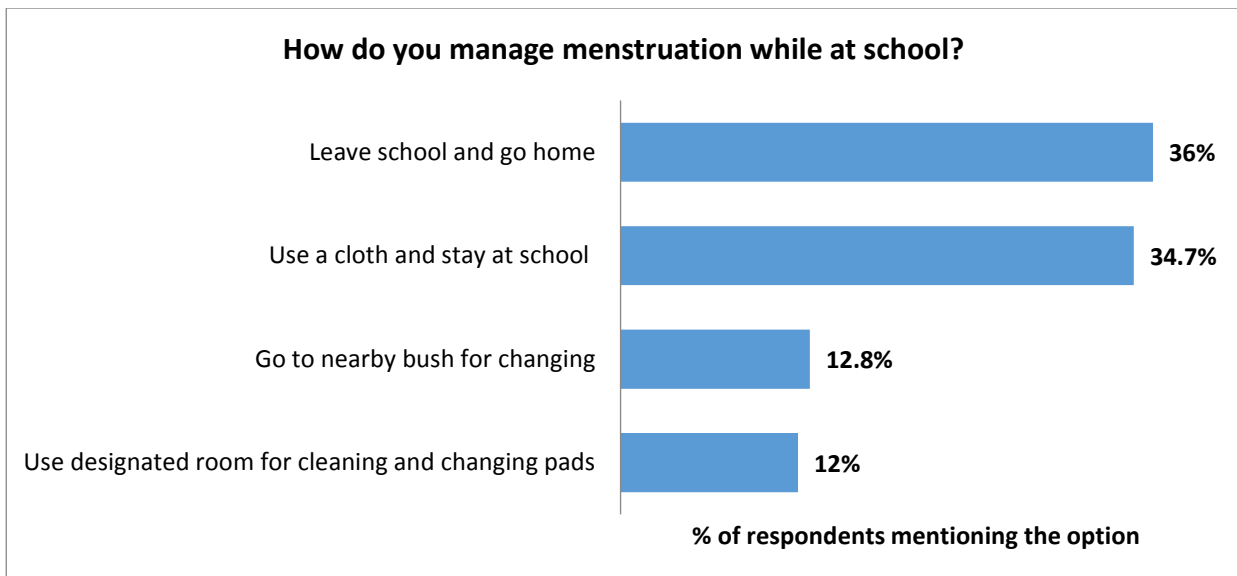
The starting point for better facilities is the understanding of the concept of menstrual hygiene management among the institution heads who may not have good background knowledge on the topic. When asked about the awareness of the most important aspects of menstrual hygiene management, school heads reported the followings: Cleanliness of the toilet (26.0%), Good sanitation facilities (25.0%), Hand washing facilities (20%), and solid waste management (10.7%)

This shows relatively good understanding that the state and cleanliness of toilets are playing a key role in creating a safe environment for the girl student to handle their menstruation while at school. However, no one managed to mention other key aspects such as safety of the toilet facilities (separated toilet blocks for girls and boys, door that can be closed, privacy, etc.), ability to wash inside the toilet or provision of sanitary pads.

Due to the sensitive nature of the topic, a specific key informant discussion was held with a group of 5 girl students in each surveyed school on their menstrual hygiene management.

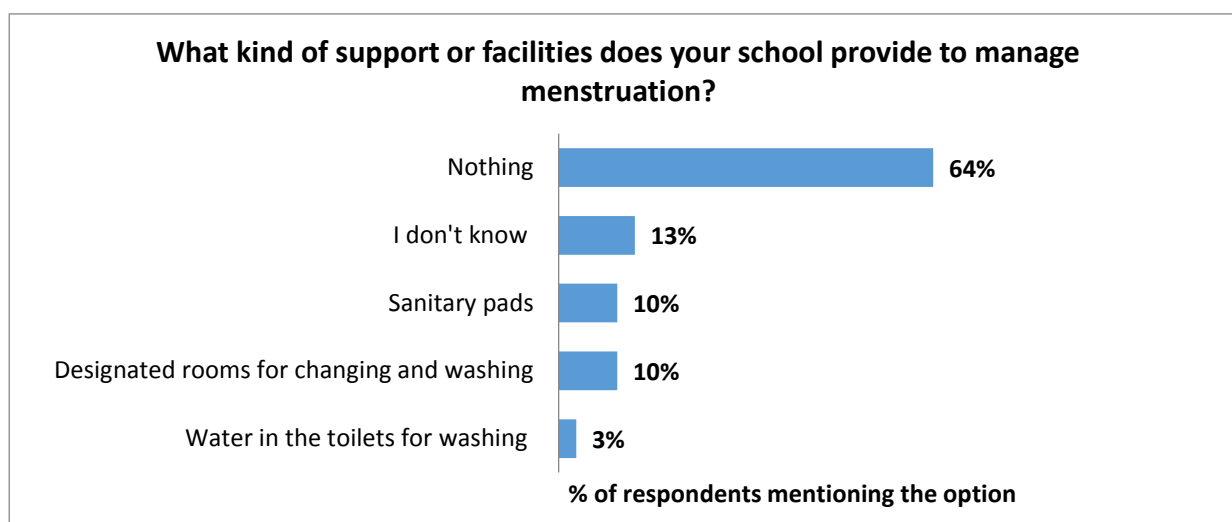
The data shows that 36% of the girl students reported that if they start menstruating while at school they would leave school and go home. This is a worrying result and need to be tackled through better facilities and awareness raising. Nearly 35% of the girls responded that they will protect their clothes by wearing a cloth which is not hygienic nor comfortable for them as it may cause bad odor. Only 12% of the girls say they have a designated room at school where they can comfortably change their pads and wash themselves. These 12% of the respondents where designated rooms were available were from Amhara or Tigray regions.

Table 58 Menstrual hygiene management while at school



It was found out that 64% of the girl students mentioned that currently their schools do not provide any kind of facilities or support to manage their menstruation. A very small percentage of the girl students (10%) reported that their schools are already providing sanitary pads or access to designated room for washing and changing. However, the survey didn't assess the sustainability of the pads provision in the schools visited.

Table 59 Support provided by schools for menstrual hygiene management



Receiving factual and neutral on menstruation is important to manage different kinds of false beliefs and misinformation on menstruation and puberty. 73% of the girl students mentioned that they had received information on menstruation before. According to the girls, the main source of information about menstruation for the girls have been the teachers in the schools. About 70% of the respondents mentioned their teachers as a source of information while only 12% told having received information from a family member.

Asked about recommendations on what schools could do to support menstrual management, the most common answer was providing pads (27%) followed by arranging designated room for cleaning and washing during menstruation (26%). These answers support the assumption that having clean and safe sanitation facilities at schools are indeed in a key role in preventing dropping out from school due to menstruation.

Table 60 Information received on menstruation

Have you ever received information on menstruation (%)?						
	Tigray	Amhara	Oromia	BSGR	SNNPR	Total:
Yes	83	76	85	43	58	73
If yes, from where (%)?						
Teacher	60.5	81	50	68	82	70.4
Family members	18.5	9	20	5.5	0	12
Friends and other people	21	10	28	26.5	9	16.4
Media	0	0	0	0	9	0.8
Don't remember	0	0	2	0	0	0.4

Table 61 Recommendations for menstrual management in schools

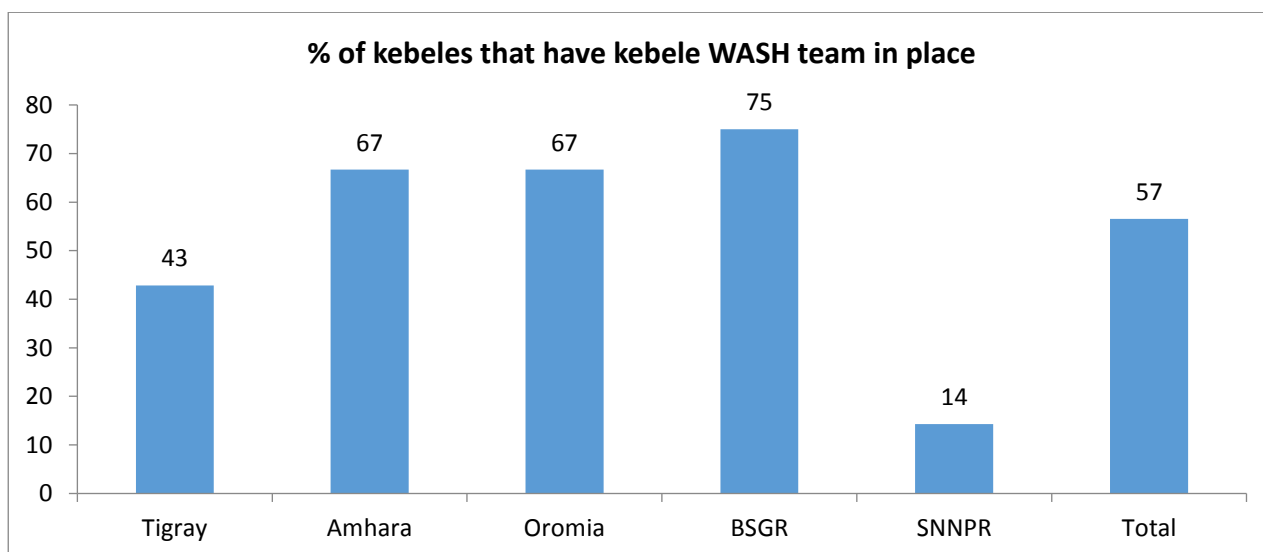
What do you recommend for better menstrual management in schools (%)?						
	Tigray	Amhara	Oromia	BSGR	SNNPR	Total:
Arrange designated room for cleaning and changing	25	32	25	18	25	26
Organize awareness raising	26	10	25	19	18	18
Provide pads	7	31	32	25	27	27
Teach how to prepare pads	37	5	16	12	24	15

3.7 WOREDA AND KEBELE LEVEL FINDINGS

Twenty-four woreda administrations and 46 kebele administrations were interviewed during the baseline survey on a range of WASH related issues: planning, implementation and challenges they face with their WASH sector works. As a sector, WASH sector requires close coordination and cooperation between the different WASH sector offices namely water, education, health and finance. WASH sector coordination in woreda and kebele level should be based on the WASH teams.

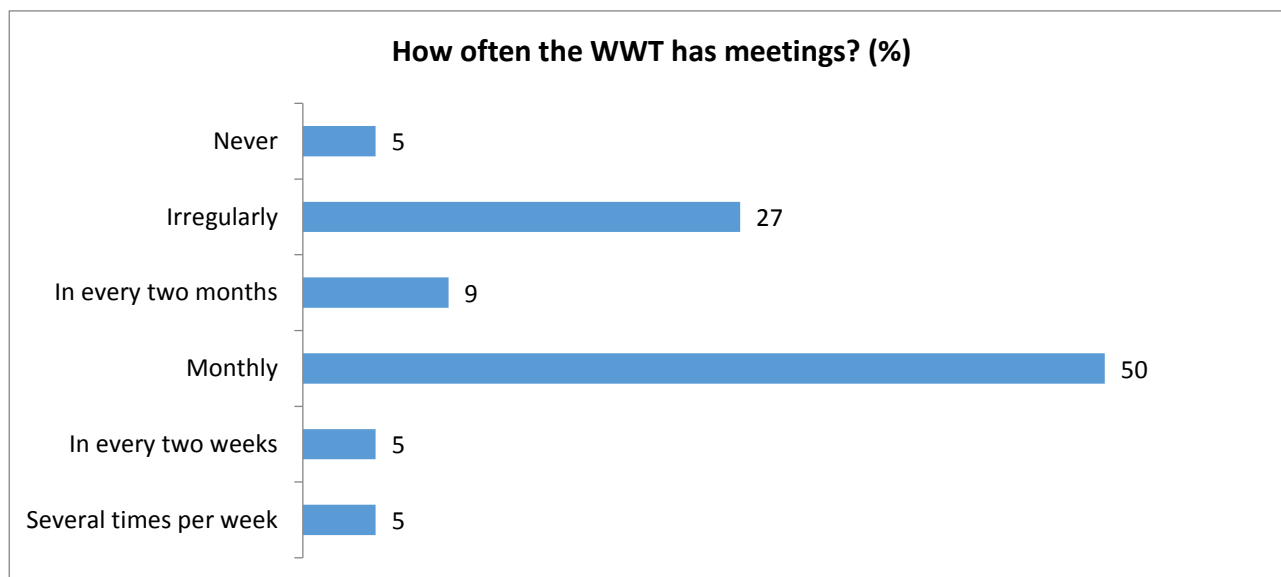
All of the woredas visited had their woreda WASH teams established (100%). In kebeles visited, 57% of them had a kebele WASH team in place.

Table 62 Kebele WASH teams established



In woreda level, it was reported that 50% of the woreda WASH teams meet monthly. However, 27% of them meet irregularly. This data is based on the responses of the woreda WASH team members. The data was not cross-checked with the minutes of meetings. In addition there is no national standard when and how often the WWTs should be meet.

Table 63 Regularity of woreda WASH team meetings



4 WAY FORWARD

The analytical scope of this baseline survey report has been descriptive focusing on providing a broad understanding of the WASH status on the COWASH working areas based on cross sectional data. The more in-depth analysis on the possible changes brought by the project activities are then to be analyzed after the endline data has been collected.

However recommendations of way forward were identified already at this stage. Major findings that would require further analysis and possibly targeted activities relate to the confidence and role of women in WASH management, status of menstrual hygiene management in schools and the status of institutional WASH.

The results concerning the confidence and role of women in their communities (52.3% of women responded they would not have the confidence to accept WASHCO leadership position such as a chairperson or cashier even if elected), indicate that targeted activities are needed in order to encourage more women to take leadership roles in their communities in WASH management despite the lack of formal education. This require awareness raising efforts both at community and woreda level to make the key stakeholders aware the WASHCOs can responsibly manage the water services even if their level of formal training is very low. The key is to engage women to the scheme management practices and provide them access to information, as they are after all the primary users of the facilities daily and thus are in a key role in observing possible environmental or management level risks for example.

36% of the girl students interviewed reported that if they start menstruating while at school, they would leave school and go home. This level of absenteeism due to menstruation is having impact to the learning of the adolescent girls and must be tackled through improved, safe and private facilities for menstrual hygiene management during the school days. The girls themselves gave very good recommendations for action such as arranging designated rooms for washing, organizing awareness raining, providing sanitary pads and even teaching the girls how to prepare pads themselves. COWASH FTAT will ensure these recommendations are brought to the attention of the relevant stakeholders in the regions.

Even if the survey taken at the school and health center level was not statistically representative, the access coverage in terms of water supply and sanitation facilities in schools and health facilities seemed to be clearly lower compared to the access coverage observed at community level. It is important to find ways to accelerate WASH development at the level of institutions as WASH improvements at schools contribute especially to improvement of girls' school attendance rates especially after puberty.

Despite the pre-testing the questionnaire section aimed to measure attitudes towards women, persons with disabilities and other vulnerable groups in WASH management and use of WASH services didn't provide the data needed for the analysis. The enumerators observed a tendency where respondents were giving an answer that they possibly expected to be the correct answer instead of the answer necessarily reflecting reality. The research team took the decision that the data collected on the section covering the attitudes towards these groups and WASH management was not used in the final data analysis as it was considered biased.

Therefore more information is needed on the attitudes and beliefs on women, persons with disabilities and other vulnerable groups (such as groups of different ethnicity or religion, elderly people) and their role and inclusion to WASH management and use of services. It is important to know whether there are beliefs in place concerning the right to use or access the water services of certain groups, in order to analyze and establish measures to change such attitudes.

A recommendation of the baseline survey team would be to conduct some focus group discussions to gather some data on these topics even with a very limited sample size. Endline survey team will then revise the methodology of the household survey concerning this section to gather more reliable representative data on this important matter.

ANNEXES

This section includes some demographic information about the HH sample for further information of the readers of this report.

Annex 1 Age distribution of household members by region

Age Distribution of the Household Members (%)						
Age Group	Region					
	Tigray	Amhara	Oromia	BSG	SNNPR	All regions
< 5	15.2	14.8	15.4	17.4	14.0	14.9
5 - 9	15.2	14.3	19.2	16.0	18.3	15.5
10 - 14	15.9	16.1	17.3	14.2	16.5	16.2
15 - 19	12.4	11.6	9.5	11.6	10.2	11.3
20 - 24	7.2	6.3	4.9	6.4	5.2	6.1
25 - 29	5.4	7.0	6.4	7.7	7.0	6.8
30 - 34	4.5	5.3	5.6	6.2	6.1	5.4
35 - 39	5.5	7.3	6.7	7.6	5.9	6.9
40 - 44	4.3	5.1	4.4	3.6	3.8	4.7
45 - 49	4.8	4.5	4.4	3.4	4.0	4.4
50 - 54	2.9	2.4	2.8	2.0	2.6	2.5
55 - 59	2.0	2.0	1.3	1.3	1.8	1.9
60 - 64	1.6	1.3	0.8	1.1	1.8	1.3
65 - 69	1.4	0.6	0.6	0.5	1.0	0.7
70 - 74	0.8	0.8	0.3	0.4	0.6	0.7
75 - 79	0.6	0.2	0.1	0.2	0.4	0.3
80+	0.2	0.2	0.4	0.3	0.6	0.3

Annex 2 Household members with a disability by the type of the disability by region

	Tigray (%)			Amhara (%)			Oromia (%)			BSG (%)			SNNPR (%)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Household members with disability:															
A lot of difficulties in seeing even with eye glasses	1.2	1.2	1.2	1.8	1.0	1.4	0.3	0.3	0.3	0.9	0.4	0.7	0.5	0.2	0.3
A lot of difficulties in hearing	0.6	0.2	0.4	0.2	0.1	0.1	0.2	0.4	0.3	0.5	0.3	0.4	0.1	0.1	0.1
A lot of difficulties in walking or climbing steps	0.8	0.2	0.5	0.3	0.4	0.3	0.5	0.3	0.4	0.5	0.6	0.6	0.5	0.5	0.5
A lot of difficulties in washing or getting dressed by the	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.2	0.0	0.0	0.0
A lot of difficulties in remembering	0.0	0.1	0.0	0.2	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A lot of difficulties in understanding or talking/speaking	0.0	0.1	0.1	0.2	0.0	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.0	0.1	0.1
Use any assistive devices (crutche, wheelchair/artificial li	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Others(epilepsy, paralysis or leprosy)	0.2	0.2	0.2	0.3	0.1	0.2	0.0	0.0	0.0	0.1	0.6	0.3	1.0	0.4	0.7
More than one health problems	3.0	3.9	3.4	1.7	1.9	1.8	2.0	1.6	1.8	1.0	2.1	1.6	0.4	0.7	0.5
No health problem	93.7	93.5	93.6	95.2	96.2	95.7	96.8	97.0	96.9	96.3	95.6	95.9	97.1	97.3	97.2
Don't know	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	0.3	0.5	0.4
Refused	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

