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SHASHAMANE WOREDA WASH SUSTAINABLE DEVELOPMENT GOAL MASTER PLAN

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Executive Summary

This woreda WASH master plan contains vision and strategies of Shashamane woreda. This master plan aims for universal access to safe and sustainable water supply, sanitation, and hygiene services (WASH) to the whole population of Shashamane woreda by 2030. The master plan is framed within targets of the United Nations' Sustainable Development Goal 6 (SDG 6). The master plan provides strategy towards achieving the set goals and visions for WASH in the woreda. The master plan is a full package containing a detailed plan for water, sanitation and hygiene, and institutional WASH components. The plan has also allowed the woredas to know the status of their woreda and strategize on the means to achieve the SDGs.

The Joint Monitoring Program of the World Health Organization and UNICEF (JMP) is responsible for monitoring progress made towards meeting SDG 6. For water services, the JMP differentiates between safely-managed services (improved water source which is located on premises, available when needed and free from faecal and priority chemical contamination); basic services (improved water source, provided collection time is not more than 30 minutes for a roundtrip including queuing); limited water services (improved water source for which collection time exceeds 30 minutes for a roundtrip including queuing) and unimproved water services (water source from an unprotected dug well or unprotected spring or directly from a river, dam, lake, pond, stream, canal or irrigation canal).

The JMP defines sanitation and hygiene services with respect to whether people access safely managed (improved with safe treatment), basic (improved private facilities), limited (shared with multiple households), or unimproved sanitation services or practices open defecation.

The JMP separately defines WASH for schools and health care facilities. For water there is basic (improved source available on premises), limited (improved source within 500m), and no service (no water source or unimproved source). For sanitation there is basic (improved, sex separated, private, with menstrual hygiene facility, accessible to people with disability), limited (improved facility), and no service (unimproved or no sanitation facility). For hygiene there is basic (hand washing facility with soap and water), limited (missing either soap or water and not available on point of care), and no service (no or non-functional hand washing facilities).

Shashamane Woreda is located in the West Arsi Zone of Oromia Regional State, Ethiopia. Administratively, the woreda has thirty-seven (37) rural and no urban kebeles. The total population of the woreda is 297,646. The annual population growth rate of the woreda is 2.7%. Agriculture is the main source of household income in the woreda, accounting for 95% of the total population livelihood, mostly mixed farming.

Water supply technologies in Shashamane include hand-dug wells, shallow wells with hand pumps, deep wells with distribution, on-spot springs, and spring with distribution. There are 132 schemes in the woreda, of which 24 are non-functional (non-functionality rate 18%). The SDG plan estimates that currently 1% of the woreda population has access to safely managed service and 18% to basic service and 81% of the woreda population has no access to water. Challenges include:

- Together, the water schemes have the potential to serve about 56,130 of 297,646 population of the woreda (19%). This is because of lack of sufficient fund for construction of new schemes and distribution systems
- At the time of the baseline, 24 rural water schemes were not functioning. This is because of low construction quality, lack of budget for maintenance, poor scheme management, and limited availability of spare parts.
- Only an estimated 1% of the woreda population have access to safely managed services. This is because lack of interest in household connection and shortage of water even at water points
- Water resource availability is not uniform throughout the woreda. The groundwater level drops during dry season causing scarcity. In addition, there is decrease in yield of springs because of deforestation
- WASHCOs serve on voluntary basis and are not getting sufficient support from woreda.

The most common sanitation facilities in Ethiopia are unimproved latrines, improved latrines, either with emptying or sewerage (off-site treatment) or in situ treatment. These facilities can be private (serving a single household), shared (serving 2-10 households), or communal (serving more than 10 households). In Shashamane, there are private and shared improved household pit latrine within situ treatment and private and shared unimproved latrines. The total number of reported improved latrines amounts to 28,793, covering 49% of the population, and the number of unimproved latrines amounts to 18,756, covering 34% of the population, with 17% of the population practicing open defecation. Challenges include:

- Limited awareness on the benefits of having improved latrine
- Limited follow-up after the ODF certification. Once declared ODF, most villages fall back to old habits and start open defecation practices.
- There are no households with a handwashing facility.
- Lack of coordination between extension workers and health centres. Professional support to extension workers is very low.

There are currently 78 schools and 45 health care facilities in the woreda. In Shashamane, 75 of the schools do not have hygiene facilities, 47 do not have sanitation facility and 50 do not have water facilities. 35 of the health care facilities have no water service, 16 of the health care facilities have no sanitation facilities, 23 health care facilities were reported to have no handwashing facilities, and 38 of the health care facilities were reported to have no waste management facilities. Main challenges include:

- Even though most schools have sanitation and hygiene facilities, they do not have separate latrines for boys, girls, and teachers as required in the criteria. These and other characters like privacy or accessibility for disabled users prevent them from having basic WASH service.
- Finance does not allocate a budget to health offices for construction of its own supply of water. Consider water office as responsible for provision of water to all.
- There is no specific budget allocated from the woreda to schools for WASH activities. Schools are expected to improve infrastructure from their own income like farming and community contribution.

Shashamane Woreda have set the vision of achieving 100% coverage with at least basic water supply, sanitation, and hygiene service in rural and urban areas. This is a big step up from the current 19% of people served with at least basic services for water, 49% of people served with basic sanitation services, and 0% of people served with hygiene services.

The woreda has also set the vision of achieving 100% coverage with basic water, sanitation, and hygiene services for all schools and health care facilities by 2030. This is a big step up from the current water, sanitation, and hygiene service of 28%, 37%, and 0% respectively in the schools and water, sanitation, hygiene, and waste management service of 22%, 0%, 0%, and 16%, respectively, in health care facilities.

Going from 1% to 30% safely managed service and 100% at least basic waster service by 2030 requires that additional 342,872 people have access to at least basic service and 104,637 people have access to safely managed service. Strategic directions are rehabilitation of broken-down schemes, construction of new schemes, and sustaining these services through establishment, legalization, and strengthening of WASHCOs and waterboards, tariff setting and revenue collection, strengthening spare part supply and preventive maintenance services, water resource protection, and addressing human and financial resource constraints at woreda level.

Going from 49% sanitation services to 100% at least basic services by 2030 requires that additional 31,013 households construct their own latrines, and 18,570 households that currently have unimproved latrines upgrade to improved latrines. Since the construction of sanitation and hygiene facilities is the responsibility of households, the main strategy is successful and sustainable implementation of the CLTSH (1055 villages to be triggered), and sanitation marketing approach will require strengthening of the Woreda Health Office capacity and performance.

Strategies to achieve 100% at least basic WASH service in institutions are construction of adequate WASH facilities, and ensuring these facilities are sustained in all of the facilities. The woreda should increase community participation, work on WASH promotion, and increase attention to monitoring and support to institutional WASH from the Woreda Health Office and Education Office.

Estimated required costs to achieve the vision by 2030 are costs for Capital Expenditure (CapEx), Capital Maintenance Expenditure (CapManEx), Operation and Minor Maintenance Expenditure (OpEx), and Direct Support Costs (ExpDS). The total cost required for achieving 100% at least basic water service by 2030 is ETB 3.19 billion (84.77 million USD). The total cost required for achieving 100% at least basic sanitation and hygiene service by 2030 is ETB 11.91 billion (316.16 million USD). The total cost required for achieving 100% at least basic WASH service in schools by 2030 is ETB 94.8 million (2.5 million USD). The total cost required for achieving 100% at least basic WASH service in health care facilities by 2030 is ETB 126 million (3.36 million USD).

Endorsement of the Shashamane Woreda WASH SDG Master Plan

This woreda WASH SDG master plan is signed by the Woreda WASH Team, composed of representatives from the Woreda Water and Energy Resources Development Office, the Woreda Health Office, the Woreda Education Office, the Woreda Finance Office, and the Woreda Administration, to support implementation of water supply, sanitation, and hygiene services for the community and institutions.

The woreda WASH SDG master plan was developed with support from IRC WASH through the Directorate-General for International Cooperation (DGIS).

The following offices have endorsed the master plan with signatures and official stamps.

Signatures:

For Woreda Water and Energy Resources Development Office _____

For Woreda Health Office _____

For Woreda Education Office _____

For Woreda Finance Office _____

For Woreda Administration _____

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Abbreviations

BCC	Behaviour Change Communication
CapEx	Capital Expenditure
CapManEx	Capital Maintenance Expenditure
CLTSH	Community Led Total Sanitation and Hygiene
CWA	Consolidated WASH Account
DGIS	Directorate-General for International Cooperation
ETB	Ethiopian Birr
ExpDS	Direct Support Costs
GTP	Growth and Transformation Plans
HEP	Health Extension Program
HHs	Households
HSDP	Health Sector Development Plan
IEC	Information Education Communication
JMP	Joint Monitoring Program of the World Health Organization and UNICEF
MDG	Millennium Development Goal
MHM	Menstrual Hygiene Management
MoWIE	Ministry of Water, Irrigation, and Energy
NGOs	Non-Governmental Organizations
ODF	Open Defecation Free
OpEx	Operation and Minor Maintenance Expenditure
OWNP	One WASH National Program
SDGs	Sustainable Development Goals
SLTSH	School Led Total Sanitation and Hygiene
SNNPR	Southern Nations, Nationalities and Peoples' Region
TSEDU	Total Sanitation to End Open Defecation and Urination in Ethiopia
WASH	Water supply, Sanitation, and Hygiene
WASHCOs	WASH committees
WFECO	Woreda Finance and Economic Cooperation Office
WHO	World Health Organization
WWERDO	Woreda Water and Energy Resources Development Office
WWT	Woreda WASH Team

1. Introduction

After the Millennium Development Goal (MDG) period, which delivered improvement in access to WASH services, the Sustainable Development Goals (SDGs) were developed with the aim of ensuring sustainable water, sanitation, and hygiene services for all. Ethiopia achieved the water component of the MDGs by halving the proportion of the population without access to improved water services but did not achieve halving the proportion of the population without access to improved sanitation. The drinking water target of the SDGs (SDG 6.1) is, “By 2030, achieve universal and equitable access to safe and affordable drinking water for all”. The sanitation and hygiene target (SDG 6.2) is, “By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations”.

The Government of Ethiopia has carried out several initiatives to improve WASH services in the MDG and SDG periods. Ethiopia has had two 5-year Growth and Transformation Plans (GTP): GTP I was completed in 2015 and GTP II ended in 2020. Achieving these plans required huge resources and interventions. These 5-year plans were at the national level with regions using them as a base to develop their annual and 5-year plans. GTP II, which covered the period from 2016 to 2020, had targets to provide 85% of the rural population and 75% of the urban population with improved water supply access and decrease non-functionality rates to 7%. These national plans did not include Operation and Minor Maintenance Expenditure (OpEx), Capital Maintenance Expenditure (CapManEx), and ExpDS that can ensure sustainability. Plans for water supply, sanitation, and hygiene were not addressed as integrated packages in these plans.

GTP II did not include sanitation, hygiene, and institutional targets. However, there is a health sector development plan (HSDP) developed by Ministry of Health. The plan includes an environmental hygiene section with a vision of increasing the proportion of households utilizing latrines from 20% to 82%, increasing the proportion of ODF villages from 15% to 80%, and increasing the proportion of households using household water treatment and safe storage practices from 7% to 77%. It is stated that hygiene and environmental health will be improved through the application of the Health Extension Program (HEP) packages designed to decrease communicable diseases caused by poor hygiene and sanitation practices.

There is also the Total Sanitation to End Open Defecation and Urination in Ethiopia (TSEDU) campaign developed jointly by the Ministry of Water, Irrigation, and Energy and the Ministry of Health in 2019. The main objective of the campaign is to eliminate open defecation and declare all woredas in Ethiopia ODF by the end of 2024. The campaign follows SDG targets and indicators.

As the GTP II period concluded in 2020, Ethiopia is now moving to a ten-year comprehensive plan called the Prosperity Plan. For WASH, the Prosperity Plan envisions at least 100% basic service by 2030 based on SDG indicators. Though not yet approved, the Prosperity Plan is also not a full package for WASH as it does not include sanitation and hygiene or try to meet full coverage.

Because the Prosperity Plan is not comprehensive for WASH, there is a huge need for a long-term, woreda wide WASH master plan. The main purpose of the woreda WASH SDG master plan is to address both access and sustainability. It is a full package containing a detailed plan for water, sanitation, and hygiene, as well as institutional WASH components. The plan helps to understand the woreda's WASH status and strategize how to achieve the SDGs.

The 10-year costed plan contains costs beyond building new infrastructure. It also includes mechanisms and costs for operation and maintenance, replacement, and direct support (monitoring, routine technical assistance, and training/retraining of service providers). The plan considers a variety of WASH service delivery models such as the commonly practiced self-supply, community managed, and utility managed service delivery models for water supply and community-led total sanitation and hygiene (CLTSH), school-led total sanitation and hygiene (SLTSH), and sanitation marketing approaches for sanitation and hygiene. The plan also helps to understand the costing gaps and henceforth uses them as evidence for resource mobilization.

The WASH SDG master plan is prepared and owned by the woreda WASH sector offices with technical support from IRC WASH through the WASH SDG consortium program funded by the Directorate-General for International Cooperation (DGIS) under the Dutch Ministry of Foreign Affairs.

1.1. The development of the woreda WASH SDG master plan

The woreda WASH SDG plan has been developed by the planning team drawn from district WASH sector offices of water, education, health, and finance.

To support the planning process, IRC WASH developed Microsoft Excel-based planning tools. The aim of the tools is to support the handling quantitative data systematically and support the strategic planning and costing process of going from the current service to the desired, as per the agreed vision. The tool supports planning and costing infrastructure needed over longer periods to provide universal services for all and planning for all necessary activities to sustain these services including operation and minor maintenance, capital maintenance, and direct support to service providers. An overview of the sheets included in the water, sanitation and hygiene, and institutional WASH planning tools can be found in Annex 1.

The planning process involved a series of workshops with coaching and evaluation activities in between by IRC WASH.

Workshop 1 (July 2019): In this workshop, the planning team was established from WASH sector offices, oriented on the SDG concepts, SDG WASH targets, and the master plan planning process, and had an introductory training on the water planning tool. There was also discussion on data requirements and timelines. The discussion was supported with the demonstration of similar activities from another program in the Amhara Region and the Excel planning tool. The woreda planning team is composed of WASH focal persons and planning experts from the water, education, and health offices, as well as planning experts from the finance office. The team is chaired by Woreda Finance and Economic Cooperation Office (WFECO) and co-chaired by Woreda Water and Energy Resources Development Office (WWERDO). The planning team agreed to be supported by the zone sector offices under the coordination of Zone Water and Energy Resources Development Department.

The planning team was responsible for collecting information and filling in the Excel planning tool by the next workshop. The planning team decided on a vision, collected data for the woreda information section, and selected a new infrastructure options to begin the planning draft after the first workshop was conducted. The team identified new infrastructure required to achieve full coverage and access to all by 2030, considering and providing attention to planning assumptions such as the number of users per scheme, the life span of water schemes, and the cost of water schemes.

Workshop 2 (October 2019): This workshop was scheduled to evaluate the status of data collection and provide additional training on using the Excel planning tool. The planning team reviewed the plan based on the vision and discussed challenges and questions about how to move up the service delivery ladder with improved services, sustainable access, and equitable provision of WASH services. The team agreed to achieve at least 100% basic access by 2030.

Workshop 3 (August 2020): This weeklong workshop was conducted to provide training on sanitation and hygiene and institutional WASH planning tools and provided refresher training on the water planning tool. The team also discussed the content of the narrative report for water, sanitation, and hygiene and institutional WASH following the proposed document outline. Accordingly, the planning team completed their SDG WASH master plans, including inputs to the content of the narrative report.

Workshop 4 (December 2020): This two-day validation and launching workshop included WASH stakeholders beyond WASH sector offices from the woreda, zone and region. The planning team from water, health and education presented their respective office plans. Participants suggested the approval of the plan by the management of each WASH sector office, the Woreda Cabinet Council, and the Woreda Council respectively after incorporating the comments to be used as a WASH roadmap for the woreda. The woreda WASH SDG plan has been developed by the planning team drawn from district WASH sector offices of water, education, health, and finance.

1.2. Outline of document

Following the general introduction of the woreda SDG master planning in Shashamane in this section, Section 2 introduces the main SDG service level definitions and national targets. Section 3 provides information on the woreda context. Section 4 presents an analysis of the current WASH situation in Shashamane related to water services, sanitation and hygiene services, and WASH in health care facilities and schools. Following this, the vision of the WASH situation in the woreda by 2030 is presented in Section 5. Section 6 presents strategic directions for going from the current situation, as presented in Section 4, to the vision, and as presented in Section 5. An analysis of the lifecycle costs for achieving the Shashamane WASH vision is presented in Section 7. Finally, a plan for monitoring and evaluation of the implementation of the plan is presented in Section 8.

2. National targets and SDG definitions

The Ethiopian government has given high priority to WASH in its development agenda. The Ministry of Water, Irrigation, and Energy leads the government's effort in water supply development in the country while the Ministry of Health leads with respect to sanitation and WASH in health care facilities. The Ministry of Education leads with respect to WASH in school. This section introduces the global and national WASH service ladders and targets. For this master plan, the SDG targets are used in planning.

2.1. Water service definition and targets

Water supply development priorities feature in the country's main development instrument, the GTPs. The JMP of the World Health Organization (WHO) and UNICEF is responsible for monitoring progress made towards meeting SDG 6. For water service, the JMP differentiates between safely managed services, basic services, limited water services, unimproved services and use of surface water.

Table 1: JMP indicators for water service

Ladder	JMP Indicator
Safely managed	Drinking water from an improved water source which is located on premises, available when needed and free from faecal and priority chemical contamination
Basic	Drinking water from an improved source, provided collection time is not more than 30 minutes for a roundtrip including queuing
Limited	Drinking water from an improved source for which collection time exceeds 30 minutes for a roundtrip including queuing
Unimproved	Drinking water from an unprotected dug well or unprotected spring
Surface water	Drinking water directly from a river, dam, lake, pond, stream, canal, or irrigation canal

As part of the two GTPs, the Ethiopian government has set norms and standards related to water service levels, differentiating between rural and urban water services. The goal of GTP II in rural areas was to ensure universal access in line with GTP I norms while reaching 85% of people with the GTP II standards. This includes supplying more water within a shorter distance and improving water quality (Table 2). Safely managed service is not included in GTP I or GTP II.

Table 2. Water service level standards according to GTP I and GTP II compiled from GTP documents

Category	Population	Water quantity (lpcd)		Accessibility			Water quality		Reliability	
		GTP I	GTP II	GTP I	GTP II	JMP (basic service)	GTP I and GTP II	JMP (basic service)	GTP II	JMP (basic service)
Rural	< 2,000	15	25	Within 1500m	Within 1000m	No more than 30 minutes round trip including queuing	In line with water quality standards of WHO	No faecal or priority chemical contamination	N/A	Available when needed
Category 5 town	2,000 - 20,000	20	40	Within 500 m	Within 250 m					
Category 4 town	20,000 - 50,000		50							
Category 3 town	50,001 - 100,000		60							
Category 2 town	100,001 - 1 million		80							
Category 1 town	> 1 million		100							

2.2. Sanitation and hygiene definitions and targets

The JMP defines sanitation and hygiene services with respect to whether people access safely managed, improved with on site or off-site safe treatment; basic, improved private facilities; limited, shared with multiple households; unimproved sanitation services; and practices open defecation.

Up to GTP II, there have not been specific targets for sanitation and hygiene in Ethiopia. GTP II states that there is a need to decrease communicable diseases caused by poor hygiene and sanitation practices. This will be done

through the application of the Health Extension Program. Table 3 and Table 4 show JMP indicators and Ethiopia's national indicators.

Table 3: National and JMP indicators for sanitation

Ladder	JMP Indicator	National Sanitation Indicators	Technology Type
Safely managed	Use of improved facilities* that are not shared with other HHs and where excreta are safely disposed in situ or transported and treated offsite.	Improved Sanitation Facility: A sanitation system that is safe and cleanable, sealed (with an appropriate lid and vent pipe) to discourage exposure to the flies, other animals, and the environment as well as promote dignity and privacy. Safe disposal** of human waste protects the quality of drinking water, enhances the safety of women and children, and promotes dignity and self-esteem.	Flush/pour-flush to a piped sewer system or septic tank, pit latrines, ventilated improved pit latrines, composting toilet, pit latrine with slab.
Basic	Use of improved facilities that are not shared with other HHs.	Onsite Sanitation: A sanitation system where human waste is contained either in a pit, chamber, vault, or septic tank.	Pit latrines, ventilated improved pit latrines, pit latrine with slab.
Limited	Use of improved facilities that are shared between two or more HHs.	Communal latrines: Communal latrines are located in or near housing areas and are used by the community - people living in nearby houses who have no household latrines.	Flush/pour-flush to a piped sewer system or septic tank, pit latrines, ventilated improved pit latrines, composting toilet, pit latrine with slab.
Unimproved	Use of pit latrines with no slab or platform, hanging latrines, bucket latrines, traditional pit latrine.	Basic/unimproved sanitation facility: A fixed point of defecation system that does not fully satisfy any of the indicators for improved sanitation facility.	
Open Defecation	On fields, forests, bushes, water bodies, or other open space.	Open defecation	

*Improved facility: Include flush/pour-flush, septic tank, or pit latrines, ventilated improved pit latrines, composting toilets, or pit latrines with slabs.

**Safe disposal: In the national context, if the facility is onsite, not emptied but not contaminating the environment, then it is considered safely managed.

Table 4: JMP indicators for hygiene

Ladder	Indicator	Technology type
Basic	Hand washing facility on premises + soap + water	Fixed or mobile, sink with tap water, buckets with taps, tippy taps, designated jugs, or basins. Bar soap, liquid soap, powder detergent, soapy water (excluding ash, soil, sand, etc.).
Limited	Hand washing facility on premises	Fixed or mobile, sink with tap water, buckets with taps, tippy taps, designated jugs, or basins.
No facility	No facilities	

2.3. Institutional WASH definitions and targets

National and JMP definitions for institutional WASH show significant differences. While the main components are similar, there is no standard for the service ladder at the national level. Table 5, Table 6 and Table 7 show sanitation and hygiene JMP indicators for schools and health care facilities separately.

Table 5: JMP water ladder for institutional WASH

	Schools	Health Care Facilities
Basic	Drinking water from an improved source is available at the school.	Water is available from an improved source on the premises.
Limited	An improved source (piped, protected well or spring, rainwater, packaged or delivered water).	An improved water source within 500m of the premises.
No service	No water source or unimproved source (unprotected well or spring, surface water).	Water is taken from unprotected dug well or spring, or surface water sources. Or an improved source that is more than 500m from the facility. Or the facility has no water source.

Table 6: JMP sanitation ladder for institutional WASH

	Schools	Health Care Facilities
Basic	Improved sanitation facilities at the school that are single-sex and usable (available, functional, and private), at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.	Improved sanitation facilities with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.
Limited	Improved sanitation facilities at the school that are either not single-sex or not usable	At least one improved sanitation facility, but not all requirements for basic service are met.
No service	Unimproved sanitation facilities or no sanitation facilities at the school.	Toilet facilities are unimproved (pit latrines without a slab or platform, hanging latrines and bucket latrines), or there are no toilets or latrines at the facility.

Table 7: JMP hygiene ladder for institutional WASH

	Schools	Health Care Facilities
Basic	Handwashing facilities with water and soap available	Functional hand hygiene facilities with water and soap and/ or alcohol-based hand rub available at point of care or within 5meters of toilet
Limited	Handwashing facilities with water but no soap available	Functional hygiene facilities available at either point of care or toilets but not both
No service	No handwashing facilities or no water available	No functional hand hygiene facilities are available at either point of care or toilets

The national definition for health centres and health posts and schools is presented in Table 8 and Table 9, respectively.

Table 8: National health facility WASH indicators

Health Institution	Water	Sanitation	Hygiene
Hospital and health centre	Running water in inpatient rooms, outpatient examination rooms, shower facility for delivery rooms.	Toilet access for inpatients.	Hand washing facility chemicals with soap or other disinfectants in all rooms.
		Toilet facility with hand washing for outpatients, considering persons with disabilities and full-term pregnant women.	
Health posts	Running water in delivery rooms and examination rooms.	Male/female separated VIP or improved latrine considering persons with disabilities and full-term pregnant women.	Hand washing facility with soap in the compound.
			Hand washing facility with soap in delivery and examination room and outpatient department (OPD).

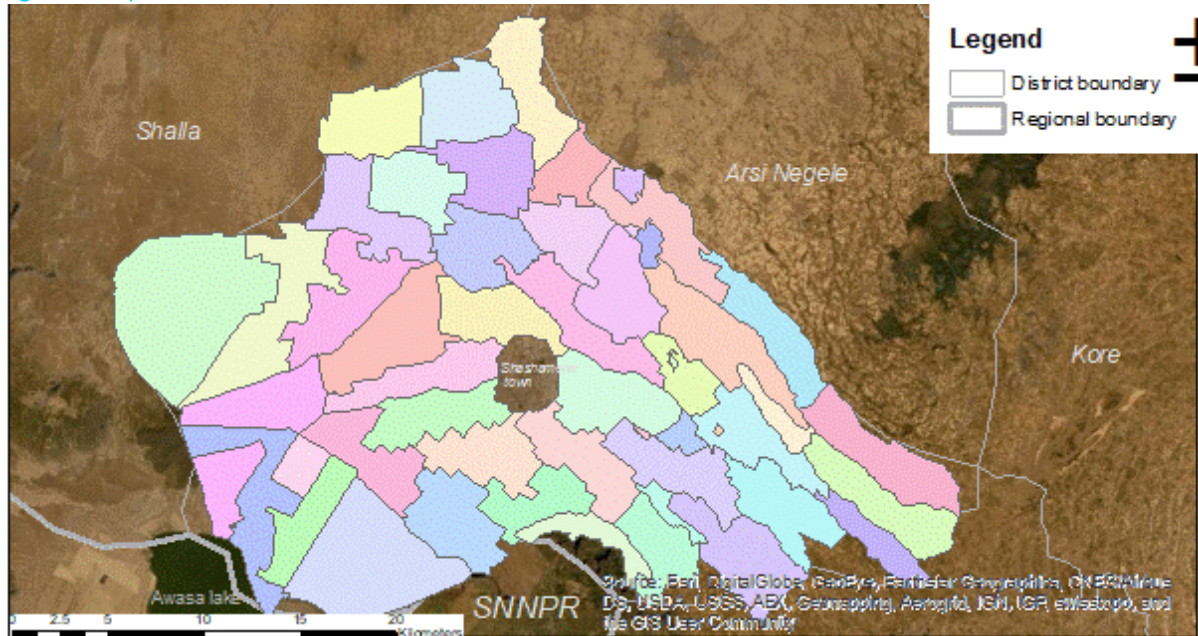
Table 9: National school WASH indicators

Parameters	Standard
Minimum package	Full package of WASH services (latrine, hand washing, menstrual hygiene management (MHM) facilities, urinals, drinking water fountains/taps).
Placement	Latrine for male and female students must be separated and placed in opposite directions.
	Latrine to student ratio should be one latrine stance for 50 girls and one for 75 boys.
Facility features	Latrines should provide adequate and separate access (male/female) to persons with disabilities both in accessing the latrine (ramp) and support mechanisms (handrail) for sitting or standing.
	Each latrine block should have a handwashing facility with soap or ash as a cleaning agent.
	Separate room for Menstrual Hygiene Management (washing, changing, and waste disposal).
	Adequate and safe water supply should be available in schools. There should be a drinking fountain or tap; at least one tap for 100 students.
Latrine stance ratios	One stance/cubicle per 50 girls and one toilet for female staff in rural schools.
	One stand/cubicle and one urinal per 75 boys and one toilet for male staffs in rural schools.
	In urban schools, the number of seats to student ratio should be one stance for every 25 girls and one toilet for female staff and one stance plus one urinal for every 50 boys and one toilet for male staff.
	At least one toilet cubicle, each should be accessible for staff, boys, and girls with disabilities; this includes level or ramped access, a wide door, and sufficient space inside for a wheelchair user or helper to manoeuvre, and the provision of support structures such as a handrail and toilet seat.

3. Woreda context

Shashamane Woreda is in West Arsi Zone of Oromia Regional State, Ethiopia. It encircles the capital town of West Arsi Zone, Shashamane town. Furthermore, it has borders with Shalla, Wondo, Kofale, and Negelle Arsi woredas, as well as the Southern Nations, Nationalities, and Peoples' Region (SNNPR). The woreda is located 250 km from Addis Ababa/ Finfinnee, the capital of Ethiopia. The woreda has a total area of 58,011 km² with an altitude range from 1685 to 2722 meters above sea level. Agroecologically, 27% of the woreda is classified as highland, 51% as midland and 22% as lowland.

Figure 1. Map of Shashamane Woreda



The woreda has several perennial and seasonal rivers and springs. In highland kebeles, groundwater is available at shallow depths which create opportunities to develop hand dug wells and shallow wells.

Administratively, the woreda is divided into thirty-seven rural kebeles. There are no urban kebeles in the woreda. Highland kebeles are found to the southeast of Shashamane, while lowland kebeles are found north and west of Shashamane.

There are currently two population data sets available in the woreda. For this plan, the Woreda Water and Energy Resources Development Office (WVERDO) used data from the Woreda Finance and Economic Cooperation Office (WFECO) while the Woreda Health Office uses population data collected by health extension workers. According to the WFECO data, the total baseline population of the woreda is 297,646 while the Woreda Health Office baseline population of the woreda is 281,247. As this is a difference of only 5.5%, we do not foresee major implications in using these two different population data sets.

Based on data from WFECO, the annual population growth rate of the woreda is 2.7%. The population density is five persons per km². There are 59,531 households (HH) in the woreda, with an average household size of five people.

The population of the woreda is predominantly dependent on agriculture, with 95% of the total population depending on agriculture as their main livelihood source. Based on data obtained from the Woreda Agriculture and Natural Resource Office, the economic activity for the majority of the communities is characterized by mixed farming (both crop production and livestock rearing). Maize, teff, and sorghum are the major crops grown in the woreda.

All kebeles in the woreda have mobile network access. There is road access to transport agricultural products to the market in either Shashamane or Kofele. There are more than 10 NGOs in the woreda supporting the rural population. The higher number of NGOs compared to other parts of Ethiopia is due to food security problem in lowland kebeles, the lack of basic services like water, climate variability and frequent drought, and diseases. Some NGOs work directly or indirectly on WASH. These have enabled the woreda to construct many water schemes and institutional WASH facilities. In addition, there is good coordination of interventions between

WASH stakeholders which ensures the synergetic effect of implementation and reducing the duplication of efforts.

4. Situational analysis

4.1. Water services

4.1.1. Water Infrastructure

In Shashamane Woreda, communities mainly rely on springs and both shallow and deep groundwater for their water supply. Water supply technologies include hand dug wells, shallow wells with hand pumps, motorized deep wells with distribution, on spot springs, and springs with distribution.

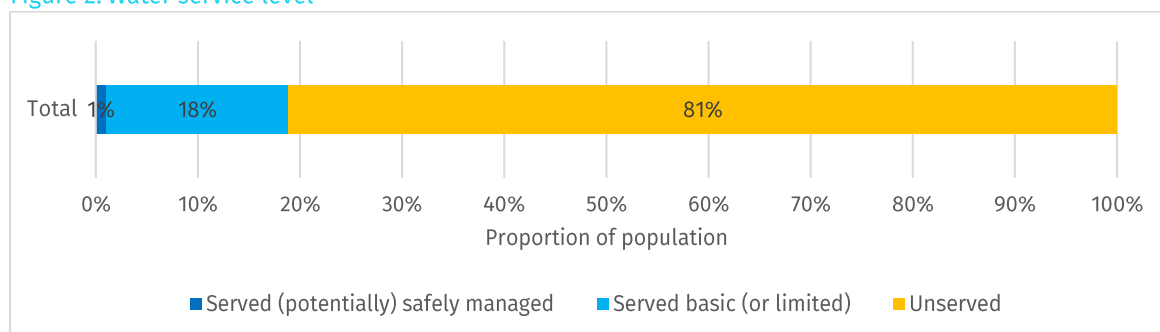
There are 132 schemes in the woreda, of which 24 are non-functional (18%). If a scheme is serving two kebeles, or if the scheme serves more than one woreda, it is divided by the number of populations served in the kebeles or woredas it currently serves which creates decimals on the number of schemes. Shallow wells can be found in the highland kebeles in the woreda's southeast. Many of the piped schemes serve multiple communities and multiple kebeles. This includes the following schemes:

- A spring with a gravity distribution scheme, serving up to 2,000 users from 3 kebeles (Turufe Wotera Elemo, Kerara Fillicha and Jigesu Korke)
- There are two rural piped systems with boreholes, each serving up to 5,000. Together these two schemes serve seven kebeles (Toga, Bulchana Deneba, Meje Dema, Kore Rogicha, Oine Chefo Umbure, Alache Harabate and Edola Burka) as well as people from the adjacent woreda
- A rural piped system with a borehole serving up to 9,000 from four kebeles (Turufe Wotera Elemo, Aredano Shiufa, Wotera Shegule, and Ilala Korke)
- A non-functional spring scheme with distribution with the potential to serve 13,000 people from three kebeles (Kerara Fillicha, Bute Fillicha and Jigesu Korke)

4.1.2. Water service level

Based on the currently functional schemes in each kebele, the number of people that these schemes can serve with safely managed and basic water services, and the number of people per kebele, the SDG plan estimates that currently 1% of the woreda's population has access to (potentially) safely managed service and 18% to basic service . Figure 2 shows an overview of the service level for Shashamane Woreda. Overall, 81% of the woreda population has no access to improved water services. Nine kebeles (Kore Borojota, Deleti Calalaka, Chabi Dida Gnata, Bura Borama, Tatesa Dadesa, Bute Fillicha, Kubi Guta, Chefa Guta, and Faji Gole) have no improved water facilities (100% unserved).

Figure 2: Water service level



4.1.3. Water service delivery models

The main service delivery model in Shashamane Woreda is community management which are managed by WASHCOs. There are also multi-village and multi-kebele schemes managed by water boards (WASHCOs drawn from the kebeles) and caretakers. WASHCOs are supposed to consist of 5 members, including at least 50% women, with a chair, a secretary, a cashier, an auditor, and a member. They are elected from the user community and work voluntarily. WASHCOs are responsible for tariff collection and day-to-day operation and maintenance of schemes.

The service authority (WWERDO, Zone Water and Energy Resources Development Department, and Regional Water and Energy Resource Development Bureau) are the service authorities supporting the service providers.

The service authorities are responsible for new water scheme construction, major maintenance, and rehabilitation. The responsibilities are shared between the woreda, zone, and region based on scale.

4.1.4. Service provider performance

WASHCOs are responsible for the operation and maintenance of schemes with support from the woreda. The Regional Water and Energy Resources Development Bureau has recently enacted a WASHCO legalisation proclamation, but there is no legalization process at this moment.

WASHCOs are volunteers and prioritize their daily routines. As a result, monitoring of caretakers, water point attendants, and cashiers, and the timely reporting of maintenance and household connection requests are all weak. It is difficult to hold WASHCO members accountable as they are volunteers. They also do not meet regularly to evaluate their performance.

4.1.5. Systems strength at woreda level

The WWERDO receives some, primarily technical, support from the zone and region, but it is reported to be inadequate. Technical support mainly comes from the zone, but this can take a while as the zone struggles with an inadequate number of skilled staff, lack of machinery like service rigs and cranes, and a lack of budget, among other challenges.

The WASHCOs do not receive continuous support and follow-up from the WWERDO. When WASHCOs are established, they receive training on scheme management based on the regional guidelines. The woreda provides support on a demand basis and cannot provide regular support due to budget limitations. The biggest challenge, in addition to budget limitations, is transportation. The woreda has many rural pipe systems that cover multiple kebeles, but the lack of transport limits the support it can provide. Woreda motorcycles, the available means of transportation, are very old and in need of maintenance. It is difficult to use public transport while carrying hand tools and then needing to walk long distances after the main road. Of the 132 schemes, six handpumps and three on spot springs do not have WASHCOs, hence, no tariff is collected. But, despite the existence of a WASHCO, the tariff collected at these schemes is not sufficient for maintenance. Therefore, at both schemes with and without WASHCOs, if there is a requirement for maintenance, the community contributes on an ad-hoc basis.

The budget allocation for rural water at the woreda level is very limited. The woreda does not have sufficient budget for Capital Maintenance Expenditure (CapManEx) and there is a financial gap between needs and current allocation to Direct Support Costs (ExpDS), mainly covering salary costs. Findings from direct support cost estimation in 2019 show that the current estimated expenditure on direct support is ETB 885,013 (23,500 USD), which is 32% of the required (desired) amount of ETB 2,791,481 (74,123 USD).

Users discuss the rate of tariffs and the use of tariff revenues with WASHCOs. The Regional Water and Energy Resources Development Bureau does the tariff study at the regional level; hence, there are problems in setting appropriate tariffs based on the context of the woreda and the community. If expenses exceed income, a new tariff study is recommended. If the audit finds a lack of proper tariff collection, a tariff collection campaign is recommended.

In Shashamane Woreda, the GTP II plan links to the zonal level GTP II WASH plan, which in turn is linked to regional and national (multi-annual) targets. The plan only considers geographical considerations (highland and lowland) to cover all kebeles. The plans consider capital investment requirements and the need to ensure sustainable service delivery (direct support and capital maintenance).

Ownership of assets is not clear, and no systematic asset management system is in place. Having an up-to-date asset inventory could help in identifying immediate and future maintenance and rehabilitation needs but would require service providers and service authorities to assume responsibility for infrastructure management. This lack of responsibility is a major system gap.

There are no mechanisms for citizens to hold service providers to account other than not re-electing WASHCO members and verbally complaining to government staff or local politicians about services. Information on the performance of service providers is not communicated to users.

Groundwater is the main source for improved domestic supply. The unserved rely upon unprotected wells, springs, and surface water. Protection of improved sources is poor because of livestock watering, inadequate construction standards, and lack of fencing. At the catchment level, there are no formal structures for making decisions about water resources or addressing conflicts over water allocations or pollution.

4.1.6. Water service challenges and gaps

The woreda has many challenges and gaps in providing sustainable water supply service. The challenges and gaps include low coverage, frequent breakdowns, low levels of potentially safe managed water services, challenges with the availability of water resources, and challenges with presence, capacity, and performance of service providers and authorities.

4.1.6.1. Low coverage (at least basic) levels

There are insufficient water schemes in the woreda for providing water services to all. Currently, none of the kebeles have enough schemes to provide at least basic water services to all. Together, the water schemes have the potential to serve about 56,130 of the total 297,646 people in the woreda (19%). Nine kebeles (Kore Borojota, Deleti Calalaka, Chabi Dida Gnata, Bura Borama, Tatesa Dadesa, Bute Fillicha, Kubi Guta, Chefa Guta, and Faji Gole) have no improved water schemes (100% unserved). Rural communities without access to safe water from improved sources depend on unprotected water sources such as unprotected springs, ponds, streams, and rivers, which are not safe for drinking.

Reasons for low basic water service level coverage include:

- Lack of sufficient budget allocation for the construction of new schemes, as the woreda mostly allocates budget for salaries.
- The need to pipe water from high potential areas to areas with low potential to reach unserved areas, requiring high capital, which the woreda does not have.
- In highland areas where self-supply is the best option, the community waits for government or NGOs, rather than investing themselves.
- There is a difference in water resource potential between kebeles. Some have good potential like shallow groundwater for dug wells, springs, and deep wells, while others only have deep groundwater potential which is costly and difficult to plan. Deep groundwater in lowland kebeles has additional water quality problems.

4.1.6.2. Frequent breakdown of schemes

At the time of the baseline, 24 water schemes (19 hand-dug wells, 1 deep well with distribution up to 2500 users, 3 deep wells with distribution up to 3500 users, and 1 spring with distribution up to 13,000 users) were not functioning.

Reasons behind the breakdown of schemes include:

- **Low construction quality:** Schemes fail because of the low quality of construction materials like PVC/HDP pipes that easily break due to pressure or human intervention.
- **Lack of resources for maintenance:** When schemes fail, maintenance should be done by WASHCOs. However, WASHCOs have limited capacity to do timely maintenance and do not have sufficient income to do maintenance. They mostly wait for the woreda or NGOs to cover the cost of maintenance.
- **Poor scheme management:** Schemes operate for a long time without preventive maintenance, which exposes them to damage. This is because of a lack of ownership at the scheme level and WASHCOs that are not committed.
- **Lack of budget for maintenance:** Maintenance is not given proper attention or planned for. In addition, woreda technicians have limited capacity and do not have practical experience in maintaining large, motorized schemes. There is also a shortage of logistics, such as motorbikes, vehicles, and fuel.
- **Lack of spare parts:** Spare parts are not available in the local market but can be found in Hawassa (some 25 km from the woreda) or Finfinnee (some 250 km from the woreda). Apart from the woreda and caretakers, there are no maintenance service providers.

4.1.6.3. Low levels of safely managed water services

Only an estimated 1% of the population has access to potentially safely managed services (improved water services on premises, regardless of quality and availability issues). The number of household connections to piped schemes is limited.

Reasons behind the low number of household connections include:

- **Lack of interest in household connection:** The community does not want to pay for household connections as there is interest to use water for free, even from water points. Even when the distribution pipe is available around premises, most households are unwilling to pay for house connections. In addition, some do not have the capacity to pay for the house-to-house connections. Settlements are also scattered, especially in lowland kebeles, making household connections difficult and expensive.
- **There is a shortage of water, even at water points:** Households that have connections and public fountains do not have water often because of shortages. Hence, others are not interested to pay for unreliable house connections.

The groundwater in some parts of the woreda is highly affected by fluoride. Fluoride causes many health problems in humans and animals, and treatment technology is not sufficiently available.

Water quality monitoring and reporting is hardly practiced. The woreda does not have the technical or financial capacity to perform regular water quality checks. Attention is also not given to water quality monitoring. Water quality is only given attention and prioritized when water-borne diseases occur.

4.1.6.4. Challenges with the availability of water resources

Water resource availability is not uniform throughout the woreda. Lowland kebeles have deep groundwater resources that require huge amounts of capital for development which is not manageable with the woreda budget. In addition, the groundwater in lowland areas is contaminated with natural fluoride.

As a result, lowland kebeles depend mostly on water supply from water sources in highland areas, i.e., springs or groundwater. There is a reduction in the yield of springs in highland areas because of deforestation. In addition, there is a drop in groundwater levels and in water availability from springs in long dry seasons. Finally, due to high capital costs, surface water has not been taken into consideration as a source for piped water supply.

4.1.6.5. Challenges with presence, capacity, and performance of service providers and service authorities

WASHCOs are volunteer service providers and cannot be held accountable for poor service provision. WASHCOs do not report to the woreda office unless staff call for information or visit the schemes. They also do not meet regularly to evaluate their performance. There is limited follow-up and support for WASHCOs from the service authority (the woreda). According to the Oromia Regional Water and Energy Resource Development Bureau regulations, WASHCO members are expected to serve for two to four years and there should be re-election after that, but the woreda does not have the required capacity or budget for re-electing and training of new WASHCO members.

The number of staff currently available in the woreda is not enough. There are only seven staff members in the WWERDO dedicated to post-construction support. There is also high turnover at the woreda offices, especially leaders.

Due to the high turnover, WASH planning and implementation is slow and disintegrated. Many offices are responsible, and work has to be restarted or reinitiated following turnover. There is minimal effort to build planning and implementation capacity or follow-up to build a sense of ownership at the community level. In addition, there are no regular meetings of woreda WASH team members. Even though woreda staff have good awareness of the WASH plans (GTP I and II), capacity building activities are necessary for technical staff to understand, implement, and support different types of technology options. There is also a shortage of logistics and technical personnel, especially for direct support and major maintenance.

The available staff lack commitment because of the low salary scale. The technicians available at the woreda level do not have sufficient technical capacity or job experience to support schemes. In addition, the ratio of schemes to the number staff is very high (19 schemes per staff member), which makes supporting difficult.

The zone has a plan to establish spare part and maintenance enterprises led by existing utilities. However, so far, there has been no implementation. There are some private spare part suppliers, but they do not have a full set of needed materials.

Additionally, major maintenance is supposed to be done by the region (supply of service rig/crane for maintenance/replacement of pumps). However, the region takes a long time to respond to maintenance requests.

4.2. Sanitation services

4.2.1. Sanitation and hygiene infrastructure

The most common sanitation facilities in Ethiopia are unimproved latrines and improved latrines, either with emptying or sewerage (off-site treatment) or in situ treatment. These facilities can be private (serving a single household), shared (serving 2-10 households), or communal (serving more than ten households). Currently in Shashamane, there are private and shared improved household pit latrines within in situ treatment and private and shared unimproved latrines (Table 11).

Table 11: Type and number of sanitation facilities in Shashamane Woreda

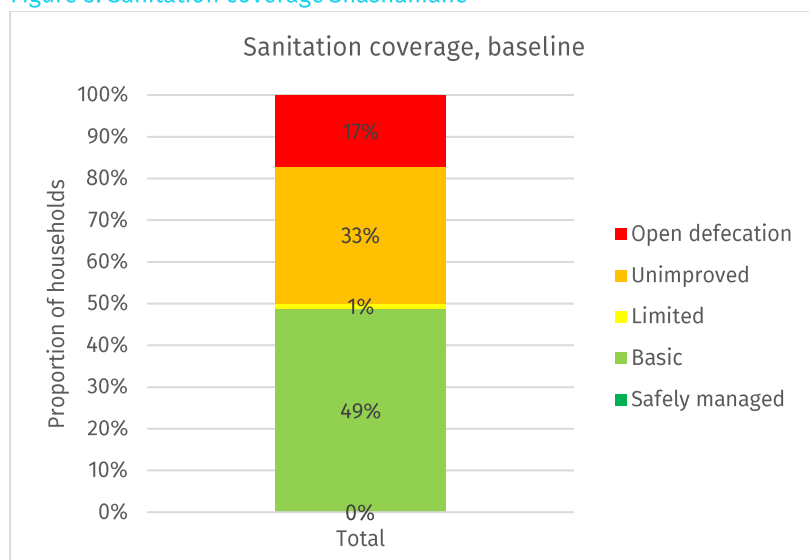
Type of facility	Improved household pit latrine (in situ), private	Improved household pit latrine (in situ), shared	Unimproved latrines, private	Unimproved latrines, shared
Number of facilities	28,508	285	18,570	186

There are 1437 villages in Shashamane Woreda, of which 266 (16.6 %) are ODF, while 382 (18.5%) have received CLTSH triggering. However, it should be noted that there is a lack of a proper definition of the ladder between national level targets and the JMP ladder. In both, there are different definitions of improved and unimproved sanitation facilities and open defecation. This makes it difficult to track which villages have sanitation services and which are ODF. Once declared ODF, most villages fall back to old habits and start open defecation practices. With One WASH National Program funding, many kebeles were declared ODF, but there was no follow-up, and their status is unknown at this moment. There is no baseline data available on household handwashing facilities, therefore it is assumed the majority do not have a handwashing facility. In addition, there are no households with handwashing facilities.

4.2.2. Sanitation and hygiene service levels

Figure 3 shows sanitation service levels in Shashamane. Currently, it is assumed that none of the latrines have proper in-situ treatment, including lining preventing contamination of ground water or the covering up of the pit and construction of a new pit when full. Currently, 49% of the population have access to basic sanitation service. In addition, there are no households with handwashing facilities, which makes service levels for hygiene 0% at the baseline.

Figure 3: Sanitation coverage Shashamane



4.2.3. Sanitation and hygiene approaches

The main approaches towards improving sanitation and hygiene in Shashamane Woreda are Community-led Total Sanitation and Hygiene (CLTSH), School-led Total Sanitation and Hygiene (SLTSH), sanitation marketing, and the production of Information Education Communication (IEC) and Behaviour Change Communication (BCC) materials.

The CLTSH approach is an approach carried out by health extension workers who guide communities and individuals through a process of 'self-realization' to end the practice of open defecation and bring about improved hygiene behaviours. This is achieved through households constructing basic sanitation facilities. The process of CLTSH includes orientation and training on the CLTSH approach, triggering villages, post triggering follow-up, verification, certification, recognition, and post ODF follow-up. The Health Extension Program, which is the centre for sanitation and hygiene approaches like CLTSH, was introduced in Ethiopia in 2006 with the goal of ending open defecation through household-built toilets and better handwashing practices. Better sanitation and hygiene practices are important in terms of controlling communicable water and hygiene-related diseases.

The SLTSH approach is a process for facilitating school communities, i.e., students, teachers, and parents, to understand their current sanitation and hygiene practices and the related consequences in the community to improve their sanitation and hygiene status and behaviour. The process of SLTSH includes establishing school WASH clubs and sanitation and hygiene training for children, teachers, and health workers. It also includes activities in school media.

The sanitation marketing approach is promoting the availability of sanitation materials and allowing private suppliers to produce these materials for the created demand through CLTSH. The products and their promotion are based on the needs of the households in the community. The sanitation marketing approach includes the establishment of sanitation marketing centres, sanitation marketing awareness, demand creation for the community, sanitation marketing training for enterprises, sanitation marketing campaigns, and sanitation marketing implementation follow-up.

IEC and BCC production is a strategy to spread awareness through printed or broadcasted media such as posters, flyers, leaflets, brochures, booklets, radio broadcasts, or TV spots.

4.2.4. Sanitation and hygiene service challenges and gaps

In sanitation and hygiene context, there are no service providers. Households are responsible for construction and maintenance of their own latrines. There is no subsidy approach for the construction of sanitation and hygiene facilities. It is assumed that sanitation promotion and marketing will be sufficient to create demand for sanitation and hygiene and households will construct their own toilets. The government is willing to support the enabling environment and demand creation. In addition, the government is responsible for the construction of facilities in public areas, schools, health care facilities, and communal latrines.

Despite the high number of household latrines in the woreda, there are still challenges such as:

- Prevalence of open defecation
- Prevalence of unimproved household latrines
- Lack of safely managed facilities
- Challenges with the presence, capacity, and performance of service providers and authorities

4.2.4.1. Challenges with coverage (at least basic) levels

17% of the woreda's population does not have access to sanitation facilities and, therefore, are practicing open defecation. About 33% of the population have unimproved household latrines and 1% of the population has shared improved latrines. Reasons for low basic coverage include:

- Lack of awareness within the community about the benefits of having improved latrines, making the construction of improved facilities a challenge.
- Lack of follow-up after ODF certification. Once declared ODF, most villages fall back into old habits and start open defecation practices.
- The construction of latrines is linked with cholera outbreaks. When there is an outbreak, the community starts constructing latrines, but following the emergency this stops, limiting sustainability.
- There are limited material suppliers available for construction of improved latrines.
- The community also cannot afford the cost of the materials.
- Health extension workers lack commitment and there is false reporting with respect to ODF status.
- Lack of plan and strategy in the government which is related to lack of attention to provide the service

The reasons behind the lack of handwashing facilities with water and soap in the woreda include:

- Limited access to water for handwashing
- Lack of handwashing culture

- Economic problem to buy soap

4.2.4.2. Challenges with levels of safely managed sanitation and hygiene services

Since there are no latrines that require off site treatment, even a fully functional treatment and disposal site would not have resulted in safely managed sanitation services in the woreda. In addition, safely managed services are not available in the woreda because of:

- Lack of well-lined pit latrines without groundwater contamination
- Lack of the practice of covering up full pit latrines and constructing a new one
- Lack of latrines which allow for off-site treatment (e.g., with septic tank) and lack of faecal sludge management facilities in the woreda
- No practice of using the sludge as compost

The reasons behind these challenges include:

- Economic problems: Many people live on the social safety net, focused on food security and nutrition, and therefore are without financial resources for constructing a safely managed sanitation facilities
- Lack of access to water preventing people from constructing flush toilets with off-site treatment (e.g., latrines with septic tank)
- Lack of professional support from the woreda

4.2.4.3. Challenges with presence, capacity, and performance of service authorities

The woreda health office is the service authority for sanitation and hygiene through approaches described in section 4.2.2. Health extension workers perform most sanitation and hygiene activities. However, there are limited human resources to perform the expected activities. There is also an overlap of duties, and health extension workers are overloaded with responsibilities. Some NGOs are working on CLTSH. As a result, 16 rural kebeles were open defecation free (ODF), even though its sustainability is not ensured. The approach was to construct latrines at the beginning and then construct handwashing facilities, but due to lack of follow up and limited resources, almost all households do not have handwashing facilities.

Additional challenges include:

- Lack of collaboration between sectors (education, water, health, finance)
- Lack of monitoring and no conducive environment for monitoring (lack of budget/manpower)
- Lack of coordination between extension workers and health centres
- Professional support to extension workers is very low

4.2.4.4. Challenges to establishing sanitation marketing enterprises

There is a lack of space to construct a sanitation marketing centre in the woreda. Demand creation activities, including CLTSH triggering, have been limited making the establishment of sanitation marketing difficult. The woreda also does not have the logistical or financial capacity for establishing sanitation marketing centres. In addition, there is no collaboration between the responsible sectors (health, job creation, water).

4.3. Institutional WASH

4.3.1. Institutional WASH infrastructure

There are currently 78 schools and 45 health care facilities (7 health centres and 38 health posts) in the woreda.

Table 12 presents an overview of WASH services in schools. Seventy-five schools have no handwashing facilities, 47 schools do not have sanitation facilities, and 50 schools do not have water facilities.

Table 12: WASH facilities in schools

Total number of schools	Service level	Water	Sanitation	Hygiene
78	Basic	22	29	0
	Limited	6	2	3
	No service	50	47	75

Table 13 presents an overview of WASH services in health care facilities. Ten health care facilities have basic water service, while none have basic sanitation facilities or basic hygiene facilities with handwashing facilities with water and soap or alcohol rub available at point of care as well as at latrines. Seven of the health care facilities have basic waste management facilities in place, while none have basic environmental cleaning practices in place. Figure 5 shows service levels for WASH in health care facilities.

Table 13: WASH facilities in health care facilities

Total number of health care facilities	Service level	Water	Sanitation	Hygiene	Waste management	Environmental cleaning
45	Basic	10	0	0	7	0
	Limited	0	29	22	0	7
	No service	35	16	23	38	38

4.3.2. Institutional WASH service levels

Figure 4 and Figure 5 show WASH service levels in schools and health care facilities. The baseline data shows 40% of the schools and 52% of the health care facilities have water services, 84% of the schools and 0% of the health care facilities have sanitation services and 0% of the schools and 5% of the health care facilities have hygiene facilities. In addition, 0% of the health care facilities have basic waste management or environmental service levels.

Figure 4: School WASH service levels

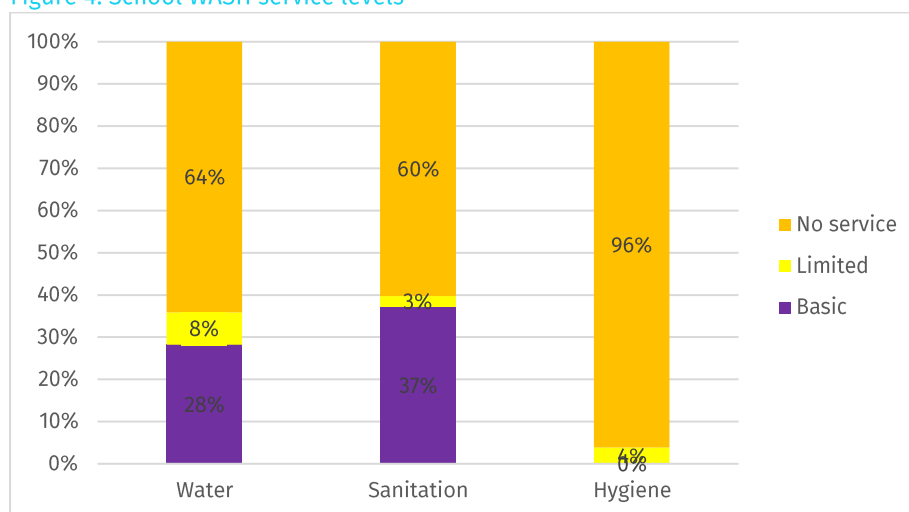
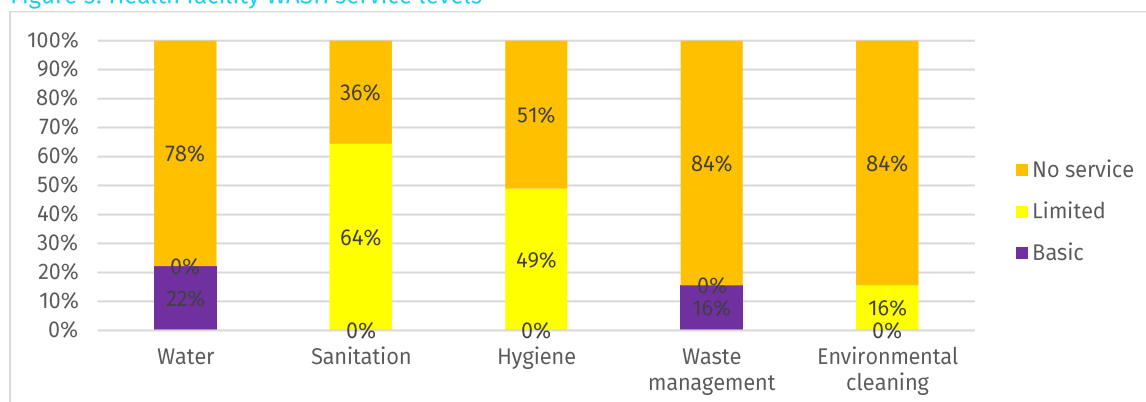


Figure 5: Health facility WASH service levels



4.3.3. Institutional WASH challenges and gaps

Because of budget shortages, the woreda has not been able to connect schools and health care facilities to existing piped systems, even when pipelines are nearby. In addition, health posts in rural areas are far from existing water systems. Some of the health posts are constructed without considering access to water. The

institutions do not have the budget or capacity to construct their own supply systems. Additional challenges include:

- During construction, pipelines are constructed together with the building but not tested and are mostly not functional due to design and construction capacity. Hence, even those having connection have a water point only in the compound.
- Focus in on the construction of a health centre alone without considering WASH facilities.
- Lack of monitoring and follow up. No status evaluation on a regular basis and no intervention based on the identification.
- Sixteen health posts were damaged because of the security situation.
- Most health post and schools are constructed by community contributions without considering standard WASH facilities.
- Unclearly on mandates for ensuring basic water service provision to institutions: The WFECO does not allocate a budget to the health office for construction of water supply system. They consider the water office as responsible for the provision of water to all.

There are many challenges with sanitation facilities. There are no clearly defined criteria for an improved latrine, and the available one is different from JMP criteria. Health posts are constructed with community participation and latrines are constructed from low-quality material making them susceptible to damage. Community construction focused on access rather than meeting the standard. Most of the sanitation and hygiene facilities that meet the standard are constructed by NGOs.

There are also many staffing gaps. There are environmental hygiene staff at all health centres. At health posts, the deputy is responsible for WASH activities. There are vacant positions (expert positions) at health centres and posts that need to be filled for better performance.

There is only one WASH specialist position at the Woreda Education Office (WEO). This is due to budget allocation problems and institutional structure issues.

There is no specific budget allocated from the woreda to schools for WASH activities. Schools are expected to improve infrastructure from their own income like farming and community contributions.

5. Woreda vision and targets

5.1. Woreda vision and targets for water supply

Shashamane Woreda set the vision of achieving 100% coverage with at least basic water services by 2030. This is a big step up from the current 19% of people served with at least basic services. In addition, the woreda has set the vision of having 29% of the total population served with safely managed water services by 2030 (Table 14).

Table 14: Shashamane Woreda vision for 2025 and 2030 based on SDG definitions

	2019 baseline	2025 vision	2030 vision
% Served	19%	76%	100%
% Served – basic	18%	63%	71%
% Served - safely managed	1%	13%	29%

5.2. Woreda vision and targets for sanitation and hygiene

Shashamane Woreda has set the vision of achieving 100% coverage with basic sanitation services by 2030. This is a big step up from the current 49% of people served with basic services. The woreda has also a vision to reach 30% safely managed sanitation service. There is a possibility that some of the latrines providing basic service could, in fact, provide safely managed service. In addition, the woreda has set the vision of having 100% of households that have handwashing facilities with soap and water (Table 15).

Table 15: Shashamane Woreda vision for 2025 and 2030 based on SDG definitions

	2019 baseline	2025 vision	2030 vision
Sanitation			
% HH Safely managed	0%	22%	30%
% HH Basic	49%	62%	70%
% HH Limited	1%	1%	0%
% HH Unimproved	33%	13%	0%
% HH Open defecation	17%	2%	0%
Hygiene			
% HH Basic	0%	62%	100%
% HH Limited	0%	0%	0%
% HH No facilities	100%	38%	0%

5.3. Woreda vision and targets for institutional WASH

Shashamane Woreda has set the vision of achieving 100% coverage with basic WASH services for schools by 2030. This is a big step up from the current water, sanitation, and hygiene service of 28%, 37%, and 0% respectively in schools (Table 16).

Table 16: Shashamane Woreda 2025 and 2030 vision for school WASH

	2019 (Baseline)	2025 vision	2030 vision
Number of schools	78	83	88
% schools with basic water	28%	68%	100%
% schools with basic sanitation	37%	43%	100%
% schools with basic hygiene	0%	10%	100%

Shashamane Woreda has set the vision of achieving 100% coverage with basic water, sanitation, hygiene, and waste management services for all health care facilities by 2030. This is a big step up from the current water, sanitation, hygiene, and waste management service of 4.4%, 2.2%, 15.6%, and 17.8%, respectively, in health care facilities (Table 17).

Table 17: Shashamane 2025 and 2030 vision for health care facility WASH

	2019 (Baseline)	2025 vision	2030 vision
Number of Health care facilities	45	47	49
% health care facility with basic water	22%	96%	100%
% health care facility with basic sanitation	0%	100%	100%
% health care facility with basic hygiene	0%	100%	100%
% health care facility with basic waste management	16%	100%	100%
% health care facility with environmental cleaning	0%	100%	100%

6. Strategic directions

This section presents the strategic directions for going from the current situation, as presented in Section 4, to the vision, as presented in Section 5. Section 6.1 presents the strategic directions for water services, 6.2 for sanitation and hygiene, and 6.3 for institutional WASH.

6.1. Water services

Table 18 shows the actual (2019) population served, the required population to be served by 2030 as per the vision, and the additional population to be served.

Table 18: Projected population and population unserved

	2019 baseline	2030 vision	Additional number of people served
Total population	297,464	399,002	101,356
People served	56,130 (19%)	399,002 (100%)	342,872
People served - basic	53,010 (18%)	291,082 (71%)	210,808
People served - safely managed	3,120 (1%)	107,920 (29%)	104,637

In 2019, there were an estimated 56,130 people (19%) served by existing, functional water schemes, including 3,120 people with (potentially) safely managed services. Going from the current situation to the vision of providing sustainable services to all and access to safely managed services to at least 29% of the woreda by 2030 requires:

- Ensuring that an additional 342,872 people have access to at least basic services by 2030
- Ensuring an additional 104,637 people have access to safely managed water services by 2030
- Ensuring the sustainability of water services

6.1.1. Strategies for increasing the number of people with access to improved water services

The strategy for ensuring that 100% of the population will have access to at least basic water services in 2030 include rehabilitating broken-down schemes and constructing new schemes. Together, the proposed strategies are expected to ensure 399,022 people will be served with at least basic water services by 2030.

6.1.1.1. Rehabilitation of broken-down water facilities in the woreda

At the time of the baseline, 19 hand dug wells with a hand pump, one deep well with distribution up to 2,500 people, three deep wells with distribution up to 3,500 people, and one spring with distribution up to 13,000 people were not functional, with the spring with distribution system serving 13,000 people given priority for service. The plan is to have these facilities rehabilitated in the first three years of implementing the master plan (2020-2022).

6.1.1.2. Implementation of new schemes

A mix of community-managed point sources, such as on spot springs, communal, hand dug wells, and community-managed piped schemes (deep wells with different sizes of distribution networks) are planned to be implemented (Table 19).

Table 19: Number of water schemes to be implemented

Service delivery model	Type of scheme	Planned additional new schemes
Community managed point sources	Hand dug well with hand pump	135
	Shallow well with hand pump	17
	On spot spring	2
	Deep well with distribution up to 2500 people	37
	Deep well with distribution up to 3500 people	32
Community-managed piped schemes	Rural piped system up to 9000 people	7
	Rural piped system up to 5000 people	12
	Rural piped system up to 2000 people	3

The implementation of multi-village and multi-kebele schemes (community managed piped schemes) in lowland areas is an important part of the strategy for ensuring at least basic water supply coverage to all. This will involve conveying water from the available area to areas where there are shortages.

To ensure the new schemes are implemented, there is a need for:

- Coordinating all WASH actors, i.e., NGOs, communities, government, and other investors, to address the water supply problem. In addition, woredas will use the master plan to look for additional finance from government, NGOs, community, and other investors
- Creating a conducive environment for NGOs and investors to focus on WASH

6.1.2. Strategies for increasing the number of people with access to safely managed water services

To achieve the vision of having safely managed water services for at least 27% of the woreda's population, sufficient people in the woreda need access to water services on premises which is available when needed and free from contamination. To achieve the vision, a total of 21,584 households need to be connected to piped schemes. Also, to ensure a contamination free water supply, the woreda plans to implement defluorination at both the household and scheme level, create awareness on water quality and water use, and supply water treatment chemicals at the community level.

6.1.3. Strategies for ensuring sustainable water service provision

Strategies to improve the sustainability of water services include establishing, legalizing, and strengthening WASHCOs and water boards, strengthening monitoring, filling the staffing gap at the woreda level, and building water technicians' capacity.

Strategies to ensure these happen include:

- Upgrading rural water supply to utilities and/or clustering rural water supply utilities to support the community-managed system with a large number of users in nearby utilities that have technical capacity for operation and maintenance
- Establish WASHCOs for all schemes and make sure tariffs are collected for operational activities
- Use a standardized revenue collection invoice to manage fee collection and increase accountability
- Monthly reporting by WASHCOs on schemes and financial activities to the woreda to have better information at woreda level

At the woreda level, there are staffing gaps that need to be filled. In addition, there are capacity limitations of available staff. To ensure staffing gaps and technical capacity of technicians is strengthened, the proposed actions are to hire additional staff by advocating for the allocation of budget to fill the gaps to enable the woreda to better provide on the job and long-term training to technicians to increase their capacity.

6.2. Sanitation services

Table 20 presents the current population and projected population in 2030 as well as the number of households based on the number of people, households, and population growth rate per kebele. It also shows the number of households with unimproved and basic sanitation and hygiene services.

Table 20: Population water sanitation services, baseline and 2030

	2020 baseline	2030 vision	Additional
Population	281,247	377,019	95,772
Number of households	58,593	78,546	19,952
Sanitation			
% HH served - open defecation	17%	0%	
% HH served - unimproved	33%	0%	
% HH served - limited	1%	0%	
% HH served - basic	49%	71%	
% HH served - safely managed	0%	29%	
Hygiene			
% HH Basic	0%	100%	
% HH Limited	0%	0%	
%HH No facilities	100%	0%	

To achieve the vision of 100% households with at least basic sanitation and hygiene services, there is a need to ensure that by 2030:

- An additional 31,013 households construct their own latrines
- 18,756 unimproved latrines are upgraded to improved latrines (18,570 households with private unimproved latrines and 186 shared unimproved latrines)
- 78,546 households will have hand washing facility with soap and water
-

To ensure that at least 30% of households will have access to safely managed sanitation services with private improved pit latrines with adequate in-situ treatment, households will need to be stimulated to construct their latrine facilities well with lining preventing ground water contamination and with households committing to cover full latrines and construct new ones as they fill up.

The proposed strategy for achieving these goals is through improved CLTSH and sanitation marketing practices. Successful and sustainable implementation of the CLTSH and social marketing approach will require strengthening the Woreda Health Office's capacity and performance.

Sanitation marketing includes the construction of sanitation marketing centres, awareness and demand creation for the community, sanitation marketing training for established enterprises, and sanitation marketing campaigns.

The plan is to trigger 1055 villages from 2020 to 2030. The CLTSH approach includes the following activities:

- Community visits and identifying CLTSH volunteers (two per village)
- CLTSH triggering, including awareness creation on contamination and use of sanitation and hygiene facilities
- Post triggering support, including technical support
- Verification, certification, and recognition of ODF status
- Post ODF follow-up

6.3. Institutional WASH

The number of schools are expected to increase from 78 in 2020 to 88 in 2030 and the number of health care facilities is expected to increase from 45 in 2020 to 49 in 2030. To go from the current situation to the 2030 vision of all schools and health care facilities with sustainable WASH services there is a need to:

- Construct adequate WASH facilities in 10 new schools and four new health care facilities
- Ensure adequate WASH facilities in the 78 existing schools
- Ensure adequate WASH facilities in the 45 existing health care facilities
- Ensuring sustainable WASH through WASH promotion

The four newly planned health care facilities and 45 existing health care facilities will include piped water schemes or rainwater collection, sex-separated latrines with menstrual hygiene management, at least one latrine accessible for people with a disability and usable improved pit latrines, handwashing facilities at both point of care and at the latrine, and waste management facilities (incinerator and non-hazardous waste solid waste pit). The facilities include:

- Six piped water into health facility buildings, 32 piped water to health facility yard, and six rainwater collections
- 36 hand washing facilities at latrines and 13 hand washing facilities at the point of care
- 49 incinerator and non-hazardous waste solid waste pits

The 10 newly constructed schools and 78 existing schools will include piped water scheme or protected hand dug wells, sex-separated latrines with menstrual health facilities, at least one latrine accessible for people with a disability, and usable improved pit latrines, and handwashing facilities with water and soap. The facilities include:

- 71 piped water to school yard and 12 protected hand dug wells
- 58 improved pit latrines
- 86 hand washing facilities

The main strategies and activities for ensuring that the basic WASH service targets in institutions are met by 2030 are to increase community participation in school WASH, plan with the WWERDO for piped connections to institutions, incorporate all WASH facilities when designing schools and health care facilities, behavioural change training for health care facilities' staff, school WASH promotion, and increased attention to monitoring and support to institutional WASH from the Woreda Health Office and Woreda Education Office. The woreda should work closely work with partners and regional government to allocate funds for connection.

7. Costing and financing

This section presents the expenditures required to reach the 2030 vision for water service (Section 7.1), sanitation and hygiene (Section 7.2), and institutional WASH (Section 7.3), as presented in Section 5 and based on the strategies presented in Section 6. Each section presents the estimated required costs for reaching the 2030 vision, including:

- Capital Expenditure (CapEx)
- Capital Maintenance Expenditure (CapManEx)
- Operation and Minor Maintenance Expenditure (OpEx)
- Direct Support Costs (ExpDS)

The costs are calculated considering an assumed annual inflation rate of 10% from the Oromia Region Finance and Economic Development Bureau, and an exchange rate of ETB 37.66 from the Commercial bank of Ethiopia as of November 2020.

Each section presents an overview of these costs per year and the resulting expected changes in service levels. Each section also presents an overview of the sources of funding for the projected costs. The sources of funding for the projected expenditures required for reaching the water vision for the woreda are:

- Taxes: Expenditure by government, paid for through tax revenues
- Tariffs: User contributions in the form of volumetric or time-based (e.g., monthly) tariffs and other user contributions such as contributions to CapEx of water schemes or household connections. When differentiating between tariffs, transfers, and taxes, tariffs refer to expenditure by users. This includes what is traditionally known as tariffs, i.e., payment for a provided service, but also includes user contributions to investment costs (e.g., household connections or in-kind contributions to construction).
- Transfers: Funding from development partners and NGOs.

7.1. Costing and financing water services

7.1.1. Estimated required expenditures for reaching the 2030 vision

This section presents the estimated expenditures required over the period 2020-2030 for reaching the water service vision as presented in Section 4 and based on the strategies presented in Section 5.

7.1.1.1. Capital Expenditure (CapEx)

The CapEx for the implementation of the master plan consists of costs related to the establishment of new assets, including new water schemes and household connections. Table 21 presents an overview of the number of assets to be developed and the unit costs.

Table 21: CapEx unit costs and number of planned schemes

Water supply system	Unit Cost CapEx New (ETB)	Unit Cost CapEx New (USD)	Number of planned schemes
Household connections	5,000	133	20,960
Communal point sources			
Hand dug well with hand pump	80,000	2,124	135
Shallow well with hand pump	210,000	5,576	17
On spot spring	80,000	2,124	2
Wells with distribution schemes			
Deep well with distribution up to 2500	3,500,000	92,937	37
Deep well with distribution up to 3500	7,000,000	185,874	32
Rural piped system up to 2000	3,800,000	100,902.8	3
Rural piped system up to 5000	18,000,000	477,960.7	12
Rural piped system up to 9000	35,000,000	929,368.0	7

The total required CapEx for new schemes is ETB 1.56 billion (41.37 million USD) and ETB 213.75 million (5.68 million USD) for household connections, with an average annual cost of ETB 130 million (3.45 million USD) and ETB 17.81 million (473 thousand USD), respectively.

7.1.1.2. Capital Maintenance Expenditure (CapManEx)

CapManEx includes the costs of repair and rehabilitation for currently broken-down facilities and the future costs of major repairs, rehabilitation, and replacement. It is also assumed that by doing continuous major maintenance, the schemes will serve beyond their design period and no schemes will be abandoned.

The costs of repairs for broken-down facilities are estimated as a percentage of the original CapEx. Table 22 gives an overview of the expected costs of required repairs for the 24 currently broken-down schemes.

Table 22: Costs of repairs of broken-down schemes

Non-functional schemes requiring repairs	Number of schemes	Unit cost for rehabilitation per scheme (ETB)	Unit cost for rehabilitation per scheme (USD)
Hand dug well with hand pump	19	16,000	425
Deep well with distribution up to 2500	1	175,000	4,647
Deep well with distribution up to 3500	3	350,000	9,294
Spring with large distribution system up to 13000	1	1,400,000	37,175

The future, annual CapManEx is estimated based on the CapEx divided by the expected lifespan (Table 23).

Table 23: CapManEX unit costs

Water supply system	Expected minimum lifespan	Unit costs CapManEx (ETB/year)	Unit costs CapManEx (USD/year)
Communal water points			
Hand dug well with hand pump	5	16,000	425
Shallow well with hand pump	10	21,000	558
On spot spring	10	8,000	212
Wells with distribution scheme			
Deep well with distribution up to 2500	20	175,000	4,647
Deep well with distribution up to 3500	20	350,000	9,294
Rural piped systems up to 2000	20	190,000	5,045
Rural piped system up to 5000	20	900,000	23,898
Rural piped system up to 9000	20	1,750,000	46,468
Spring with distribution scheme			
Gravity spring with distribution system up to 2000	20	150,000	3,983
Spring with large distribution system up to 13000	20	1,400,000	37,175
Spring with distribution up to 1000	20	50,000	1,328

Considering the number of schemes requiring CapManEx per year and inflation, the required CapManEx has been estimated as 3.38 million ETB (89.6 thousand USD) for the rehabilitation of currently broken-down schemes, which is planned to be take place throughout 2021. The total costs of regular CapManEx in the period 2020-2030 amounts to 764.83 million ETB (20.31 million USD), increasing because of the increasing number of schemes that require CapManEx, from 7.3 million ETB (0.19 million USD) in 2019 to 153 million ETB (4.1 million USD) in 2030 with an average per year of ETB 63.74 million (1.69 million USD).

7.1.1.3. Operation and Minor Maintenance Expenditure (OpEx)

The required OpEx is estimated by calculating the required annual expenditure on preventive and minor maintenance activities for each type of scheme, the salary of staff (where applicable), transport, power, and other cost items related to operation and minor maintenance. Table 24 gives an overview of the annual OpEx per scheme type.

Table 24: OpEx unit costs

	Number of users	Preventive and minor maintenance (ETB/year)	Spare parts (ETB/year)	Transport (ETB/year)	Power (ETB/year)	Total OpEx (ETB/year)	Total OpEx (USD/year)
Communal water point							
Hand dug well with hand pump	60	2,450	600	400	-	3,450	91.61
Shallow well with hand pump	200	3,450	-	400	-	3,850	102.23
On spot spring	250	1,950	-	400	-	2,350	62.40
Well with distribution							
Deep well with distribution up to 2500	2500	20,900	127,180	600	120,000	268,680	7,134.36
Deep well with distribution up to 3500	3500	28,700	145,400	600	180,000	354,700	9,418.48
Rural piped system up to 9000	9000	30,000	162,100	600	192,000	384,700	10,215.08
Rural piped system up to 5000	5000	23,500	152,000	600	144,000	320,100	8,499.73
Rural piped system up to 2000	2000	14,900	133,800	400	120,000	269,100	7,145.51
Spring with distribution							
Gravity spring with distribution system up to 2000	2000	9,900	92,000	600	-	102,500	2,721.72
Spring with large distribution system up to 13000	13000	35,500	99,000	600	-	135,100	3,587.36
Spring with distribution up to 1000	1000	6,000	2,000	400	-	,400	223.05

The total required OpEx for the period 2020-2030 is ETB 499 million (13 million USD), increasing because of the increasing number of schemes that require OpEx, from 4.12 million ETB (109 thousand USD) in 2019 to 99 million ETB (2.63 million USD) in 2030 with an average per year of ETB 41.58 million (1.1 million USD).

7.1.1.4. Direct Support Costs (ExpDS)

The required ExpDS are estimated by calculating the required personnel and non-personnel costs (per diems, transport, office costs and admin, costs of meetings and workshops), water quality testing, and other costs related to the following direct support tasks:

- Planning and reporting
- Training of WASHCOs
- Monitoring and follow-up of WASHCOs
- Supervising construction
- Water quality monitoring
- Maintenance

Table 25 gives an overview of the required personnel based on the directions from the planning team. Currently, only eight of the 14 required positions have been filled.

Table 25: Actual and required personnel Woreda Water Office

Positions	Actual (current) number of staff	Required number of staff
Scheme administration team leader	1	1
Electromechanical Engineer	1	3
Water Quality Expert	2	2
Electrician	1	2
Plumber	1	3
Office head	1	1
Planning (regulatory and budgeting)	1	2
Total	8	14

Table 26 presents an overview of the estimated actual and required ExpDS in 2019. It shows that non-staff (non-salary) costs are 20% of the ExpDS. It also shows that actual expenditure on ExpDS amounts to 21% of the

required expenditure. This shows additional 21% of the current cost is needed to achieve required direct support from the woreda.

Table 26: Annual direct support costs

Positions	Actual 2019 staff costs	Required 2019 staff costs
Staff costs		
Scheme administration team leader	108,672	108,672
Electromechanical Engineer	96,204	865,836
Water Quality expert	297,216	297,264
Electrician	96,204	384,816
Plumber	46,320	416,880
Office head	38,925	38,925
Planning (regulatory and budgeting)	24,772	99,088
Total staff costs	708,313	2,211,481
Non-staff costs		
Per diems	59,700	263,000
Transport costs (fuel, depreciation, maintenance)	33,500	24,000
Office costs and admin	26,500	7,000
Costs of meetings and workshops	33,000	282,000
Water quality testing	24,000	4,000
Total non-staff costs	176,700	580,000
Total ExpDS	885,013	2,791,481

Total required district support costs over the period 2020-2030 amount to ETB 158 million (4.2 million USD) with an average per year of ETB 13 million (350 thousand USD).

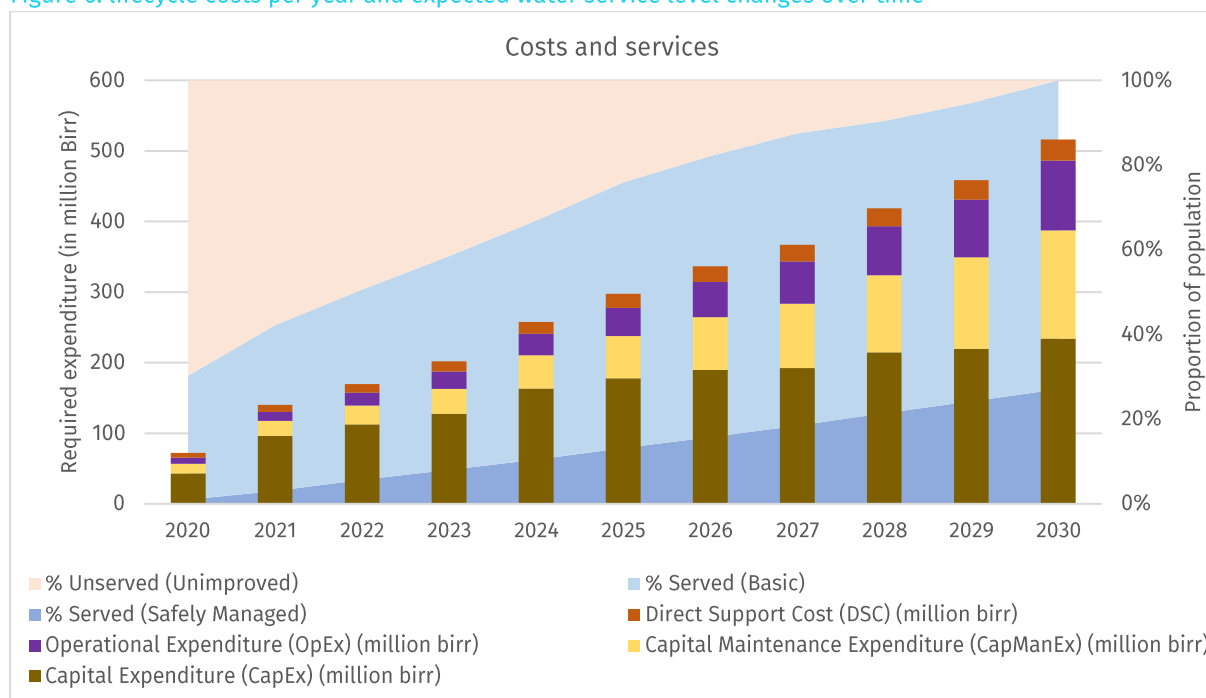
7.1.2. Projected changes in service levels and costs

Table 27 gives an overview of the total required lifecycle costs, while Figure 6 presents an overview of the required lifecycle costs per year and the expected resulting changes in service levels. Table 27 shows in the period 2020-2030, CapManEx constitutes the largest proportion (67%) of the required costs. Over the years, with an increase in the number of schemes, annual required CapManEx is expected to be higher than annual required CapEx, as shown in Figure 6.

Table 27: Total required lifecycle costs

	Total 2020-2030 (ETB million)	Total 2020-2030 (USD million)	Average per year (ETB million/year)	Average per year (USD million/year)	Average per person served per year (ETB per person per year)	Average per person served per year (USD per person per year)
CapEx	1,771.84	47.05	147.65	3.92	582	15.46
CapManEx	768.21	20.40	64.02	1.70	234	6.21
OpEx	498.96	13.25	41.58	1.10	151	4.02
ExpDS	158	4.2	13	0.35	55	1.47
Total costs	3,250.84	86.32	270.90	7.19	1,041	27.65

Figure 6: lifecycle costs per year and expected water service level changes over time

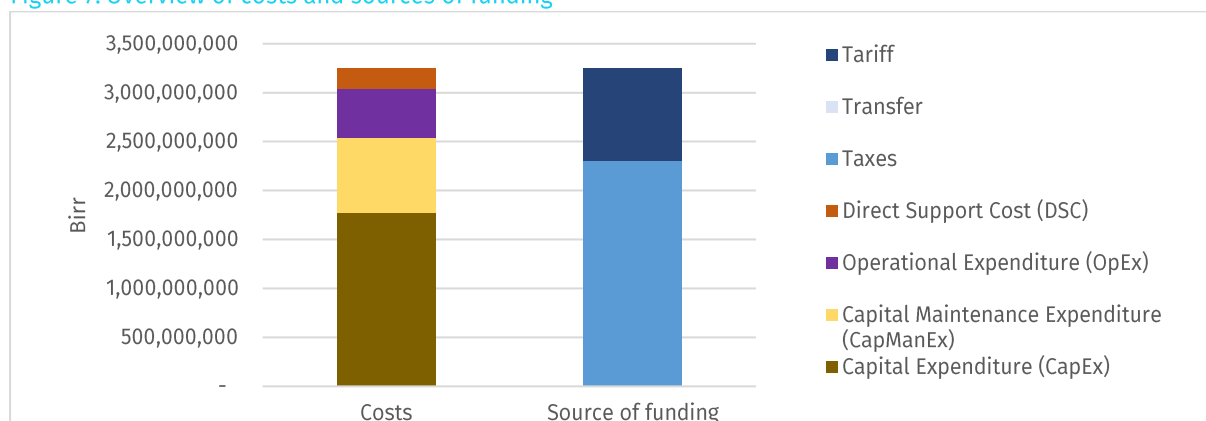


7.1.3. Funding for projected costs

The government is expected to fund the main part (85-95%) of the required CapEx via taxes for all scheme types with users contributing the remaining 5% via tariffs, with the exception of household connections, which are expected to be paid for fully through user contributions via tariffs. Repairs of rural communal schemes which are currently broken down are expected to be paid for by the government (60-90%), with users contributing the remaining percentages. Government is responsible for 100% of the ongoing (future required) CapManEx, and water users are responsible for 100% of the OpEx of all types of schemes.

Figure 7 presents an overview of the required expenditure and sources of funding. The figure shows that a considerable proportion of the required expenditure is to be covered by the government through taxes.

Figure 7: Overview of costs and sources of funding



7.2. Costing and financing sanitation and hygiene services

7.2.1. Estimated required expenditures for reaching the 2030 vision

This section presents the estimated expenditures required over the period 2020-2030 for reaching the sanitation and hygiene service vision, as presented in Section 4, and based on the strategies presented in Section 5. These costs are related to CLTSH approach, sanitation marketing, IEC/BCC materials, construction of new sanitation and hygiene facilities, and upgrading existing sanitation facilities.

7.2.1.1. Capital Expenditure (CapEx)

The capital expenditure for the implementation of the master plan consists of the costs related to the construction of new sanitation and hygiene facilities (CapEx hardware) and CLTSH triggering and the sanitation marketing approach (CapEx software). Table 28 presents the number of planned schemes, the planned number of villages to be triggered, and total costs. These are separated into hardware and software because the total cost of hardware for sanitation and hygiene is covered by households whereas CLTSH and sanitation marketing is financed by the woreda.

Table 28: Sanitation CapEx unit costs

	Unit	Unit Cost CapEx (ETB per unit)	Unit Cost CapEx (USD per unit)	Total number of planned units
CapEx hardware (construction of latrines)				
Improved household pit latrines	Latrine	12,500	332	47,548
Hand washing facility		7,500	199	
CapEx software - CLTSH triggering				
Community visits and identification of CLTSH Volunteers (2/village)	Village	5000	133	1055
Triggering including woreda and kebele level CLTSH facilitators (includes pre-triggering)	Village	35,000	929	1055
Verification, certification, and recognition	Village	20,000	531	1055
CapEx software - social marketing				
Sanitation marketing centres	Woreda	850,000	22,570	1
Sanitation marketing awareness and demand creation for the community	Woreda	300,000	7,966	1
Sanitation marketing training for enterprises	Woreda	130,000	3,451	1
Sanitation marketing campaigns	Woreda	215,000	5,708	1
Review meeting	Woreda	300,000	7,966	1

Total required CapEx costs over the period 2020-2030 are estimated to be ETB 1.79 billion (47.78 million USD) for hardware (construction of improved latrines) and ETB 354.66million (9.42 million USD) for software (CLTSH triggering, ODF verification, social marketing, etc.) with an average per year of ETB 149.96 million (3.98 million USD) and ETB 29.55 million (784.77 thousand USD) for hardware and software, respectively.

7.2.1.2. Capital Maintenance Expenditure (CapManEx)

CapManEx includes the costs of repairs and rehabilitation of sanitation and hygiene facilities. This includes the cost of upgrades for unimproved facilities to improved facilities that provide basic service, as well as the continuous CapManEx, which is estimated based on CapEx and the expected lifespan of the facility. Based on an expected lifespan of 10 years, the required annual CapManEx is estimated to amount to 1250 ETB (33 USD) per year for sanitation facilities (improved pit latrines) and 750 ETB (20 USD) for hygiene facilities. The total required CapManEx over the period of 2020-2030 is estimated, as shown in Table 29.

Table 29: CapManEx overview sanitation

	Total (ETB)	Total (USD)	Average per year (ETB)	Average per year (USD)
CapManEx, upgrade	238.94 million	6.34 million	19.9 million	529 thousand
CapManEx, household latrines	2.35 billion	62.43 million	195.92 million	5.20 million
Total CapManEx	2.59 billion	68.72 million	215.67 million	5.73 million

7.2.1.3. Operation and Minor Maintenance Expenditure (OpEx)

The required OpEx is the estimated costs of operation and minor maintenance of the facilities. This includes expenditure on toilet paper, water, minor repairs, soap, and others. Annual OpEx of improved household pit latrines is estimated to amount to 1,500 ETB per year (about 39.83 USD per year). The total required OpEx is ETB 6.95 billion (184.61 million USD) with an average per year of ETB 579.36 million (15.38 million USD).

7.2.1.4. Direct support Costs (ExpDS)

The required ExpDS are the costs of post triggering support, post ODF follow-up, and IEC and BCC material production costs. Table 30 gives an overview of the unit costs of direct support activities. The total ExpDS is ETB 222.19 million (5.9 million USD) with an average per year of ETB 18.52 million (491.67 thousand USD).

Table 30: Direct support cost overview sanitation

	Unit	Unit Cost (ETB per unit)	Unit Cost (USD per unit)
ExpDS - post triggering CLTSH software			
Post triggering support, including technical support	Per village	4,800	127.5
Post ODF follow-up	Per village	5,490	145.8
ExpDS - IEC and BCC production			
IEC production	Per Woreda	232,000	6,160
BCC production	Per Woreda	35,000	929
Media coverage	Per Woreda	100,000	2,655

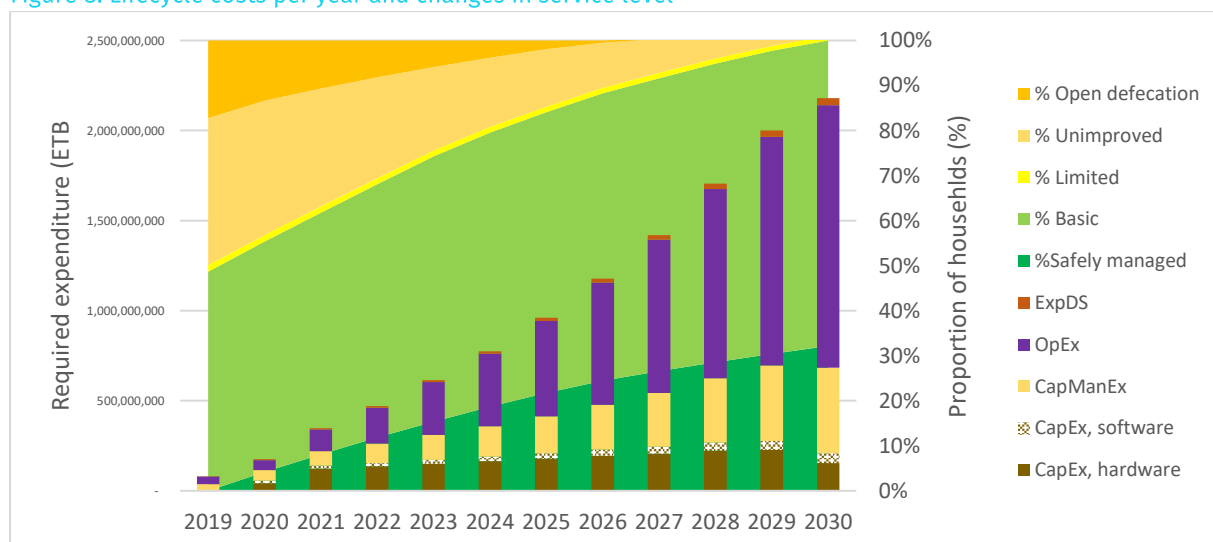
7.2.2. Projected changes in service levels and costs

Table 31 gives an overview of the total required lifecycle costs. It shows in the period 2020-2030, CapManEx constitutes the largest proportion of the required costs. Figure 8 presents an overview of the required lifecycle costs per year and the expected resulting changes in service levels.

Table 31: Total required lifecycle costs

	Total 2020-2030 (ETB million)	Total 2020-2030 (USD million)	Average per year (ETB million/year)	Average per year (USD million/year)	Average per person served per year (ETB per person per year)	Average per person served per year (USD per person per year)
CapEx, hardware	1,800	47.78	149.96	3.98	569	15
CapEx, software	355	9.42	29.55	0.78	108	3
CapManEx	2,588	68.72	215.67	5.73	747	20
OpEx	6,952	184.61	579.37	15.38	1,934	51
ExpDS	212	5.63	17.66	0.47	62	2

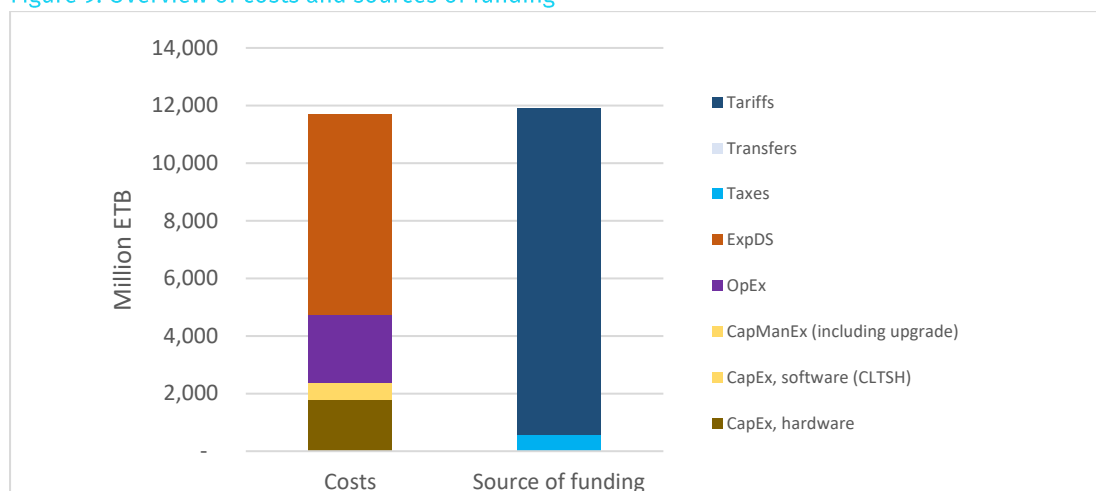
Figure 8: Lifecycle costs per year and changes in service level



7.2.3. Funding for projected costs

The sources of funding for the projected expenditures required for reaching the sanitation and hygiene vision for the woreda are the government and households. In Shashamane, households are expected to pay for CapEx hardware, CapManEx, and OpEx, while the government pays for CapEx software and ExpDS. Figure 9 presents an overview of the required expenditure and sources of funding.

Figure 9: Overview of costs and sources of funding



7.3. Costing and financing institutional WASH

7.3.1. Estimated required expenditures for reaching the 2030 vision

This section presents the estimated expenditures required over the period 2020-2030 for reaching the WASH service vision as presented in Section 4 and based on the strategies presented in Section 5.

The capital expenditure for implementing the master plan consists of the costs related to the construction of new WASH facilities in schools and health care facilities. The required CapManEx is based on expected CapManEx related to future required major repairs, rehabilitation, and asset replacement.

7.3.1.1. Health care facility WASH

7.3.1.1.1. Capital Expenditure (CapEx)

Table 32 presents the unit costs for the construction of new WASH facilities in health care facilities. The total required CapEx is ETB 52 million (1.38 million USD) with an average per year of ETB 4.72 million (125 USD).

Table 32: CapEx unit costs for WASH in health care facilities

Type of facility	Unit costs (ETB)	Number of units required
Water supply		
Piped water into health facility building	450,000	6
Piped water to health facility yard	250,000	32
Rainwater collection	70,000	6
Sanitation		
Improved pit latrine	390,000	49
Handwashing facility		
Handwashing facility at latrine	7,000	49
Handwashing facility point of care	105,000	13
Waste management		
Incinerator	90,000	49
Non-hazardous waste solid waste pit	60,000	49

The required CapEx is estimated based on the planned implementation of new WASH facilities and their unit costs, taking inflation into account. Table 33 gives an overview of the estimated required CapEx for health facility WASH.

Table 33: CapEx overview WASH in health care facilities

	Total (2020-2030) million ETB	Total (2020-2030) thousand USD	Average per year (million ETB per year)	Average per year (thousand USD per year)
CapEx - water	14	377	1.3	34
CapEx - sanitation	29	771	2.6	70
CapEx - hygiene	5	127	0.43	11
CapEx - solid waste	4	104	0.35	9
Total CapEx	52	1.38 million	4.7	125

7.3.1.1.2. Capital Maintenance Expenditure (CapManEx)

The expected required expenditures on major repairs and rehabilitation of WASH facilities in health care facilities are estimated based on lifespan and initial CapEx, as shown in Table 34.

Table 34: CapManEx unit costs health care facility WASH

Type of facility	Expected lifespan	Unit costs (ETB)
Piped water into health facility building	15	30,000
Piped water to health facility yard	10	25,000
Rainwater collection	10	7,000
Improved pit latrine	20	19,500
Handwashing facility at latrine	5	1,400
Handwashing facility at point of care	10	10,500
Incinerator	15	6,000
Non-hazardous waste solid waste pit	15	4,000

The annual required CapManEx is estimated based on the presence of WASH facilities in each year and their CapManEx unit costs, taking inflation into account. Table 35 gives an overview of the estimated required CapManEx for health facility WASH. The total required CapManEx is ETB 47.7 million (1.27 million USD) with an average per year of ETB 4.34 million (115 thousand USD).

Table 35: CapManEx overview health care facility WASH

	Total (2020-2030) million ETB	Total (2020-2030) thousand USD	Average per year (million ETB per year)	Average per year (thousand USD per year)
CapManEx - water	18	484	1.66	44
CapManEx - sanitation	14	372	1.27	34
CapManEx - hygiene	8.1	214	0.73	19
CapManEx - solid waste	7.4	197	0.67	18
Total CapManEx	47.7	1.27 million	4.34	115

7.3.1.1.3. Operation and Minor Maintenance Expenditure (OpEx)

Table 36 presents the unit costs for operation and minor maintenance of WASH facilities in health care facilities. The required OpEx is estimated based on the presence of WASH facilities and their unit costs, taking inflation into account.

Table 36: OpEx unit costs for WASH in health care facilities

Type of facility	Unit costs (ETB per year)
Piped water into health facility building	2,500
Piped water to health facility yard	3,500
Rainwater collection	1,500
Improved pit latrine	1950
Handwashing facility at latrine	1,200
Handwashing facility at point of care	3,500
Incinerator	5,000
Non-hazardous waste solid waste pit	3,000

Table 37 gives an overview of the estimated required OpEx for health facility WASH. The total required OpEx is ETB 11.4 million (303 thousand USD) with an average per year of ETB 1.04 million (27.5 thousand USD).

Table 37: OpEx overview WASH in health care facilities

	Total (2020-2030) million ETB	Total (2020-2030) thousand USD	Average per year (million ETB per year)	Average per year (thousand USD per year)
OpEx - water	2.1	56	0.19	5.1
OpEx - sanitation	1.3	34	116	3.1
OpEx - hygiene	2.6	69	0.24	6.3
OpEx - solid Waste	5.4	143	0.49	12
Total OpEx	11.4	303	1.04	27.5

7.3.1.1.4. Direct Support Costs (ExpDS)

The required ExpDS related to health facility WASH are estimated by calculating the required personnel and non-personnel costs (per diems, transport, office costs and admin, costs of meetings and workshops (meals, room, per diems, transport), and other costs) related to the following direct support considering:

- Planning and reporting
- WASH promotion
- Monitoring WASH in health care facilities
- Technical support to health care facilities

Table 38 gives an overview of the required personnel, based on the directions from the planning team. Currently, 5 of the 6 required positions have been filled.

Table 38: Required personnel for support to health care facility WASH

Positions	Actual (current) number of staff	Desired number of staff
WASH Focal Person	1	2
Woreda Health Office Head	1	1
Planning Budget and Monitoring & Evaluation	1	1
Primary health care unit Director	1	1
Disease control Coordinator	1	1
Total	5	6

Table 39 presents an overview of the estimated actual as well as the required 2020 ExpDS. It shows that non-staff (non-salary) costs are 69% of the ExpDS in actual costs and 65% of the ExpDS in required costs illustrating the need for additional ExpDS finance beyond salaried positions.

Table 39: Annual direct support costs (yearly staff costs) health care facility WASH

Posts/positions	Actual 2020 costs (ETB/year)	Required 2020 costs (ETB/year)
Staff costs		
WASH Focal Person	121,800	243,600
Woreda Health Office Head	20,300	20,300
Planning Budget and Monitoring & Evaluation	27,168	27,168
Primary health care unit director	36,224	27,168
Disease control Coordinator	40,600	40,600
Total staff costs	246,092	358,836
Non-staff costs		
Per diems	75,867	132,132
Transport costs	137,000	160,000
Office costs and admin	140,000	162,000
Costs of meetings and workshops	189,000	218,000
Total non-staff costs	541,867	672,132
Total ExpDS	787,959	1,030,968
Total ExpDS per health care facility	17,510	22,910

Considering the expected increase of the number of health care facilities and inflation, the total required ExpDS for the period 2020-2030 is estimated to amount to ETB 15.3 million (407 thousand USD) with an average per year of ETB 1.4 million (37 thousand USD).

7.3.1.2. School WASH

7.3.1.2.1. Capital Expenditure (CapEx)

Table 40 presents the unit costs for the construction of new WASH facilities in schools. The required CapEx is estimated based on the planned implementation of new WASH facilities and their unit costs, taking inflation into account.

Table 40: CapEx unit costs for WASH in schools

Type of facility	Unit costs (ETB)	Number of units required
Piped water to school yard	70,000	71
Protected hand dug well	80,000	12
Improved pit latrine	270,000	5
Handwashing facility	5,000	86

Table 41 gives an overview of the estimated required CapEx for school WASH. The total required CapEx is ETB 37.6 million (998 thousand USD) with an average per year of ETB 3.42 million (91 thousand USD).

Table 41: CapEx overview WASH in school

	Total (2020-2030) million ETB	Total (2020-2030) thousand USD	Average per year (million ETB per year)	Average per year (thousand USD per year)
CapEx - water	8	206	0.704	19
CapEx - sanitation	29	772	2.6	70
CapEx - hygiene	0.77	20	70 thousand	1.86
Total CapEx	37.6	998	3.42	91

7.3.1.2.2. Capital Maintenance Expenditure (CapManEx)

The expected required expenditures on major repairs and rehabilitation for WASH facilities in schools are estimated based on lifespan and initial CapEx, as shown in Table 42.

Table 42: CapManEx unit costs school WASH

Type of facility	Expected lifespan	Unit costs (ETB)
Piped water to school yard	20	3,500
Protected hand dug well	5	16,000
Improved pit latrine	10	27,000
Handwashing facility	5	1,000

The annual required CapManEx is estimated based on the number of WASH facilities and their CapManEx unit costs, taking inflation into account. Table 43 gives an overview of the estimated required CapManEx for school WASH. The total required CapManEx is ETB 39.5 million (1.05 million USD) with an average per year of ETB 3.59 million (95 thousand USD).

Table 43: CapManEx overview school WASH

	Total (2020-2030) million ETB	Total (2020-2030) million USD	Average per year (million ETB per year)	Average per year (thousand USD per year)
CapManEx - water	6.5	0.17	0.59	15.7million
CapManEx - sanitation	32	0.85	2.9	77
CapManEx - hygiene	1.03	27 thousand	94 thousand	2.5 million
Total CapManEx	39.55	1.05	3.6	95

7.3.1.2.3. Operation and Minor Maintenance Expenditure (OpEx)

Table 44 presents the unit costs for operation and minor maintenance of WASH facilities in schools.

Table 44: OpEx unit costs for WASH in schools

Type of facility	Unit costs (ETB per year)
Piped water to school yard	2,000
Protected hand dug well	5,000
Improved pit latrine	4,000
Handwashing facility	1,000

The required OpEx is estimated based on the presence of WASH facilities and their unit costs, taking inflation into account. Table 45 gives an overview of the estimated required OpEx for school WASH. The total required OpEx is ETB 8.2 million (217 thousand USD) with an average per year of ETB 744.5 thousand (19.8 USD).

Table 45: OpEx overview WASH in schools

	Total (2020-2030) million ETB	Total (2020-2030) thousand USD	Average per year (thousand ETB per year)	Average per year (thousand USD per year)
OpEx - water	2.95	78.2	268	7.1
OpEx - sanitation	4.3	114	391	10.4
OpEx - hygiene	0.94	25	85	2.3
Total OpEx	8.2	217	744.5	19.8

7.3.1.2.4. Direct Support Costs (ExpDS)

The required ExpDS are estimated by calculating the required personnel and non-personnel costs (per diems, transport, office costs and admin, costs of meetings and workshops (meals, room, per diems, transport), and other costs) related to the following direct support considering:

- Planning and reporting
- WASH promotion
- Monitoring WASH in schools
- Technical support to schools

Table 46 gives an overview of the required personnel, based on the directions from the planning team. Currently, only three of the six required positions have been filled.

Table 46: Required personnel for support to school WASH

Positions	Actual (current) number of staff	Required number of staff
Office head	1	1
WASH Focal Person	1	2
Support staff	10	12
Total	12	15

Table 47 presents an overview of the estimated required 2020 ExpDS. It shows that non-staff (non-salary) costs are 73% of the ExpDS in actual costs and 60% of the required ExpDS costs illustrating the need for additional ExpDS finance beyond salaried positions.

Table 47: Annual direct support costs for school WASH

	Actual 2020 costs (ETB/year)	Required 2020 costs (ETB/year)
Staff costs		
Office head	10,267	10,267
WASH Focal person	108,672	217,344
Support staff	10,422	240,510
Total staff costs	129,361	468,121
Non-staff costs		
Per diems	157,950	601,128
Transport costs	12,600	14,400
Office costs and admin	37,170	43,560
Costs of meetings and workshops	136,870	55,960
Total non-staff costs	344,545	715,048
Total ExpDS	473,906	1,183,169
Total ExpDS per school	6,076	15,169

Considering the expected increases of the number of schools and inflation, the total required ExpDS for the period 2020-2030 are estimated to amount to ETB 9.45 million (250 thousand USD) with an average per year of ETB 859 thousand (22.8 thousand USD).

7.3.2. Projected changes in service levels and costs

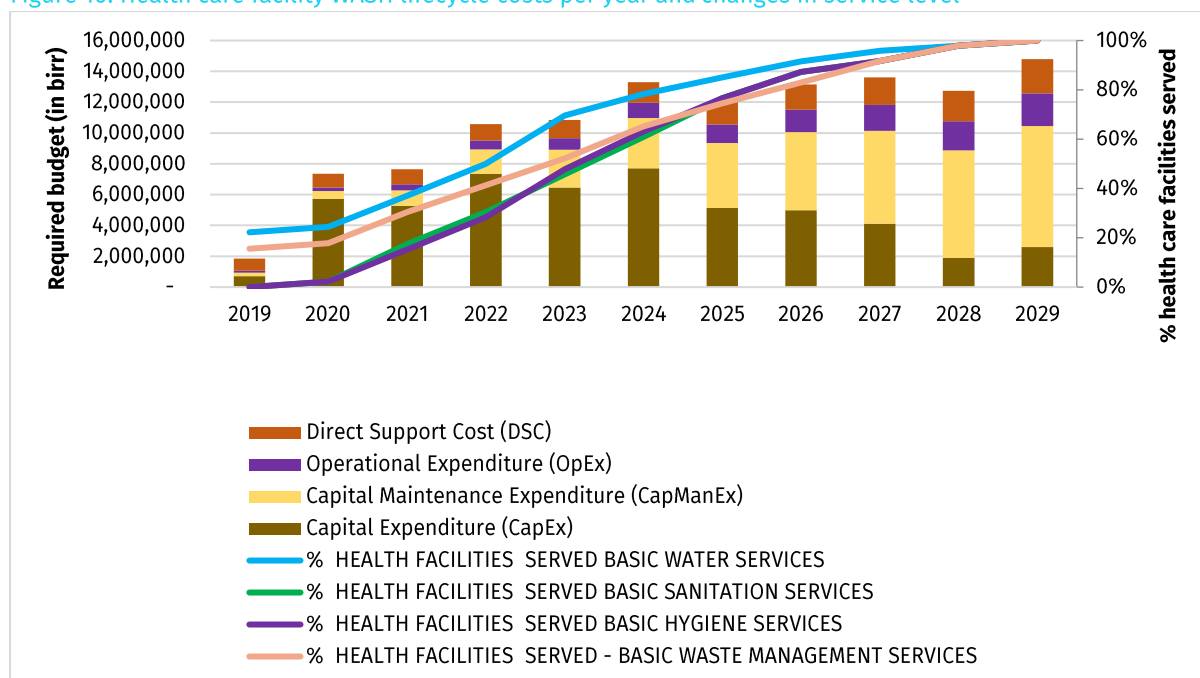
7.3.2.1. Health care facility WASH

Table 48 gives an overview of the total required lifecycle costs, while Figure 10 presents an overview of the required lifecycle costs per year and the expected resulting changes in service levels. It shows in the period 2020-2030, CapEx and CapManEx constitute the largest proportion (41% and 38% respectively) of the required costs. Total CapManEx and OpEx related to health care facility WASH in the woreda increase with an increasing number of WASH facilities in place in health care facilities.

Table 48: Total required lifecycle costs health care facility WASH

	Total (2020-2030) million ETB	Total (2020-2030) million USD	Average per year (million ETB per year)	Average per year (thousand USD per year)
CapEx	52	1.38	4.72	125
CapMan Ex	47.7	1.27	4.34	115
OpEx	11.4	0.302	1.04	27.5
ExpDS	15.3	0.407	1.39	37
Total	126	3.36	11.5	305

Figure 10: Health care facility WASH lifecycle costs per year and changes in service level



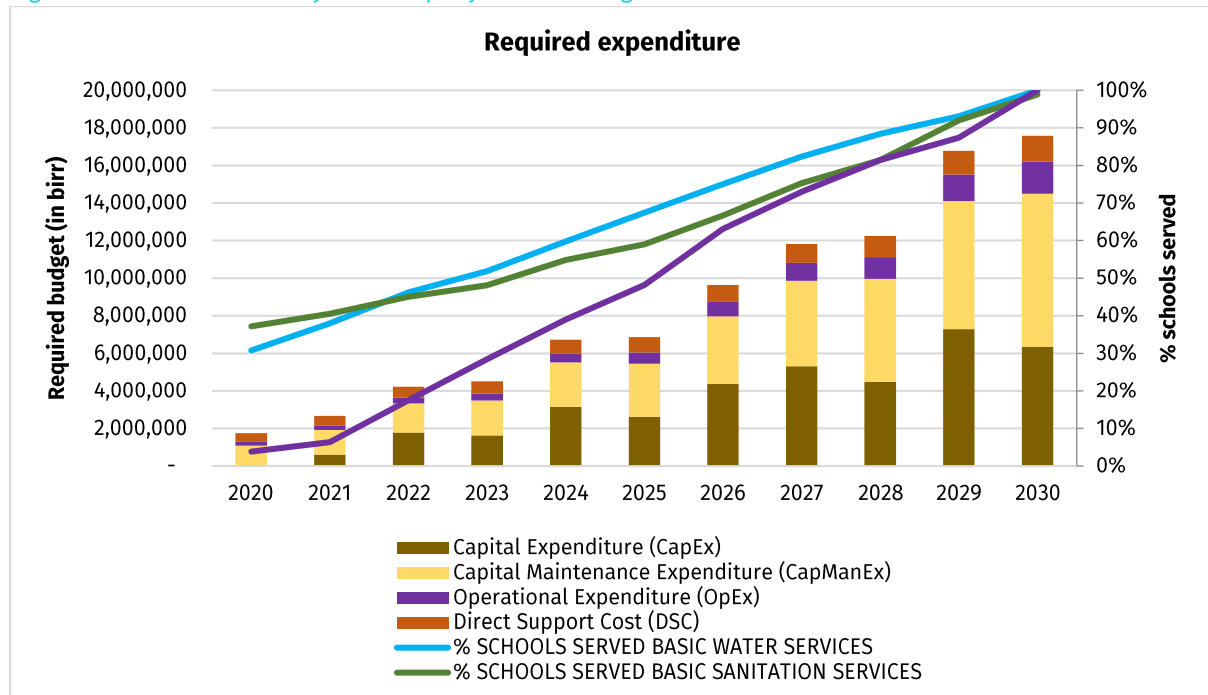
7.3.2.2. School WASH

Table 49 gives an overview of the total required lifecycle costs, while Figure 11 presents an overview of the required lifecycle costs per year and the expected resulting changes in service levels. It shows in the period 2020-2030, CapEx and CapManEx constitute the largest proportion (40% and 42% respectively) of the required costs. Total CapManEx and OpEx related to school WASH in the woreda increase with an increasing number of WASH facilities in place in schools.

Table 49: Total required lifecycle costs school WASH

	Total (2020-2030) million ETB	Total (2020-2030) million USD	Average per year (million ETB per year)	Average per year (thousand USD per year)
CapEx	37.6	1.0	3.4	90.8
CapMan Ex	39.6	1.1	3.6	95.5
OpEx	8.2	0.217	0.744	19.8
ExpDS	9.4	0.25	0.86	22.8
Total	94.8	2.5	8.6	22.9

Figure 11: School WASH lifecycle costs per year and changes in service level



The source of funding for the projected expenditure required for reaching institutional WASH vision for the woreda is the government.

8. Equity and Inclusion

The SDG plan prioritizes community and institutions having no or low service coverage for the provision of new infrastructure. Accordingly, community and institutions in arid kebeles where resources are scarce, water quality is challenge, and infrastructure coverage is low are prioritized for the implementation of new infrastructure. The implementation strategy also suggested consulting different social groups including women, children, elderly, people with disabilities, and people living with illness about their priorities, location, and on the design of WASH facilities. The cost estimates for the implementation of WASH facilities have taken into consideration inclusive design and implementation.

9. Monitoring and Evaluation

Monitoring and evaluation of the master plan implementation will be conducted internally by implementing WASH sector offices and externally by an independent entity. This helps to track progress, identify gaps, and design solutions based on the identified gaps and bottlenecks. The master plan can also be used as a source document to improve unit cost estimates, population estimates if census is conducted, the inflation rate when new data is available, and other input parameters whenever necessary.

Recommendations for proper implementation of the SDG master plan include:

- The woreda administration and influential sectors have to give special attention to the SDG plan by supporting financing and logistics in collaboration with appropriate WASH sectors.
- The schemes planned to be constructed per year must be constructed on time and be of high quality.
- Each activity and process must be monitored and evaluated periodically.
- All three WASH sector departments (zonal water, health, and education) must provide the necessary support to the woreda and play a role in monitoring and evaluating the progress of the SDG plan with proper follow up and feedback.
- As the main beneficiaries, the community needs to be well informed about this SDG plan before and during implementation. They must play a vital role in monitoring and evaluating the implementation of the plan.
- The three WASH sector offices are expected to evaluate themselves and each other as their work is interdependent and sometimes overlapping.
- The established learning alliance is to play a role in monitoring and evaluating the plan quarterly and give feedback.

The proposed monitoring programs are:

Ongoing progress assessments: WASH sector offices will track and report on implementation status by different actors on a quarterly basis to the Woreda Finance and Economic Cooperation Office (WFECO) or another entity/office which the woreda could assign to oversee the implementation of the plan. The sector office reports will be supported with evidence from field supervision.

The WFECO will consolidate the reports from sector offices on a quarterly basis and report to the Woreda WASH Team (WWT). The WWT will conduct quarterly project visits and consultative meetings with different WASH actors to have firsthand information before sitting for a progress evaluation meeting. The learning from the reports, quarterly project visits, and consultation meetings will be used as input for the subsequent planning. After review of reports, the consultative meeting, and field visits, the WWT will sit and evaluate the progress and challenges on a quarterly basis and provide feedback to sector offices. The WWT will also share the approved quarterly reports with zone sector offices for additional support. This will be aligned with existing quarterly sector reporting from woreda to zone.

Annual progress review: WASH sector offices will track budget allocation, physical implementation status, and gap analysis annually. Based on the identified gaps, activities and strategies will be reviewed annually based on learnings. The review includes replanning activities not accomplished in the previous year. The revised plan will be presented to WWT for approval.

Midterm evaluation: A midterm impact evaluation will be conducted by an external entity to be deployed by the WFECO. The evaluation will be conducted at the beginning of year 2026. The intended target of the evaluation is to know if the implementation is on track, challenges encountered thus far, and the sustainability of the results.

End line evaluation. The end line evaluation will be conducted by the team drawn from the woreda WASH sector offices led by the WFECO. The end line evaluation will be conducted in quarter four (Q4) of 2030. The target of the end line evaluation is to measure the impact brought through the implementation of the master plan.

The data in the master plan shall be used as a baseline for progress evaluation and achievements. This plan is focused on achieving the SDGs, hence, SDG level indicators developed by the JMP both for community and institutional WASH will be used in monitoring progress. Customization of the indicators to local conditions will be done by the WTT drawn from WASH sector offices. The customized indicators will be annexed to this plan.

Annex 1: Overview of the planning tools

The woreda WASH SDG master planning **tool for water** has the following sheets:

User Guide: The user guide describes each section of the tool including definitions and data requirements.

Woreda Information: General information about the woreda such as the total population per kebele, population served by different systems, type of existing and planned water supply technology in the woreda, the number of beneficiaries each scheme can serve, the potential for household connections, and the functionality status of each scheme are defined. This was defined for urban and rural areas separately. Information related to the population was taken from the Woreda Finance and Economic Cooperation Office. This part also includes population growth rate, inflation rate, exchange rate, and average household size.

Planning Assumptions: This is a critical part of the overall planning as it affects the projections to the future and cost estimations related to expected unit costs. These assumptions are unit costs for CapEx, rehabilitation, CapManEx, OpEx, and ExpDS. These costs occur before and after the schemes have been constructed. Planning and budgeting for operation, maintenance, support, and other recurring activities is essential for the schemes to provide sustainable service. This part also includes minimum design lifespan per scheme type. To facilitate calculations, there are separate sheets for OpEx estimation and ExpDS estimation. The OpEx estimation section is used to calculate required expenditures for operation and maintenance, including electricity or diesel to run pumps, pump operator or caretaker salaries, chlorine to disinfect, as well as servicing and other preventative maintenance or minor corrective repairs. The ExpDS estimation section calculates current and required ExpDS, including costs of setting up and carrying out monitoring of services, routine technical assistance, and training (and re-training) of service providers such as WASHCOs and utilities.

Option Selection: This is the main sheet where the planning happens. The option selection part has 3 main parts: setting and achieving the vision, planning of rehabilitation for non-functional schemes, and planning of new construction for rural and urban kebeles separately. This section is kebele-level choice of technological options for water supply delivery over time. This was done per kebele, noting that there are kebeles with 0% coverage and other kebeles with 100% coverage.

Since the same population can be served by a range of different water systems, each with a different set of costs, the choice of systems is critical. SDG 6.1 targets aim to reach safely managed services for all by 2030. The JMP ladder has safely managed (on premises with sufficient quality and quantity and readily available), basic (within an acceptable distance with sufficient quality and quantity), limited (sufficient quality and quantity but travel distance is not acceptable), unimproved (drinking water from unprotected dug well or unprotected springs), and surface (drinking water from river, dam, lake, pond, stream, canal, irrigation canal). Options to achieve safely managed are piped on premises or self-supply. Therefore, choosing the right type of service delivery mechanism is critical for the specific vision of the woreda.

Coverage change: This sheet presents the annual level of service for the woreda, rural areas, urban areas, and per kebele, based on the planning. This part has graphs showing service level changes over the planning period for the total woreda, the rural areas, the urban areas, and the kebeles.

Cost Estimation: This sheet presents an overview of the expected changes in service levels and required costs in line with planning for rehabilitation of existing non-functional schemes and construction of new water schemes. This part shows the cost implications of the kebele-level choices of technical options including the costs of rehabilitating and sustaining all systems over time.

Financing: This part is for defining options available to finance the SDG plan. It estimates the amount of money to be spent from main sources of finance (taxes, transfers, and tariffs). It also provides insight into the finance gaps. Sources of finance could be government budget, community contributions, development partners and others. The percentage of contribution varies based on existing conditions and upcoming projects.

The woreda WASH SDG master planning **tool for sanitation and hygiene** has the following sheets:

Woreda Information: General information about the woreda such as total population per kebele, availability and functionality of faecal sludge management facilities, types of sanitation facilities, and their potential for safely managed service are described. It also includes the number of villages in each kebele, the total number of households, the number of CLTSH triggered villages, the number of open defecation free (ODF) villages, and the number of villages requiring CLTSH triggering. Information related to the population and households is taken from the Woreda Health Office. This part also includes population growth rate, inflation rate, exchange rate, and

average household size. In addition to sanitation facilities, this part also indicates the total number of households with handwashing facilities with or without soap and water.

Planning Assumptions: This part includes sanitation and hygiene approaches and their costs. The most common sanitation and hygiene approaches are CLTSH, SLTSH, sanitation marketing, and the distribution of IEC and BCC materials. These costs are defined per village, per kebele, or per woreda. If there are additional approaches for improving sanitation and hygiene services in the woreda, they can be indicated as well.

This part also includes the cost of infrastructure including unit costs for new sanitation and hygiene facilities, costs of rehabilitation/upgrade, emptying, and operation and minor maintenance. The lifespan of facilities and emptying frequency is also included.

Planning: This is the main sheet where the planning happens. This part has three main sections: setting and achieving vision, CLTSH planning, and planning for upgrades and new facilities. The vision indicates the woreda's sanitation and hygiene vision for 2030. CLTSH planning is planning for triggering and post-triggering activities per village, annually. Infrastructure planning includes plans for upgrading unimproved latrines and improved latrines with basic service to improved latrines with safely managed service and construction of new sanitation facilities. For hygiene facilities, the assumption is all households will have a handwashing facility by 2030. This part also includes plans for improving sludge management if relevant.

Cost overview and coverage change: This sheet presents service level changes over the planning period. This part also shows the cost implications of the plan including the costs of new facilities, upgrading, CLTSH, SLTSH, sanitation marketing, IEC/BCC materials, and hygiene facilities.

Financing: This part is for defining options available to finance the SDG plan. It estimates the amount of money to be spent from main sources of finance (taxes, transfers, and tariffs). It also provides insight into finance gaps. Sources of finance could be government budget, community contributions, and others. The percentage of contribution varies based on existing conditions and upcoming projects.

The woreda WASH SDG master planning **tool for school WASH** has the following sheets:

Woreda Information: General information about schools in the woreda is described. It includes the availability, type, reliability, and functionality of WASH facilities in each school. For sanitation, information of separate facilities for boys, girls, and teachers, the number of compartments, privacy, accessibility to disabled students, and waste disposal mechanisms are included. For hygiene, accessibility to younger or disabled students, availability of detergent, and menstrual hygiene facilities are included. In addition, information on school WASH sustainability like proper maintenance of WASH facilities and availability of funds, rules, regulation, and training on WASH are also included.

Planning Assumptions: There are two sections in planning assumption. The first section looks at the expected number of schools. This is to plan for WASH facilities for new schools. The second section is for CapEx, CapManEx, and OpEx for each type of WASH facility. This includes the unit cost for the construction of new facilities, rehabilitation costs for non-functional facilities as a percentage of the CapEx, CapManEx based on experience, the expected life span of the facility, and unit costs of OpEx.

To facilitate calculations, there is a separate sheet for ExpDS estimation. The ExpDS estimation section calculates current required and desired ExpDS including planning and reporting, WASH promotion, monitoring at schools, and technical support to schools.

Option selection: This is the main sheet where the planning happens. This part has four main sections: setting and achieving, planning for existing and new sanitation facilities, planning for existing and new water facilities, and planning for existing hygiene facilities.

Cost overview and coverage change: This sheet presents service level changes over the planning period. This part also shows the cost implications of the plan.

Financing: It is assumed that all costs will be covered by the government.

The woreda WASH SDG master planning **tool for WASH in health care facilities** has the following sheets:

Woreda Information: General information about health care facilities (health centres and health posts) in the woreda is included. It includes information on water service level (availability, type, reliability, and functionality). Sanitation service level (availability, type, separate facilities for boys, and girls, and functionality), hygiene service level (availability, type, availability of detergent, menstrual hygiene facilities), waste

management (incinerator for hazardous medical waste, placenta pit, separate bins for sharps, infectious materials, and non-infectious materials, and ash pit), and environmental cleaning (cleaning protocol and staff training on cleaning).

Planning Assumptions: The first section looks at the expected number of health facilities. This is to plan for WASH facilities for new health facilities. The second section is for CapEx, CapManEx, and OpEx of each type of WASH facility and for waste management and environmental cleaning. This includes the unit cost for construction of new facilities, rehabilitation costs for non-functional facilities as a percentage of the CapEx, CapManEx based on experience, the expected lifespan of the facility, and unit costs of OpEx.

To facilitate calculations, there is a separate sheet for ExpDS estimation. The ExpDS estimation section calculates the current required and desired ExpDS including planning and reporting, capacity building training, WASH monitoring, WASH promotion, review meetings, and technical support to health facilities.

Option selection: This is the main sheet where the planning happens. This part has five main sections: setting and achieving, planning for existing and new sanitation facilities, planning for existing and new water facilities, and planning for existing hygiene facilities, and planning for existing and new waste management facilities.

Cost overview and coverage change: This sheet presents service level changes over the planning period. This part also shows the cost implications of the plan.

Financing: It is assumed that the government will cover all costs.