



ጤና ሚኒስቴር - ኢትዮጵያ
MINISTRY OF HEALTH-ETHIOPIA

WASH and Waste Management in Health Care Facilities National Roadmap 2025-2034

December 2025
Addis Ababa, Ethiopia



Table of Contents

Foreward	I
Acknowledgements	II
Executive Summary	IV
Acronyms and Abbreviations	VII
Definitions of Key Terms	VIII
Introduction	01
1. Background	01
1.1 Rationale	02
1.2 Scope	02
2. Situational Assessment	05
2.1 Enabling Environment	05
2.2 Water supply	08
2.3 Sanitation	09
2.4 Environmental cleanliness	09
2.5 SWOT Analysis of WASH in HCFs	10
2.6 Stakeholder Analysis	11
2.7 SWOT Analysis of WASH and Waste Managment in Health Care Facilities	12
3. WASH in Health Care Facilities Roadmap and waste managment	19
3.1 Vision	19
3.2 Mission	19
3.3 GOAL	19
3.4 Strategic Objective of WASH in HCFs	19
3.5 Description of strategic objectives	20
3.6 Targets	22
3.7 Strategies /Approaches	22
4. Physical & Financial Plan	23
4.1 Proposed Initiatives	23
5. Implementation arrangements, Monitoring Evaluation and learning	34
5.1. Governance structure	34
5.2. Stakeholder role and responsibility	34
5.3. Planning and implementation	37
5.4. Monitoring and Evaluation	37
6. Research, Documentation and Learning	45
7. Costing and Financing	46
7.1 Costing Method	46
7.2 Costing summary of results	46
7.3 Proposed financing arrangement	50
Reference	51

Foreward



The commitment to ensuring safe and reliable Water, Sanitation, and Hygiene (WASH) services in Health Care Facilities (HCFs) is more than an administrative necessity; it is a fundamental human right and a cornerstone of quality healthcare. The WASH in HCFs roadmap is a testament to our dedication to this cause, outlining strategic steps and coordinated efforts required to transform our healthcare environments.

The Sustainable Development Goals (SDGs) emphasize universal health coverage, including access to Water, Sanitation, and Hygiene (WASH) services. They reflect a shift toward quality care and an integrated, people-red approach, enhancing the experience in HCFs. This roadmap, developed from 2025 to 2034, serves as a

comprehensive guide to achieving universal access to essential WASH services in healthcare settings. It aligns with national health policy and global SDGs, particularly those focused on health, clean water, and sanitation.

Through the collaborative efforts of the Ministry of Health, development partners, and stakeholders, this roadmap addresses the critical needs of our healthcare facilities. It highlights the importance of leadership, political commitment, skilled personnel, and effective use of technology. Additionally, it emphasizes the necessity of community engagement, robust monitoring, and evaluation mechanisms.

WASH in HCFs involves providing basic water supply, sanitation, hygiene, healthcare, waste management, environmental cleaning, energy and environment, and management and workforce, all critical for infection prevention and quality care. Ensuring quality WASH services in healthcare facilities will significantly enhance infection prevention and control, reduce healthcare-associated infections, combat antimicrobial resistance, and improve overall patient outcomes.

Ensuring universal access to WASH services in healthcare facilities is achievable and offers a good return on investment. We are committed to supporting this effort by collaborating with partners to deliver quality WASH services in healthcare facilities and enhance monitoring, evaluation, and data management for WASH. The Ministry of Health has committed to this initiative through the national roadmap for improving WASH in HCFs from 2025-2034. This roadmap outlines the pathway to achieving better WASH in healthcare facilities. The ministry believes this roadmap will play a crucial role in enhancing WASH services and augmenting the quality of healthcare in Ethiopia.

The ministry calls upon all regional health bureaus, development partners, and stakeholders to diligently implement the actions outlined in this roadmap, regularly monitor and evaluate progress, and allocate necessary resources. This roadmap represents our collective vision and commitment to fostering a safer, healthier environment for all. Together, we can achieve the goal of providing every individual with access to safe, hygienic, and quality healthcare.

Finally, I extend my sincere gratitude to all individuals and organizations contributing to developing the WASH in HCFs roadmap and look forward to continued collaboration in this vital endeavour.

H.E Dr. Dereje Duguma (MO, MPH)
State Minister, Ministry of Health

Acknowledgements



The Ministry of Health sincerely thanks UNICEF, WHO, and Swiss church Aid for their financial and technical support during this roadmap development.

Furthermore, the MoH greatly acknowledges all individuals and organizations whose expertise and dedication were instrumental for developing this WASH in Environmental Health Services in Healthcare Facilities Roadmap. Special recognition is given to the experts and institutions listed below for their outstanding contributions to advancing this national roadmap which will help to advancing WASH and EH services in healthcare settings.



Mr. Israel Ataro

Community Engagement and Primary Health Care
Lead Executive Officer

No	Name	Organisation
1	Israel Ataro	Ministry of Health
2	Alemu Kejela	Ministry of Health
3	Beza Kibret	Ministry of Health
4	Misganaw Tewachew	Ministry of Health
5	Ashrafedin Youya	Ministry of Health
6	Derege Mengistu	Ministry of Health
7	Ziyad Ahmed	Ministry of Health
8	Fekadu Nigussie	Ministry of Health
9	Samuel Abera	Ministry of Health
10	Yimenu Adane	Ministry of Health
11	Birhanu Genet	SNV
12	Netsanet Kasa	UNICEF

13	Dawit Haile	UNICEF
14	Leykun Birhanu	St. Peter Hospital
15	Wendmagegn Sindew	ALERT Hospital
16	Selamawit Tiruneh	Millennium Water Alliance
17	Melaku Tafesse	Plan International Ethiopia
18	Yared Legesse	EEHPA
19	Dr. Birhanu Tekle	ICAP
20	Meron Birhanu	Ministry of Water and Energy
21	Desalegn Ayalew	World Vision Ethiopia
22	Waltaji Terfa	World Health Organization
23	Abyot Geremew	Amref Health Africa
24	Prof. Argaw Ambelu	EEPFA
25	Getachew Tikuye	OWNP
26	Addisu Fekadu	Swiss Church Aid-HEKS/EPER
27	Zinabu Assefa	Ethiopian Public Health Institute
28	Teklu Hailu	EEHPA
29	Yirgalem Tilahun	CRS
30	Amanuel Ejeta	Hawassa University
31	Hayleyessus Tefer	OWNP
32	Tizita Tulu	Concern worldwide
33	Kirubel Tesfaye	Ethiopian Public Health Institute

Executive Summary

Water, Sanitation, and Hygiene (WASH) and waste management in healthcare facilities (HCFs) are critical components for ensuring quality, safe, and dignified healthcare service delivery. Proper WASH services help prevent infections, reduce antimicrobial resistance (AMR), and support maternal and newborn health. It involves providing clean water, proper sanitation, and hygiene services, including healthcare, waste management, and environmental cleaning, across all levels of a healthcare facility. Despite their importance, WASH services have often been underfunded and inadequately implemented, leading to significant health risks, including infections, antimicrobial resistance, and increased morbidity and mortality rates.

There is a need to prioritize WASH in healthcare facilities, to enhance the quality of healthcare service delivery, improve patient and staff safety, and achieve better health outcomes for communities. Improved WASH conditions in HCFs lead to better health outcomes by reducing the incidence of healthcare-associated infections (HAIs). This is particularly important for vulnerable groups such as pregnant women, newborns, and those with compromised immune systems. Adequate WASH services are essential for maintaining high standards of care. They support various medical procedures and daily operations, ensuring that healthcare services are delivered effectively and efficiently. This can result in shorter stays in healthcare facilities, lower healthcare costs, and improved patient recovery rates. Furthermore, ensuring that healthcare workers have access to clean water and sanitation facilities can boost their morale and performance. It creates a healthier and more productive working environment.

Adequate resources are essential for ensuring effective Water, Sanitation, and Hygiene (WASH) in healthcare facilities (HCFs). Building and maintaining WASH infrastructure, such as clean water supply systems, sanitation facilities, and hand washing stations, requires significant financial investment. Regular supply of essential items like soap, disinfectants, and personal protective equipment (PPE) is necessary to maintain hygiene standards. These supplies need to be consistently available. Long-term sustainability of WASH initiatives requires continuous funding and resource allocation. This ensures that facilities do not fall into disrepair and that services remain reliable. By securing adequate resources, healthcare facilities can provide safer, cleaner, and more effective care, ultimately improving health outcomes for patients and communities.

Capacitating healthcare workers need proper training on WASH practices to ensure they can implement and maintain these systems effectively. This includes ongoing education and capacity-building programs.

WASH in HCFs need multi-sectoral action of stakeholder engagement to foster collaboration among various stakeholders, including government agencies, healthcare providers, and international organizations. This collective effort is crucial for the successful implementation of WASH in HCFs. By involving a diverse group of stakeholders, WASH initiatives in healthcare facilities can be more effective, equitable, and sustainable, ultimately leading to better health outcomes for communities. Stakeholder engagement promotes accountability and transparency. It ensures that the needs and concerns of all parties are addressed and that there is a clear understanding of roles and responsibilities. Engaged stakeholders can advocate for necessary policy changes, resource allocation, and support integration of WASH in HCFs into broader health and development agendas.

The status of Water, Sanitation, and Hygiene (WASH) and healthcare waste management of healthcare facilities (HCFs) in Ethiopia has seen some progress, but there are still significant challenges to address. Here are some key points:

Water Supply: As of the latest assessments, only about 55% of healthcare facilities in Ethiopia have basic water service. This highlights a critical need for infrastructure development to ensure a reliable and safe water supply in all HCFs.

Sanitation Facilities: Approximately 39% of healthcare facilities have basic sanitation facilities. While this is a majority, there is still a substantial portion of facilities that lack adequate sanitation, which is essential for infection prevention and control.

HealthCare Waste Management: Only 32% of HCFs in Ethiopia have basic waste management service.

In cognizant of the challenges, the Ethiopian government has launched several initiatives over the last 10 years to improve WASH in HCFs, such as the Clean and Safe Healthcare Facilities (CASH) and the Clean and Timely Care of Health (CATCH-IT) initiatives. These programs aim to enhance the quality of care and ensure that WASH standards are met. Despite these efforts, there are still gaps in funding and resource allocation. Limited budgets and poor coordination among sectors have been identified as major barriers to improving WASH services in HCFs. Thus, improving WASH in healthcare facilities in Ethiopia needs continued efforts to ensure that all facilities meet the required standards and provide safe, dignified, and quality care.

As part of its continued effort, the government of Ethiopia showed its commitment to the global agenda aims to achieve universal access to quality WASH services in healthcare facilities by 2030, aligning with Sustainable Development Goals (SDGs) 3 (Good health and well-being) and 6 (Clean water and sanitation). Strategically, to realize this commitment, the government of Ethiopia developed a comprehensive WASH in HCFs roadmap 2025-2034. The comprehensive WASH in HCFs can significantly improve WASH services, leading to better health outcomes and safer environments for both patients, healthcare workers, and communities. A costed road map has been developed using 6 strategic objectives and 21 initiatives. The total cost is 652.12 million USD distributed across 6 strategic objectives. The following are strategic objectives with the parentage of cost share:

- › Ensure the availability of inclusive and climate-resilient basic water supply services in HCFs with 27.0% of the total cost.
- › Ensure the availability of inclusive and climate-resilient basic sanitation services in HCFs at 20.1% of the total cost.
- › Ensure availability and sustainability of basic and inclusive hand hygiene services in HCFs to improve the quality of healthcare service delivery, 12.3% of the total cost.
- › Ensure Safe and environmentally friendly healthcare waste management in HCFs, 23.3% of the total cost.

- › Ensure climate-resilient and inclusive basic environmental cleaning service in healthcare settings, 17.1% of the total cost.
- › Ensure proper Enabling Environment for WASH in HCFs services 0.2 % of the total cost.

The total cost has been estimated to be 652.12 Million USD and further disaggregated into cost categories based on the financial need elaborated by years for short term (2 years), mid term (4 years), and long term (5 years) to facilitate internal and external resource mobilization.

Monitoring and evaluations are one of the major components of the road map to ensure effectiveness, accountability, transparency, and compliance; and to identify gaps and inform policy and practices. Key performance indicators and frequency of monitoring have been elaborated across each strategic objective. Monitoring and evaluation will be used to facilitate engagement of stakeholders at all levels and the use of the findings to continuously improve WASH services in HCFs.

Acronyms and Abbreviations

AMR	Antimicrobial Resistance
CBOs	Community-Based Organizations
EPHI	Ethiopian Public Health Institute
EH	Environmental Health
EE	Enabling Environmental
ESPA	Ethiopian Service Provision Assessment
HAIs	Healthcare-Associated Infections
HCWs	Health Care Workers
HCFs	HealthCare facilities
HCWM	Health Care Waste Management
HSDP	Health Sector Development Plan
HSDIP	Health Sector Development and Investment Plan
HU	Hawass University
IPC	Infection Prevention and Control
JMP	Joint Monitoring Program
LEO	Led Executive Office
MoWE	Ministry of Water and Energy
MOH	Ministry of Health
MWA	Millennium Water Alliance
NGOs	Non-Governmental Organisations
PHC	Primary Health Care
PIE	Plan International Ethiopia
PPP	Private Public Partnership
SDG	Sustainable Development Goals
SNV	Netherlands Development Organization
UNICEF	United Nations Children’s Fund
WASH	Water, Sanitation, and Hygiene
WASH FIT	Water, Sanitation and Hygiene – Facility Improvement Tool
WHO	World Health Organization
WVI	World Vision International

Definitions of Key Terms

Basic hand hygiene—Functional hand hygiene facilities with water and soap, and or alcohol –based hand rubs are available at the point of care, and within five metres of toilets.

Basic Sanitation in service HCF: is improved sanitation facilities that are usable, with at least one toilet dedicated for staff, inclusive toilet facilities (at least gender separated toilet with menstrual hygiene facilities and with at least accessible for people with limited mobility, safe collection, storage, and treatment of faecal waste.

Basic waste management—waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely.

Basic water service: Water is available from an improved source on the premises of the healthcare facility.

Chemical waste: for example, solvents and reagents used for laboratory preparations, disinfectants, sterilants, and heavy metals contained in medical devices (e.g., mercury in broken thermometers) and batteries.

Climate change: refers to any change in the climate over time, generally decades or longer, whether due to natural variability or as a result of human activity.

Climate resiliency: is “the ability of the healthcare facilities, and WASH infrastructures to resist, absorb, accommodate, adapt to, transform and recover (restore) from the effects of a climate hazard in a timely and efficient manner.

Cytotoxic waste: waste containing substances with genotoxic properties (i.e., highly hazardous substances that are mutagenic, teratogenic, or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites.

Effluents are non-chemical liquid wastes that come out of laundry, kitchen, toilet, shower, and laboratory rooms, which may be contaminated by pathogenic microorganisms. Effluents and, more particularly, effluents from isolation wards and medical diagnostic laboratories should be considered as hazardous liquid waste that should receive specific treatment before being discharged into the sewer/drainage system, if such a system exists

Healthcare-associated infections (HAIs): are infections that occur while receiving healthcare and develop in a hospital or other healthcare facility and first appear 48 hours after admission, and within 30 days after surgery discharge; and up to one year post-surgery discharge for deep organ and orthopaedic surgeries.

Hand disinfection is extensively used as a term in some parts of the world and can refer to antiseptic handwash, antiseptic hand rubbing, hand antisepsis/ decontamination/ degerming, handwashing with an antimicrobial soap and water, hygienic hand antisepsis, or hygienic hand rub. Since disinfection normally refers to the decontamination of inanimate surfaces and objects, this term is not used in these Guidelines.

Hygienic handwash—Treatment of hands with an antiseptic handwash and water to reduce the transient flora without necessarily affecting the resident skin flora; It is broad-spectrum but is usually less efficacious and acts more slowly than the hygienic hand rub.

Hand hygiene is a general term referring to any action of hand cleansing – that is, the action of performing hand hygiene for the purpose of physically or mechanically removing dirt, organic material, and/or microorganisms.

Hazardous waste: means wastes that belong to any category contained explosive, flammable, liable to spontaneous combustion and oxidizing characteristics all the waste generated by medical activities from diagnosis as well as preventive, curative, and palliative treatments in HCFs. Hand washing—Washing hands with plain or antimicrobial soap and water.

Hygienic hand rub—Treatment of hands with an antiseptic hand rub to reduce the transient flora without necessarily affecting the resident skin flora;

Infectious waste: waste contaminated with blood and other bodily fluids (e.g., from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g., waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g., swabs, bandages, and disposable medical devices);

Limited Sanitation service in HCFs: At least one improved sanitation facility is available, but not all requirements for a basic service are met.

Limited water service: an improved water source is within 500 metres of the premises, but not all requirements for basic service are met.

Non-hazardous or general waste: waste that does not pose any biological, chemical, radioactive, or physical hazard.

No sanitation service: Toilet facilities are unimproved (e.g., pit latrines without a slab or platform, hanging latrines, bucket latrines) or there are no toilets.

No water service: Water is taken from unprotected dug wells or springs, or surface water sources; or an improved source that is more than 500 metres from the facility; or the facility has no water source.

Pharmaceutical waste: expired, unused, and contaminated drugs and vaccines

Pathological waste: human tissues, organs, or fluids, body parts, and contaminated animal carcasses.

Proper liquid waste management: Wastewater comes from flushing toilets (black water) and from sinks, showers, and other fixtures (grey water). It ought to be removed via conventional waste drainage systems and treated waste waters that are gathered from various departments, either in off-site sewer systems or on-site disposal systems. Every open wastewater drainage system needs to be protected.

Radioactive waste: such as products contaminated by radionuclides, including radioactive diagnostic material or radiotherapeutic materials.

Sharps waste syringes, needles, disposable scalpels and blades, etc.

WASH in healthcare facilities refers to the provision of water, sanitation, healthcare waste management, hygiene, and environmental cleaning infrastructure and services across all parts of the facility.

WASH Improvement Tool(WASH FIT): A risk-based approach for improving and sustaining water, sanitation, hygiene, and healthcare waste management services in healthcare facilities, developed by WHO and UNICEF.

Introduction

1 Background

Water, Sanitation, and Hygiene (WASH) in HealthCare Facilities (HCF) encompasses the provision of water, sanitation, healthcare waste management, and infrastructure for hygiene and environmental cleaning services across all areas of a facility. The primary objective of healthcare facilities is to provide safe and reliable care to clients, workers, caregivers, and visitors. However, due to insufficient WASH services, the quality of provided healthcare is significantly compromised. Inadequate WASH services in healthcare facilities undermine patient safety and dignity, exacerbate the spread of antimicrobial-resistant infections, and hinder efforts to improve healthcare practices, including child and maternal health¹.

WASH in healthcare facilities is recognized in Sustainable Development Goal 6 (SDG 6), which calls for the “availability and sustainable management of water and sanitation for all.” Furthermore, SDG 3.8 calls for “access to quality essential healthcare services” for all. Thus, the global community will not achieve universal access to essential health services or meet the SDGs without WASH services in healthcare facilities. Recognizing this, the development of a roadmap for WASH in healthcare facilities involved a thorough review and assessment of the current status of WASH services. This process identified strengths, gaps, and prioritized activities across the supply chain of WASH services, considering existing capacities, resources, potential risks, and

challenges. Stakeholders from various sectors and disciplines involved in implementing WASH in healthcare facilities collaborated to create a vision and course of action to align investments and activities.

The roadmap aligns with the national Health Sector Transformation Plan and the WASH and Environmental Health Strategy (2021-2025), which recognize WASH in healthcare facilities as crucial to responding to the Health Sector Development and Investment Plan (HSDIP) and achieving SDG 6.1 and 6.2. These goals set the targets for universal access to safe drinking water, sanitation, and hand hygiene by 2030. The review of existing literature revealed several gaps in the healthcare delivery system, including inadequate prioritization, poor planning, and insufficient financing.

Adequate WASH services in healthcare facilities reduce the risk of healthcare-associated infections (HAIs) for staff, patients, clients, caregivers, and visitors. They also address antimicrobial resistance (AMR) and ultimately improve health outcomes. The development of this roadmap aims to address identified gaps and challenges by proposing strategic actions categorized into two phases. These actions involve all relevant stakeholders in the WASH sector in a well-coordinated and systematic manner, ensuring comprehensive and effective implementation.

¹ MoH, 2021,

1.1 Rationale

The government of Ethiopia has implemented various initiatives nationwide to support the improvement of WASH services, including the recently launched TSEDU-Clean Ethiopia initiative at national-level healthcare facilities. However, there is no well-organized roadmap for the implementation of these services. Additionally, the inadequate implementation of WASH services at healthcare facilities makes it difficult for the Ministry of Health to monitor the progress of interventions carried out by different stakeholders.

WASH in healthcare is non-negotiable because it is essential for providing quality care, protecting front-line healthcare workers, care seekers, and patients, and preventing avoidable deaths. It is a prerequisite for infection prevention and control, as well as for preventing the spread of antimicrobial-resistant pathogens. WASH is fundamental for health security, preparedness, and response efforts, and is a necessary element of primary healthcare (PHC). It is a human rights, dignity, social justice, and gender issue, and a top priority for women receiving maternal care. It is critical to end neglected tropical diseases and is considered a 'best buy' for its economic sense for investment. WASH is increasingly affected by climate change and requires climate-smart innovations and approaches. It is necessary for achieving all health- and environment-related

*WASH in healthcare
is non-negotiable
because it is essential
for providing quality
care, protecting front-
line healthcare workers,
care seekers, and
patients, and preventing
avoidable deaths.*

sustainable development goals (WHO, 2020). Considering these benefits, various national and sub-national actors are taking actions to improve WASH in healthcare facilities.

Therefore, the Ministry of Health (MoH) recognized the gap and took the initiative to develop this national WASH and Environmental Health Services in healthcare facilities roadmap in collaboration with relevant stakeholders. This roadmap will be used to properly track progress at both national and sub-national levels in achieving global and national targets.

1.2 Scope

This roadmap addresses all types of healthcare facilities (HCFs) in both rural and urban settings, including public, private, community-based organisations (CBOs), and non-governmental organisations (NGOs). The WASH and Environmental Health services needed for these facilities vary according to the services provided by each HCF.

Furthermore, it addresses the major WASH service domains and cross-cutting issues in HCFs, including water supply services, sanitation services, healthcare waste management services, hand hygiene services, and environmental cleaning services. Additionally, it addresses climate resilience, environmental sustainability, and gender and social inclusiveness of WASH services.

Guiding principle

Universal Access: No HCF is left behind. It must be inclusive of all segments of the population

Equity: Availing HCF WASH with gender inclusive and disabled inclusive and, as well as availing equity WASH services at the urban and rural level.

Efficiency: Results are measured against the quantity and the quality of the outcome and optimal use of resources and practices to ensure that water supply, sanitation services, and hygiene promotion are adequately provided to support healthcare delivery

Self-reliance, Community ownership, and empowerment



Multi-Sectoral approach: Different sectors engage with their roles and responsibilities

Evidence-based decision: Avail WASH in Healthcare Facility research for the decision makers for monitoring the progress of the result

Partnership: Gather together the experts, ideas, resources, and reach the public and private sectors.

Theory of Change

The Theory of Change for WASH (Water, Sanitation, and Hygiene) in HCFs and Health Care Waste Management involves a comprehensive approach to ensure safe and sustainable practices.

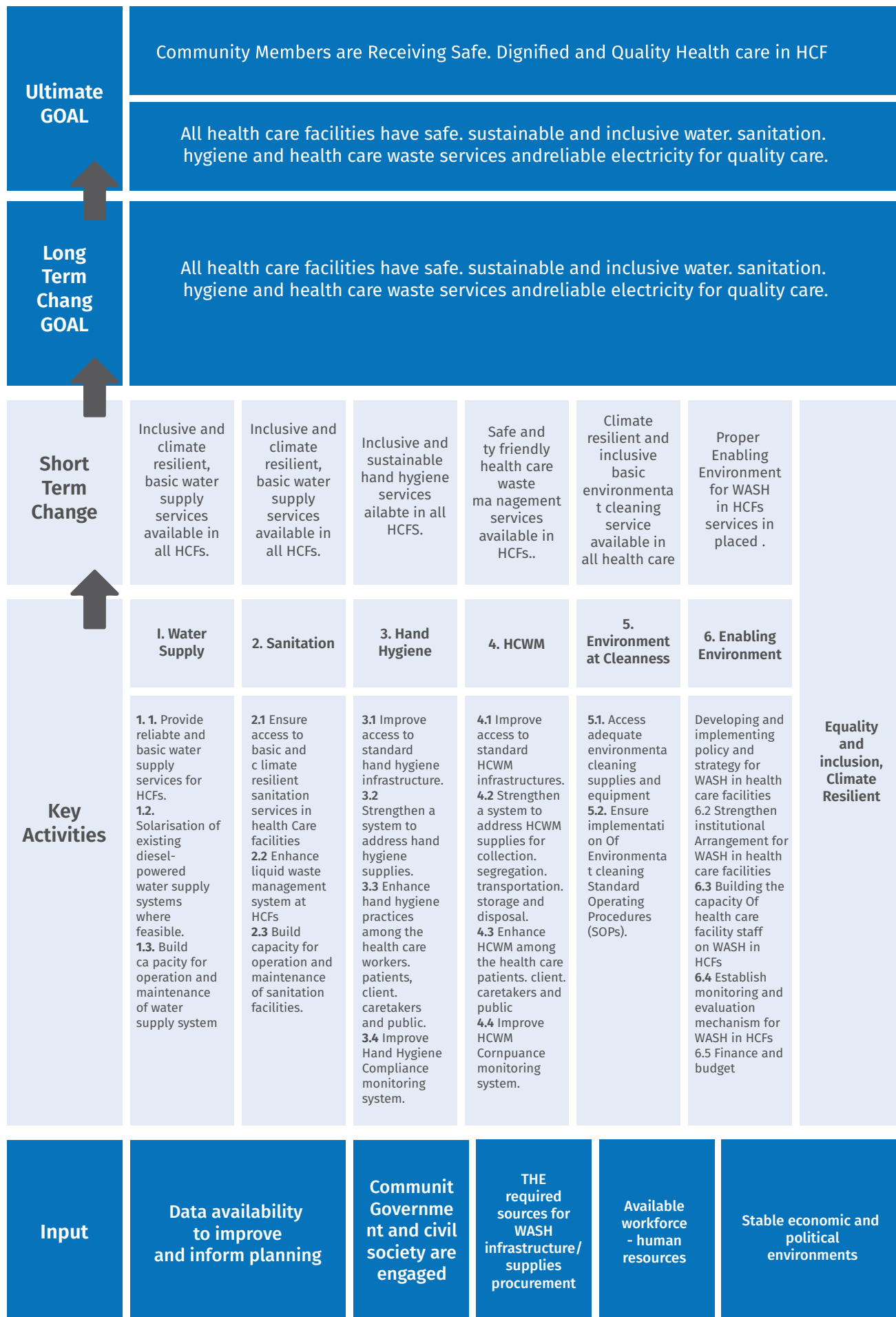
Here are some key elements ²:

1. Universal Access: Ensuring all healthcare facilities have access to safe water, sanitation, hygiene, and reliable waste management systems.
2. Quality Care: Improving the quality of care by maintaining clean and safe environments.
3. Sustainability: Implementing practices that are environmentally sustainable and resilient to climate change.

² Water Aid, 2022. Water, sanitation and hygiene; a foundation of strong, resilient health systems. Global learning report May 2022

Theory of change for this roadmap is summarised in the Table 1 below

Table 1: Theory of change



2 Situational Assessment

2.1 Enabling Environment

An enabling environment for WASH in HCFs is one that creates the conditions for a country to have sustainable, at-scale WASH services that will facilitate achievement of the Universal Access for All for WASH in HCFs with progressive reduction of HAIs and inequality.

MOH is working with sectors and partners to improve its efforts to support an enabling environment that allows all actors to contribute effectively to capacity strengthening, promote innovation, and increase water and sanitation coverage. Policy and programs, institutional arrangement, coordination, M&E, finance, and partnership are among the enabling factors to strengthen WASH in healthcare facilities.

Policies & Programs

Fully functioning Water, Sanitation, and Hygiene (WASH) services are essential to prevent infections, reduce antimicrobial resistance (AMR), prevent maternal and newborn deaths, and respond to outbreaks and emergencies. The United Nations Secretary-General's global call to action on WASH in HCFs has raised awareness among Member States, UN agencies, and partners. In 2019, the World Health Assembly passed a resolution to further elevate the issue, with all Member States committing to work towards achieving universal access

to WASH services by 2030. The Ethiopian Health Sector Transformation Plan II incorporated WASH as a focus area to improve public health. More than half of the HEP packages focus on sanitation and hygiene. Following this, MOH has developed and implemented the WASH and EH strategy, WASH in HCFs, and WASH-FIT and IPC guidelines to enhance the proper WASH interventions in HCFs. Even though there are many working strategies and guidelines, their availability, use, and implementation of those documents should be assessed, including the awareness and commitment of facility professionals and managers.

Institutional Arrangement and Human Resources

Different structures and human resources in various sectors are responsible for implementing WASH interventions. These structures are committed to ensuring the success of such interventions at various levels, including MOH, MOWE, MOF, and different regional offices. MOH leads the coordination, promotion, and advocacy of WASH in HCFs through the available structures at national, regional, and Woreda levels.

Ministry of Health is addressing the construction and maintenance of Primary Health Care (PHC) WASH facilities through one WASH national program, which is led by community engagement and the PHC LEO-WASH and EH desk. Moreover, Health System Innovation and Improvement LEOs are working to reduce infection prevention and improve health service quality. Multiple disciplines from governmental and non-governmental organisations are working on WASH in health and non-health sectors in the country at different levels to ensure WASH service availability.

Environmental Health professionals must lead the implementation of WASH in HCF at all levels. As WASH service implementation is not one professional service, the involvement of administrators, water and civil engineers, social workers, and others is crucial.

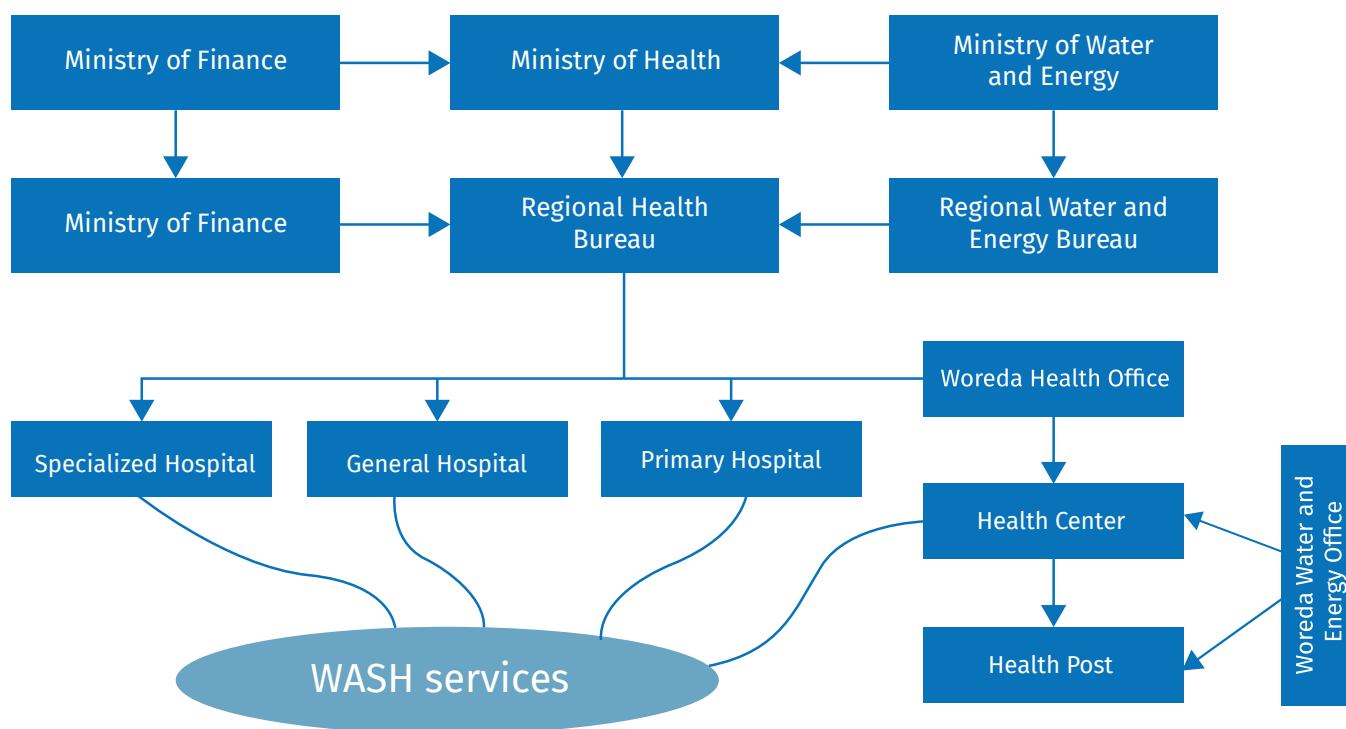


Figure 1: *Diagram for institutional arrangement*

Capacity Development

Capacity building deals with health workforce training, skill transfer, best practice sharing, and behavioural change awareness status that can improve the quality of healthcare WASH services. Ministry of Health is exerting its efforts to improve knowledge of the healthcare workforce through training (either pre-service or in-service) and sharing of skills and best practices on WASH in HCFs. Ministry of Health is collaborating with stakeholders to prioritise and work on HCFs to improve the quality of care to address the specified WASH service gaps through the launch of new initiatives like WASH FIT, climate resilience, and IPC guidelines. Different partners have also provided on-the-job training and logistics to health professionals to promote WASH in HCFs.

Coordination

Nationally, WASH and Environmental health activities are led and coordinated by technical and steering committees established at the federal and regional levels. This platform comprises seven concerned sector ministries that signed an MoU in 2017. The One WASH National Program (OWNP), known by the one plan, one budget, and one report principle, is a sector-wide approach established to achieve universal access to WASH services in HCFs. The coordination offices are based at national and regional levels, and the WASH technical teams are established at Woreda level to coordinate the sector plans, reports, and budgets.

Institutional WASH TWG with a role to coordinate the integration among sectors and partners to strengthen WASH in HCFs in a harmonised manner. However, the coordination mechanism is not well cascaded to regions, zones, and Woredas. Integration among different health programs within MOH, regional health bureaus, and with other partners needs revitalization through clear alignment of activities and performance monitoring for improvement of WASH in HCFs.

Monitoring and Evaluation

Monitoring WASH services requires strong and consistent mechanisms to measure progress and direct efforts to inform program managers for timely decision-making. Recently developed program/service indicators will be used through DHIS2 to monitor WASH in HCFs regularly.

In addition, regular surveys like Service Provision Assessment (SPA) and others are needed to monitor indicators that cannot be addressed through DHIS 2 and SPA reports. This effort is an important undertaking to regularly monitor progress towards attainment of the target set for the annual, mid-term, and end of the strategic plan, and further track contributions of the program interventions towards the reduction of the environmental burden of diseases. However, in all routine and survey reports, huge data inconsistencies and discrepancies hinder informed decision-making processes.

The inclusion of indicators about basic WASH service indicators in health facilities will serve as a useful starting point to track the progress, but it does not incorporate many important aspects of WASH services, such as quality, continuity, and sufficiency. Moreover, no mechanism has been put in place to monitor the impact of WASH service availability on reducing HAIs in Ethiopia.

Finance

Financial resources and funding should be in place to deliver, operate, and maintain WASH services and to reduce infection prevention and control (IPC) in health facilities. So that infrastructure continues to operate, and resources are made available to help facilities access other safe WASH in the event of failures, minimise environmental and other impacts, and maintain hygiene practices. Currently, the SDG pool fund is being used to cover costs related to WASH infrastructure construction, expansion, and upgrading in HCFs. One WASH national program also allocates a budget for WASH in HCFs. Some health facilities mainly use their own resources/internal budget to maintain existing WASH facilities.

Even though MOH is working intensively to mobilise resources from different partners to ensure all healthcare facilities are equipped, there is a huge gap in terms of addressing the quality and full WASH packages. Implementation capacity at the regional and facility level also needs to be strengthened.

Partnership

Partnerships with NGOs and the Public-Private Partnership (PPP) advance WASH services within HCFs through Enhanced Service Delivery. Many hospitals have outsourced some WASH activities, such as Environmental Cleaning. With the presence of critical monitoring and evaluation, private sector involvement brings efficiency; it introduces innovative solutions, such as water purification systems, sanitation and hygiene technologies, waste management, and energy-efficient practices. Collaborating with private entities allows HCFs to improve WASH services. Private companies/firms often possess expertise in project management, technology, and maintenance, which can elevate the overall quality of WASH services. In addition, the partnership brings sustainable financing as it may provide supplementary financial resources. Joint ventures, corporate social responsibility initiatives, and well-structured PPPs ensure sustainable financing for WASH projects. Other partners, such as Partners, can contribute by training healthcare staff on WASH best practices, including proper water management, storage, hygiene promotion, and infection prevention, that empower environmental health workers to maintain WASH facilities effectively.

Regulatory framework

To ensure the proper functioning of WASH and IPC services in HCFs, a regulatory framework must be established to ascertain the intended function. To establish the regulatory framework, the following requirements (key enforcing mechanisms of WASH standards) are in HCFs and need to be fulfilled.

Develop standards

The MoH has developed WASH standards for HCFs. The requirements dictate the infrastructure and resources necessary to provide sustainable WASH services in HCFs

Implementation through accountability mechanisms

Regulatory frameworks are pivotal in enforcing compliance with WASH standards. Using the existing guidelines, there should be a monitoring mechanism for adherence and penalties for non-compliance imposed.

The accreditation mechanism

The accreditation of HCFs can help enforce the fulfilment of and adherence to WASH standards. Besides, authorities ensure that HCFs meet WASH requirements during the licence provision before granting an occupational licence. Community scorecards are very helpful through the community's engagement in assessing WASH services and fostering transparency and accountability. The regulatory body should use a feedback mechanism from patients, staff, and visitors that helps identify gaps and areas for improvement.

Global experience

The global experience from different countries on how the regulatory framework is placed and properly functions needs to be assessed and adapted to the local context.

2.2 Water supply

The WHO and UNICEF JMP 2023 Progress Report showed that globally, 21.5% (1.7 billion people) lack basic water service, including 11% (861 million people with limited services), while 11% (874 million people) with no water service as of 2022. In Ethiopia, only 55 % of the HCFs had basic water service, and 55 million people in Ethiopia had no water service at their healthcare facility (WHO and UNICEF 2023 JMP Report).

The main issues with water supply in HCFs were lack of a dedicated budget for WASH facilities, broken water pipes, absence of water-quality monitoring systems, and frequent water interruptions due to climate-induced challenges and power shortage. Furthermore, water sources are susceptible to contamination from both natural (such as climate change, natural disasters, geological factors, etc.) and anthropogenic activities such as industrial applications, urban development, and agricultural practice. Similarly, water in the environment can be a source of infection linked to outbreaks and environmental transmission in hospitals.

Sustainable development, gender equality, and the reduction of poverty all depend on having access to safe water, which is a fundamental human right. Due to their increased susceptibility to abuse, attacks, and illness, women and girls are disproportionately affected by poor water quality.

Electricity is necessary for the majority of the basic services in HCFs to function, such as the provision of clean water, lighting, and communication. Electricity outage is a major issue that affects the provision of WASH services in HCFs.

In Ethiopia, the two most popular energy sources for running water supply systems and other services in HCFs are electricity and diesel-powered generators. But in the face of high costs

of diesel and its impact on the climate, it would be mandatory practice to shift to alternative renewable energy sources like solar power. This will be a crucial energy choice, in particular for the majority of HCFs that are located in far remote areas.

Conflict and insecurity significantly impact the sustainable use of water supply facilities in HCFs in Ethiopia. For instance:- Conflicts often lead to the destruction or damage of water infrastructure. Water facilities have been targeted, which leads to severe disruptions in water supply. Moreover, it hinders the maintenance and repair of water infrastructure. Insecurity can make it difficult for healthcare workers and patients to access water facilities. This is particularly problematic in conflict zones where movement is restricted. Resource Allocation: During conflicts, resources are often diverted to immediate humanitarian needs, leaving little for the maintenance and improvement of water supply systems in HCFs.

Climate change is critically affecting WASH service provision in HCFs. It is manifested through recurrent and prolonged drought conditions, low average annual rainfall, and extensive flooding. Climate change hampers the sustainable provisions of basic Water supply services in HCF through creating water shortages/scarcity and/or damage to infrastructure as a result of excessive flooding. Therefore, WASH interventions in HCFs should be climate resilient to ensure sustainable services

2.3 Sanitation

Als). The access and proper use of sanitation facilities is a fundamental aspect of delivering high-quality care in healthcare settings. HCFs must ensure that their sanitation facilities meet the needs of individuals with limited mobility and provide unhindered access to sinks, taps, and water for all users. This requires the installation of accessible toilets that are tailored

to the specific needs of people with disabilities or special requirements. A joint report by WHO and UNICEF (2023) in healthcare WASH revealed that globally, many regions lacked estimates for basic sanitation services, and 8% of HCFs lack any sanitation service. While in Ethiopia, only 39% of HCFs had basic sanitation service, 39% had limited sanitation service, and 22% had no sanitation service.

2.4. Hand Hygiene

Hand hygiene is a component of WASH in HCFs, encompassing the provision of comprehensive infrastructure and services, including management. These include access to water, soap or alcohol-based hand rubbing at the point of care, toilets, waiting rooms, and the entire health facility set up aimed at improvement of IPC and quality of healthcare service delivery. Furthermore, in healthcare settings, practising adequate hand hygiene, such as washing hands with soap, is a cost-effective method to prevent infection (MoH, 2021).

However, several hundred million patients acquire infections arising from poor hand washing practices annually. Compliance with hand washing standards among healthcare settings is often low, facilitating, healthcare acquired infection (HAI). Thus, HCFs might serve as foci for infection for patients seeking care, staff, and caretakers.

According to the WHO and UNICEF global baseline report of WASH in HCFs 2019, an alarming number of HCFs do not have adequate hand-hygiene facilities, which puts patients and HCWs at risk. Globally, one out of every six HCFs (16%) lacks hand hygiene facilities at points of care. In sub-Saharan Africa, 84% of hospitals had hand hygiene facilities at points of care, compared to 64% of other HCFs. In Ethiopia, 52% of HCFs have hand hygiene supplies at points of care (WHO, 2019)³. The neglected element of hand hygiene - significance of hand drying, efficiency of different

methods and clinical implication: A review. *J Infect Prev.* 2019 Mar;20(2):66-74]. The 2021/2022 Ethiopian SPA report showed availability of materials for infection prevention, such as soap and running water was 31%. In Ethiopia about 35% of healthcare facilities have basic (available) hygiene services (WHO-UNICEF JMP 2020) of which 65% of health facilities have no hygiene services which need new construction of hygiene infrastructures. From this 31-41% will be planned to be constructed in the first period of road map implementation and the rest 41-100% will be in the second phase of the road map implementation. According to studies, 20% of the hygiene infrastructure of the healthcare facilities needs to be upgraded on the subsequent years (Assessment of WASH in healthcare facilities, North Shoa and West Gojam, Amhara Region, Ethiopia, Swiss Church Aid) and 15% of the hygiene infrastructures in the health facilities needs major rehabilitation or maintenance (the research conducted by Safe and friendly environmental for healthcare facilities (SAFE4HCFs) Project baseline June 2023, World vision Ethiopia)

2.5 Health care waste management

The term healthcare waste includes all the waste generated within healthcare facilities, research centres, and laboratories related to medical procedures. Over ¾ (75% -90%) of the waste produced by health-care providers is comparable to domestic waste and considered “non-hazardous” or “general health-care waste”. The remaining 10–25% of health-care waste is regarded as “hazardous” and may pose a variety of environmental and health risks.

Thus, effective healthcare waste management is crucial in preventing the spread of infections among HCWs, patients, and communities. However, inadequate and improper management can have serious consequences, including increased infection risk, environmental pollution, and occupational hazards. HCWs without proper

training and protective measures are at risk of injuries and infections. The Joint Monitoring Program (JMP) service ladder for global monitoring of healthcare waste management emphasises the importance of proper waste segregation, treatment, and disposal, which aligns with the minimum requirements for IPC programs. However, according to the 2024 WHO/ UNICEF Water and Sanitation JMP report, 32% of HCFs in Ethiopia have basic waste management service, 66% HCFs have limited service, and 2% don't have service.

According to the Ethiopia Service Provision Assessment (ESPA) 2021-2022 report, waste management in HCFs is only 23% of facilities that have an incinerator, 15% have written guidelines for healthcare waste management, 23% have a placenta pit, and 15% have a septic tank. Moreover, just 7% of health facilities have staff trained in waste management, and 17% and 6% of facilities have suction trucks and municipal lines, respectively. Only 2% of HCFs have a dilution tank. According to these findings, there is an urgent need to improve healthcare waste management practices. These include encouraging procedures that minimise waste production and ensure appropriate waste segregation, preparing plans and mechanisms, and enforcing oversight and regulation to gradually improve waste Collection, segregation, storage, transportation, and disposal methods as per the national and international standards.

2.6 Environmental cleanliness

Internationally, especially in developing countries, there is a limitation in obtaining comprehensive data on environmental cleanliness (EC) services that provide disaggregated information on the status of the service by facility type and settings. Similarly, in Ethiopia, there is no data that provides insight into the status of environmental cleanliness (EC) services in urban hospitals.

³ Gammon J, Hunt J. *The neglected element of hand hygiene - significance of hand drying, efficiency of different methods and clinical implication: A review. J Infect Prev.* 2019 Mar;20(2):66-74

However, in rural areas, thirty percent of non-hospital HCFs owned by the government were documented to have basic EC services, 53% have limited EC services, and the remaining 17% have no service. Less than half (47%) and about one-third (34%) of the rural non-hospital HCFs have reported having a protocol for cleaning and providing training for workers responsible for cleaning services, respectively⁵.

However, findings from studies conducted in 6 hospitals and 22 health centres by development partners in North Shoa and West Gojam of the Amhara region revealed that none of the surveyed HCFs have no access to have access to basic environmental cleaning services, while only 10% of health centres, and 33.3% hospitals observed have limited or no service, respectively⁶. Additionally, a study conducted in one hospital, six health centres, and six health posts (Este Woreda) revealed that none of the HCFs included in the study had a cleaning protocol, and only two (15%) HCFs had staff who received training on IPC. Similarly, 97% of HCFs in Addis Ababa identified a lack of environmental cleaning services⁷.

The recent assessment conducted by World Vision International (WVI) in the Amhara region provides significant insights into the current situation. The

findings reveal several critical areas that require attention. Firstly, an alarming 97% of surveyed HCFs did not have established cleaning protocols at every point of care, indicating a substantial gap in ensuring proper cleaning practices. Moreover, an overwhelming 79% of HCWs reported not receiving training on cleaning protocols, while 13% of facilities did not have designated staff responsible for overseeing environmental cleaning practices⁸.

The survey also shed light on the challenges faced by HCFs in meeting national standards for environmental cleaning and instrument processing. Notably, 48% of facilities reported a need for detergents, and 43% required autoclaves. Additionally, 26% and 18% of facilities expressed a need for personal protective equipment and proper storage facilities, respectively, to effectively implement environmental and instrument processing practices.⁹

Lack of access to basic environmental cleaning services, combined with poor management of faecal sludge and wastewater in healthcare, significantly contributes to the entry of antimicrobial-resistant (AMR) bacteria species into the environment^{10,11}.

⁵ WHO/UICEF JMP report 2020

⁶ HEKS-EPER 2023. Assessment of WASH in selected HCFs in North Shoa and West Gojam, Amhara Region, Ethiopia

⁷ Derso A., et al (2023) Healthcare facility water, sanitation, and hygiene service status and barriers in Addis Ababa, Ethiopia. *Journal of Water, Sanitation and Hygiene for Development* Vol 13 No 12, 1001 doi: 10.2166/washdev.2023.217

⁸ SNV, 2019: Assessment report of WASH in Health Care Facilities in Este woreda, conducted by MoH, RHB, ZHD and Este Woreda Health office in collaboration with SNV Ethiopia

⁹ World Vision assessment

¹⁰ FDRE MoH, MoA, and FCCC (2021) Antimicrobial Resistance Prevention and Containment strategic plan: The One Health Approach 2021-2025, Addis Ababa, Ethiopia

¹¹ Mekengo B.M et al (2021). Distribution and antimicrobial resistance profile of bacteria recovered from sewage system of health institutions found in Hawassa, Sidama Regional State, Ethiopia: A descriptive study. *SAGE Open Medicine* Volume 9: 1–8. DOI: 10.1177/20503121211039097

2.7 SWOT Analysis of WASH and Waste Management in Health Care Facilities

Strengthen:	Weakness:
■ Strong internal coordination mechanisms between desks (example, WASH & EH with health system innovation, quality) in the MoH and regional Health bureaus ■ Strong commitment from the government to improve WASH services in HCFs, in terms of considering WASH in HCFs being a key component of the health and Water Sector policies, programs, strategies, and plans ■ Initiation of the national continuous professional development (CPD) program	■ Inadequate data on the status of WASH in HCFs ■ Low priority for improvement of WASH service and water safety due to lack of awareness and skills among leadership, healthcare workers, and service users. ■ Lack of basic WASH infrastructure and services in the majority of the health centres and health posts. ■ Insufficient and poor-quality infrastructure due to poor O&M practices ■ Very limited dedicated budget for healthcare WASH service improvement ■ Donor-dependent funding due to very limited effort for domestic resource mobilisation ■ Poor coordination of the WASH in healthcare facilities interventions is being implemented with different stakeholders ■ Low enforcement of available policy and strategy ■ Intermittent water supply services due to frequent power interruptions and weakness of operation and maintenance services ■ Lack of adequate water due to a lack of backup water storage reservoir ■ Inadequate effort to strengthen HCFs with skilled human resources. ■ The majority of the existing WASH services are not inclusive for differently abled people. ■ Limited effort to make the facilities climate resilient due to a lack of awareness about climate change on WASH infrastructures and services

Opportunity:	Threat:
■ Availability of government-led Sector coordination mechanisms (example, OWNPN, GO - NGO forums, and platforms) ■ Existing public-private partnership on research, environmental cleaning, operation, and maintenance of the WASH facilities ■ Availability of IPC unit in HCFs ■ Availability of standards, guidelines, design and construction manual, healthcare waste management manual. ■ Existing National initiatives such as OWNPN and recently advocating for Clean Ethiopia at the national level ■ An ongoing high-level advocacy works for improvement of WASH in HCFs at the national and global levels. ■ An ongoing effort by development partners to implement WASH service improvement in HCFs ■ Strong community engagement (Voluntary Health Service (VHS), Health Development Army (HDA))	■ Natural and human-induced disasters. ■ Water resources unavailability or scarcity of water. ■ Price escalation of construction materials ■ Water shortage due to climate change challenges ■ Intermittent and continuous internal conflicts ■ Interruptions of WASH support donor funds at any time in relation to dynamic global politics

2.8 Stakeholder Analysis

Table 02: SA

No	Name of stakeholder	Category for the implementation of the road map		Interest		Level of influence in the implementation of the roadmap	Impact on the implementation of the roadmap if not participated in.	
		Primary	Secondary	Stakeholder	MOH		Impact	MOH responses
1	Ministry of Water and Energy	X		Universal water supply coverage	Design and conduct construction supervision of the water supply infrastructure	High	Delay in accessing at least basic water services. Sustainability / intermittent supply.	Subcontract design and construction and supervision to the private sector
2	City/Town Municipalities	X		Safe management of solid and liquid wastes	Timely collection and disposal of general healthcare waters	High	Public and Environmental Health Risk	Engage the private sector
3	Water Utilities	X		Continuous water services. Continuous wastewater collection, treatment and disposal services	Get sustainable water and sanitation services	High	Compromise Healthcare facility services. Increase healthcare acquired infection. Increased HCF users' dissatisfaction.	Promote self-supply. Strengthen O&M capacity of HCFs. Develop on-site sanitation technology options.

No	Name of stakeholder	Category for the implementation of the road map			Interest		Level of influence in the implementation of the roadmap	Impact on the implementation of the roadmap if not participated in.	
		Primary	Secondary	Stakeholder	MOH	MOH		Impact	MOH responses
4	Ethiopian Power Utility	X		Electric power access to all HCFs	Consistent power supply for all HCFs		High	Interruption of critical health services. Dissatisfaction with Healthcare users. Poor health and safe practices.	Backup energy supply generators Promote renewable energy technologies (solar power supply)
5	Environmental Protection Authority	X		Ensure wastes are managed as per the national standards.	Compliance monitoring of HCF waste management practices		Medium	Increase public and environmental health risks.	Strengthen operational monitoring capacity of the HCFs on HCWM practices and standards.
6	Food and Drug Authority	X		Safe Management of pharmaceutical wastes and HCF services as per the national standard	Compliance monitoring of pharmaceutical waste management practices		Medium	Increase public and environmental health risks. Substandard services	Strengthen operational monitoring capacity of the HCFs on Service and Pharmaceutical waste management practices and standards.
7	Ministry of Finance	X		Proper and efficient utilisation of financial resources	Allocation of an adequate budget for the improvement of WASH in HCFs.		High	Inadequate WASH services in HCFs. Substandard health services	Mobilize additional resources from different partners and the private sector.

No	Name of stakeholder	Category for the implementation of the road map			Interest		Level of influence in the implementation of the roadmap	Impact on the implementation of the roadmap if not participated in.	
		Primary	Secondary	Stakeholder	MOH	MOH		Impact	MOH responses
8	Community	X		Quality healthcare services	Engagement in terms of feedback provision and contribution (in kind and /or cash) for service improvement Proper utilisation of WASH facilities and services.		High	Poor utilization of the HCFs, Shift to a private health service provider or traditional practitioners. Increased prevalence of preventable diseases	Conduct awareness creation and increase community engagement in all planning, implementation, and monitoring of WASH in HCFs (community empowerment)
9	Public Health care facilities	X		Support (financial, logistics, and technical) from the next higher administrative/ management structure	- Provide healthcare WASH services as per the national standard. - Implement WASH FIT		High	Inadequate quality of health services, Increased HCAI Dissatisfaction of healthcare workers and users	Built the capacity healthcare facilities on the implementation and monitoring of WASHFIT. Development of WASH and HCWM Infrastructures, Advocacy and resource mobilisation

No	Name of stakeholder	Category for the implementation of the road map		Interest		Level of influence in the implementation of the roadmap	Impact on the implementation of the roadmap if not participated in.	
		Primary	Secondary	Stakeholder	MOH		Impact	MOH responses
10	Privet healthcare facility (clinics, Hospitals, Pharmacy, Laboratories, etc...)	X		Technical support and regular follow up	Provide healthcare WASH services as per the national standard. Implement WASH FIT	High	Inadequate quality of health services, Increased HCAI Dissatisfaction of healthcare workers and users	Built the capacity healthcare facilities on the implementation and monitoring of WASHFIT. Enforce the national standard WASH in HCFs
11	Private Sector		X	Participation in the study, design, construction, O & M of WASH facilities. Management of HCWs and Environmental cleaning. Innovations	Quality and cost-effective services.	Medium		Strengthening internal capacity with the required skilled human resources. Conduct capacity building interventions
12	NGOs		X	Improved community engagement, health services and ensure government accountability	Technical; logistics and financial support	Medium	Limited capacity of the government to implement WASH Services in all HCFs.	Domestic resources mobilization (private sector and community)
13	Bilateral and multilateral Partners	X		Socio-economic development including health services	Technical; logistics and financial support	High	Limited capacity of the government to implement WASH Services in all HCFs	Domestic resources mobilization (private sector and community)

No	Name of stakeholder	Category for the implementation of the road map		Interest		Level of influence in the implementation of the roadmap	Impact on the implementation of the roadmap if not participated in.	
		Primary	Secondary	Stakeholder	MOH		Impact	MOH responses
14	Professional Associations		X	Service improvement	Technical Support	Medium		Internal capacity building
15	Teaching and/or Research Institutions		X	Services improvement. Develop innovations/ technology	Produce skilled Health workforce. Technical support and knowledge creation	Medium	Poor service quality Limited information / data	Implement proper in-service training (CPD) Strengthen HMIS/ DHIS2.
16	Media (Mainstream media)		X	Information exchange Investigative of wrong doings	Enhance public engagement. Awareness creation	Medium		Strengthen public relations. Capacity building for internal staffs Use other media options such as social media . Strengthen community engagement platforms

3 WASH and Waste Management in Health Care Facilities Roadmap

3.1 Vision

To see safe and clean healthcare facilities (HCFs) for the wellbeing of patients, clients, health facility staff and visitors.

3.2 Mission

To ensure inclusive, sustainable, and resilient basic WASH services that meet the highest standards in all HCFs in the country.

3.3 GOAL

To achieve universal access to adequate and sustainable WASH services in all HCFs by 2034

3.4 Strategic Objective of WASH in HCFs:

SO.1: Ensure the availability of inclusive and climate resilient, basic water supply services in HCFs.

SO.2: Ensure the availability of inclusive and climate resilient basic sanitation service in HCFs

SO.3: Ensure availability and sustainability of basic and inclusive hand hygiene services in HCFs to improve quality of healthcare service delivery.

SO.4: Ensure Safe and environmentally friendly healthcare waste management in HCFs.

SO.5: Ensure climate resilient and inclusive basic environmental cleaning service in healthcare settings.

SO.6: Ensure proper Enabling Environment for WASH and Environmental Health services in HCFs services

3.5 Description of strategic objectives:

Strategic objective 1: Ensure the availability of inclusive and climate resilient basic water supply services in HCFs.

Description

To provide quality care, healthcare facilities need to have a safe and adequate onsite water supply. HCFs are ranked among institutions with high water demand and hence, require access to an adequate supply of water at all times in order to maintain a standard of daily patient care services and other operations. Adequacy of water can be characterised in terms of quantity, quality, reliability, and accessibility.

Initiatives:

- 1.1. Provide reliable and basic water supply services for HCFs.
- 1.2. Solarisation of existing diesel-powered water supply systems where feasible.
- 1.3. Build capacity for operation and maintenance of water supply system.

Strategic objective- 2: Ensure the availability of inclusive and climate resilient basic sanitation services in HCFs.

Description

This strategic objective refers to the need to meet basic Sanitation in HCFs as it is among one of the 5 major areas covered by the national WASH program as a critical aspect of infection prevention and control (IPC) practices to control Healthcare associated infection by breaking the disease transmission cycle. Therefore, ensuring the availability of inclusive, and climate resilient basic sanitation service in HCFs is one of the strategic objectives to meet patient/client and HCWs/care takers safety and improve quality of care

Initiatives

- 2.1 Ensure access to basic and climate resilient sanitation services in healthcare facilities
- 2.2 Enhance liquid waste management system at HCFs
- 2.3 Build capacity for operation and maintenance of sanitation facilities.

Strategic objective 3: Ensure availability and sustainability of basic and inclusive hand hygiene services in HCFs to improve quality of healthcare service delivery.

Description:

This strategic objective focuses on improving hand hygiene service including infrastructure development, operation, maintenance, supplies and practices under the leadership of HCFs management system.

Initiatives:

- 3.1 Improve access to standard hand hygiene infrastructure.
- 3.2 Strengthen a system to address hand hygiene supplies.
- 3.3 Enhance hand hygiene practices among the healthcare workers, patients, client, caretakers and public.
- 3.4 Improve Hand Hygiene Compliance monitoring system.

Strategic objective 4: Ensure safe and environmentally friendly healthcare waste management in HCFs.

Description:

This strategic objective contributes to the creation of a healthy environment in healthcare facilities including environmentally sustainable, climate resilient and inclusive HCWM under the leadership of HCFs management system. The healthcare wastes include sharps waste, pathological waste, other infectious wastes, pharmaceutical waste including cytotoxic waste hazardous chemical waste, radioactive waste, wastewater, and general (non-risk)

Initiatives:

- 4.1 Improve access to standard HCWM infrastructures.
- 4.2 Strengthen a system to address HCWM supplies for collection, segregation, transportation, storage and disposal.
- 4.3 Enhance HCWM among the healthcare workers, patients, client, caretakers and public
- 4.4 Improve HCWM Compliance monitoring system.

Strategic objective 5. Ensure climate resilient and inclusive basic environmental cleaning service in healthcare settings:

Description:

The strategic objective focuses on developing policy, guideline standards and protocols of environmental cleaning. It also strengthens the basic service level for environmental cleaning consists of having written protocols available and ensuring all staff with cleaning responsibilities have received related training. Facilities that either have no protocols in place or have provided some but not all staff with training on environmental cleaning are classified as having limited services, while facilities lacking both protocols and training are considered to have no service.

Initiatives:

- 5.1. Access adequate environmental cleaning supplies and equipment
- 5.2. Ensure implementation of Environmental cleaning Standard Operating Procedures (SOPs).

Strategic Objective 6: Ensure proper Enabling Environment for WASH in HCFs services

Description:

This strategic objective will help the aim to create the conditions for a country to have sustainable, at-scale WASH services that will facilitate achievement of the Universal Access for All for WASH in HCFs with progressive reduction on HAIs and inequality.

Enabling environment for WASH in healthcare facilities comprises policy and institutional arrangements, multi sectoral integration, capacity building. Moreover M&E, finance and strengthening regulatory framework are another critical enabling environment for WASH in healthcare facilities.

Initiatives:

- 6.1 Developing and implementing policy and strategy for WASH in healthcare facilities
- 6.2 Strengthen institutional Arrangement for WASH in healthcare facilities
- 6.3 Building the capacity of healthcare facility staff on WASH in HCFs
- 6.4 Establish monitoring and evaluation mechanism for WASH in HCFs
- 6.5 Finance and budget

3.6 Targets

Domain	Short term – 2025- 2026	Medium Term – 2027- 2030	Long term – 2031 - 2034
Water	55–60%	61 –100%	Sustain 100% basic coverage and upgrade 20% of HCFs to advanced level water supply
Sanitation	39–50%	51 –100%	Sustain 100% basic sanitation services and upgrade 20% of HCFs to advanced level sanitation
Hand Hygiene	35– 45%	46– 100%	Sustain basic one to 100% and 20% of the basic to advanced level Hand Hygiene
Healthcare waste management	32– 55%	56– 100 %	Sustain basic one to 100% and 20% of the basic to advanced level Healthcare waste management
Environmental cleaning	30 – 40%	41 – 100%	Sustain basic to 100% and 20% of the basic to advanced level environmental cleaning services

3.7 Strategies /Approaches

- › Through Systematic assessment and establishing baseline, and regularly monitoring the WASH services implementation, .
- › By upgrading and maintaining WASH infrastructures in the HCFs to meet the minimum standards of cleanliness and safety.
- › By designing and implementing tailored hygiene promotion programs targeting healthcare workers, patients, and communities to inculcate good hygiene practices.
- › Through Provision of need-based training and capacity-building programs for healthcare staff
- › Through ensuring equitable access to reliable and inclusive WASH services within the HCFs considering the diverse needs of the patients, healthcare workers, and visitors.
- › Through establishing a platform for local community groups to actively engage in the planning, and maintenance of WASH initiatives in HCFs.
- › Through integrating environmentally sustainable and energy-efficient water, sanitation, and waste management technologies in HCFs.
- › Through development of emergency response plans for HCFs to be resilient and can maintain WASH services during crises.
- › By advocating and increasing awareness for funding, secure necessary resources.
- › By adhering to compliance with established national standards and regulations related to WASH in HCFs.

4 Physical & Financial Plan

4.1 Proposed Initiatives

Table 4.1: WASH in Healthcare facilities Initiatives proposed for a range of period (2025 – 2034)

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
Water Supply	Targets: 55- 60% Basic services	Target: 61- 100% Basic services	Targets: sustain the basic one to 100% and 20 % for advanced level water service
	SO1. Ensure the availability of inclusive and climate resilient basic water supply services in HCFs		
	Initiative 1.1 Provide reliable, and safe water supply system for HCF		
	Activities ■ Conduct assessment and prepare operational plan ■ Map resources, identify and establish partnerships with key stakeholders and local communities. ■ Construct an inclusive and climate resilient water supply system. ■ Conduct capacity building trainings ■ Provision of maintenance of tool Kits ■ Conduct regular/ periodic Monitoring and Evaluation	Activities ■ Continue provision of capacity building trainings ■ Continue Constructing, expanding, and upgrading of water supply system in HCFs ■ Continue Provision of maintenance tool Kits ■ Continue periodic inspection and treatment of water quality at source and point of use ■ Continue implementation of regular Monitoring and Evaluation ■ Define “Advanced level of water supply service” in healthcare facilities	Activities ■ Continue provision of capacity building trainings ■ Constructed, Expanded, Rehabilitated and upgrading of HCF ■ O&M ■ Provision of maintenance of tool Kits ■ Continue periodic inspection and treatment of water quality at source and point of use ■ Continue implementation of regular Monitoring and Evaluation ■ Start construction of advanced water supply service

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 1.2: Solarisation of existing diesel-powered water supply systems where feasible		
	Activities ■ Conduct baseline assessment on water supply systems in HCFs ■ Solarization of existing water supply systems.	Activities ■ Solarization Of existing water supply systems.	Activities ■ Solarization of existing water supply systems.
	Initiative1.3: Build capacity for the operation and maintenance of water supply system		
	Activities ■ Provision of maintenance of tool Kits ■ Train HCF staff on operation and maintenance of water supply systems. ■ Develop manuals, guidelines, and SOPs for routine O&M tasks ■ Schedule regular inspections and maintenance of all water supply systems. ■ Maintaining existing non-functional water systems ■ Conduct periodical water quality monitoring at source and point of use. ■ Install water treatment systems where necessary. ■ Conduct regular/ periodic Monitoring and Evaluation	Activities ■ Provision of maintenance of tool Kits ■ Conduct periodical water quality monitoring at source and point of use. ■ Install water treatment systems where necessary. ■ Conduct regular/ periodic Monitoring and Evaluation ■ Schedule regular inspections and maintenance of all water supply systems.	Activities ■ Provision of maintenance of tool Kits ■ Conduct periodical water quality monitoring at source and point of use. ■ Install water treatment systems where necessary. ■ Schedule regular inspections and maintenance of all water supply systems. ■ Conduct regular/ periodic Monitoring and Evaluation

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Target: 39 -50%Basic services	Target: 51- 100%Basic services	Target: sustain the basic one to 100% and 20 % for advanced level sanitation service
Sanitation	SO2. Ensure the availability of inclusive and climate resilient basic sanitation services in HCFs		
	Initiative 2.1 Ensure access to basic and climate resilient sanitation service in healthcare facilities.		
	Activities ■ Conduct baseline assessment on basic sanitation service ■ Resources mapping and establish partnerships with implementing partners ■ Provide training on sanitation to health service providers and Program managers ■ Establish regular planning, Monitoring and evaluation on implementation of sanitation service at HCFs. ■ Construct, upgrade or maintain existing toilet infrastructures in inclusive way (on gender based and limited mobility) ■ Manage, operate and maintain sanitation service at HCFs.	Activities ■ Continue provision of training on sanitation to health service providers ■ continue upgrading existing toilet infrastructures of basic sanitation service using WASH FIT ■ Construct inclusive and climate resilient basic sanitation facilities. ■ Management, operation, and maintenance of sanitation facilities ■ Define Advanced sanitation service in healthcare facilities	Activities ■ Continue management, operation and maintenance of sanitation facilities to sustain the service ■ Continue provision of training on sanitation to health service providers ■ Continue regular Monitoring of the implementation of the basic sanitation service. ■ Construction of advanced sanitation service (construction of Liquid waste treatment plant)

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 2.2: Enhance liquid waste management system at HCFs		
	Activities ■ Conduct baseline assessment on liquid waste gaps.	Activities ■ Upgrading of standard septic tank with three compartments for liquid waste storage at HCFs ■ Engage public and private sectors on	Activities ■ Construction of Liquid waste treatment plant at Hospitals
	Target: 35-45% to reach basic service	Target: 46-100% to reach basic service	Target: sustain the basic one to 100% and 20 % for advanced level Hand Hygiene service
Hand Hygiene	SO3. Ensure availability and sustainability of basic and inclusive hand hygiene services in HCFs to improve quality of healthcare service delivery.		
	Initiative 3.1. Improve access to standard hand hygiene infrastructures.		
	■ Develop /adapt infrastructure design ■ Develop action plan ■ Construct, maintain, and renovate hand hygiene facilities	■ Construct, maintain, and re-innovate hand hygiene infrastructures. ■ Review plan/ midterm review. ■ Develop construction plan for long term period.	■ Continued to construct, maintain, and re-innovate hand hygiene infrastructures.
	Initiative 3.2. Strengthen a system to address hand hygiene supplies		
	■ Identify and plan appropriate hand hygiene supplies ■ Procure supplies ■ Provide hand hygiene supplies ■ Follow up and supervision on its provision and utilization	■ Allocate and utilize budget for hygiene supplies in the HCFs budget line ■ Establish sustainable System based supply management ■ Strengthening public private partnership ■ Capacitate HCFs to generate their own hand hygiene supplies	■ Adequate budget allocation for hand hygiene supplies ■ Avail adequate hand hygiene supplies for HCFs ■ HCF Produce hand hygiene supplies ■ Learning and sharing best practice

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 3.3. Enhance hand hygiene practices among the healthcare workers, patients, client, caretakers and public		
	■ Conduct global hand hygiene events in the context of Ethiopia ■ Deliver capacity building trainings ■ Developed hand hygiene materials i.e. IEC/BCC materials	■ Continue celebrating global hand hygiene events ■ Expand the capacity building Training ■ Revise existing SOP and develop new ones ■ Previous and in-service training for Health workforce for hand hygiene practice ■ Provide periodic awareness raising for HCFs Staffs(Health workers ,administrative staffs and cleaners) ■ Learning and sharing best practice	■ Continue celebrating global hand hygiene events ■ Expand the capacity building Training ■ Review of the implementation ■ Establishing recognition system for best performers ■ Learning and sharing best practice
	Initiative 3.4. Improve Hand Hygiene Compliance monitoring system		
	■ Develop and avail SOPs, protocols, etc ■ Conduct compliance monitoring ■ Conduct periodic auditing	■ Conduct review/ consultative meeting ■ Review and utilise the SOPs and Protocol ■ Conduct policy dialogue ■ Continue compliance monitoring	■ Document learnings and sharing best practice ■ Conduct advocacy to improve hand hygiene compliances ■ Re-design new compliance monitoring mechanisms
HCWM	Target: 32-55%	■ Target: 56-100 %	■ Target: sustain the basic one to 100% and 20 % for advanced level Healthcare Waste Management service
	SO4. Ensure Safe and environmentally friendly healthcare waste management in HCFs		

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 4.1. Improve access to standard HCWM infrastructures		
	■ Develop /adapt infrastructure design ■ Develop action plan ■ Construct, maintain, and renovate HCWM facilities	■ Construct, maintain, innovate HCWM infrastructures ■ Review plan/ midterm review ■ Develop construction plan for long term period ■ Engage public and private sectors on HCWM interventions ■ Establish a functional HCWM treatment hub	■ Continue for upgrading works , maintain, innovate HCWM infrastructures ■ Evaluate the status as per the road map plan ■ Adapt new technologies for HCWM infrastructures ■ Work on sustainability work
	Initiative 4.2. Strengthen a system to address HCWM supplies for collection, segregation, transportation, storage and disposal		
	■ Advocate for HCFs to integrate HCWM supplies budget to their annual budget part. ■ Identify and engage competitively local suppliers working on HCWM. ■ Mobilise resources for HCWM supplies. ■ Procure HCWM supplies. ■ Provide HCWM supplies.	■ Allocate and utilise budget for HCWM supplies in the HCFs budget line ■ Establish sustainable System based supply management. ■ Strengthening public private partnership ■ Capacitate HCFs to generate their own HCWM supplies, ■ Learning and sharing best practice	■ Adequate budget allocation for HCWM supplies ■ Avail adequate HCWM supplies for HCFs. ■ Continue production of HCWM supplies ■ Conduct follow up on its proper utilisation of supplies.

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 4.3. Enhance HCWM practices among the healthcare workers, patients, client, caretakers and public		
	■ Develop/update HCWM training module ■ Provide pre- and in-service training for healthcare work force	■ Establish a system with municipal waste management to handle a general waste from HCFs ■ Expand the capacity building Training ■ Revise existing SOP and develop new ones ■ Continue provision of previous and in-service training for Health workforce for HCWM ■ Provide periodic awareness raising for healthcare workforce ■ Learning and sharing best practices	■ Develop Joint plan and implement management of healthcare waste general categories as municipal wastes ■ Expand the capacity building trainings ■ Review the implementation status ■ Establishing recognition system for best performers ■ Learning and sharing best practice
	Initiative 4.4. Improve HCWM Compliance monitoring system		
	■ Develop and utilise SOPs, protocols for HCWM ■ Conduct advocacy and awareness raising for decision makers and stakeholders. ■ Develop & avail compliance monitoring protocols and SOPs. ■ Develop a policy brief. ■ Conduct regular monitoring	■ Conduct review/ consultative meeting. ■ Review and utilise the SOPs and Protocol ■ Conduct policy dialogue. ■ Continue compliance monitoring. ■ Conduct compliance auditing	■ Document learning and sharing best practice. ■ Conduct advocacy to improve hand hygiene compliances. ■ Conduct evaluation. ■ Design new compliance monitoring mechanisms.

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Target 30- 40%	Target: 41-100%	Target: sustain the basic one to 100% and 20 % for advanced level Environmental cleaning service
Environmental cleaning	SO5. Ensure climate resilient and inclusive basic environmental cleaning service in healthcare settings		
	Initiative 5.1. Strengthen availability and accessibility of adequate environmental cleaning supplies and equipment		
	■ Establish a baseline on the availability and utilisation of environmental cleaning supplies and equipment, supplies and facilities. ■ Prepare a cost incremental EC service improvement plan. ■ Organise awareness creation events to allocate resources for accessibility and availability of EC facilities, equipment and supplies. ■ Monitor availability and proper utilisation of supplies and equipment. ■ Ensure operation and maintenance status of cleaning equipment.	■ Develop and implement advocacy and resource mobilisation for EC facilities, equipment and supplies. ■ Ensure availability, accessibility, and sustainability of the supply chain. ■ Train workers for cleaning and health workers on proper use of equipment, facilities, and supplies ■ Define and pilot advance EC service level. ■ Monitor availability and proper utilisation of supplies and equipment. ■ Ensure operation and maintenance status of cleaning equipment.	■ Design and implement advanced EC services in all HCFs. ■ Train cleaning and healthcare workers on advanced EC service level ■ Ensure sustainable supply chain of environmental cleaning. ■ Schedule and cascading capacity building on the utilisation of supplies ■ Internally assess functionality and sustainability of the EC supply chain ■ Ensure operation and maintenance status of cleaning equipment.

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 5.2. Ensure availability and accessibility Environmental cleaning Standard Operation Procedures (SOPs)		
	■ Establish baseline on the availability and accessibility SOPs ■ Develop/revise/ print/distribute and document SOPs based on assessment finding. ■ Prepare detailed action points based on the assessment. ■ Train cleaning and healthcare workers on SOPs ■ Conduct EC compliance monitoring.	■ Update SOPs based on new developments ■ Train cleaning and healthcare workers on the update SOPs ■ Conduct continuous compliance monitoring on the availability and use of the SOPs. ■ Strengthen environmental cleaning coordination platform. ■ Define advanced EC level services and update SOPs based on advanced EC service level	■ Implement advanced EC level services and SOPs. ■ Train cleaning and healthcare workers on update SOPs ■ Continuous monitoring on compliance of SOPs ■ Ensure operation and maintenance status of cleaning equipment.
Enabling Environment	SOB 6. Ensure proper Enabling Environment for WASH in HCFs services		
	Initiative: 6.1 Developing and implementing policy and strategy for WASH in healthcare facilities		
	■ Identify policies, strategies and guidelines related to WASH in HCFs ■ Conduct review of the policies and strategies related to WASH in healthcare facilities in terms of global and national situation and update based on the findings ■ Promote and develop policies and strategies in related to WASH in HCFs	■ Ensure the inclusion of WASH in HCFs in national policy and strategy documents in a comprehensive manner/ ■ Availability and practice of regulatory framework and standards for WASH in healthcare facilities ■ Facilitate the update of those policies and strategies based on the gap	■ Support the implementation of policies and strategies at regional and healthcare facility level ■ Engage sectors, partners and private sectors in the implementation of policies and strategies

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 6.2: Strengthen institutional Arrangement for WASH in healthcare facilities		
	■ Identify lead agency and/or establish technical working group for WASH in healthcare facilities in Ethiopia with clear TOR ■ Conduct assessment on the gap and capacity of those institutions ■ Design and implement community engagement mechanisms through organizing discussion forums with the community representatives ■ Staffing and HR	■ Develop operation and maintenance plan with clear role and responsibility of actors at the national, sub-national and health facility levels ■ Plan and conduct technical and financial capacity building of those institutions	■ Conduct research on how to establish more responsive institutional arrangement for WASH in HCFs ■ Documentation and scale up of best practices on WASH in Healthcare facilities
	Initiative 6.3: Building the capacity of healthcare facility staff on WASH in HCFs		
	■ Conduct technical skill and implementation capacity gap assessment on WASH in healthcare facilities ■ Conduct training of training for public health experts at regional, district and health facility level ■ Cascade basic training for cleaners, O&M and other supportive staff on WASH in healthcare facilities.	■ Cascade basic training for cleaners, O&M and other supportive staff on WASH in healthcare facilities. ■ Plan and implement a close mentorship and follow up to improve WASH in healthcare facilities.	■ Organize and conduct experience sharing and learning events among health facilities

Domains	Water, sanitation, Hygiene, HCWM and EC services coverage at HCF levels		
	Short Term (2025-2026)	Medium Term (2026-2030)	Long-Term (2031 -2034)
	Initiative 6.4: Establish monitoring and evaluation mechanism for WASH in HCFs		
	■ Identify major gaps and bottlenecks on WASH in HCFs monitoring and evaluation ■ Ensure inclusion of indicators in DHIS2 addressing utilization and functionality of WASH infrastructure in healthcare facilities,	■ Conduct regular assessment and surveys on WASH in HCFs ■ Support and monitor the implementation of those policy strategies including proper reporting as per the indicators	■ Conduct regular assessment and surveys on WASH in HCFs ■ Support and monitor the implementation of those policy strategies including proper reporting as per the indicators
	Initiative 6.5: Finance and budget		
	■ Advocate and ensure budget allocation for WASH in healthcare facilities from the government. ■ Develop resource mobilization plan for WASH in healthcare facilities. ■ Develop financial estimates for in kind support from the community and private sector.	■ Develop resource mobilization plan for WASH in healthcare facilities. ■ Capacity building on financial utilization and reporting	■ Design close follow up for the allocated budget utilization and liquidation. ■ Evaluate the effectiveness and efficiency of allocated budget ■ Organize experience sharing and learning events on best utilization finance

5 Implementation Arrangements, Monitoring Evaluation and learning

5.1. Governance Structure

Targets, initiatives and milestones of the roadmap will be referred to in the preparation of annual plans of all relevant sectors. The Ministry of Health will take the coordination of the planning, implementation and the Monitoring & Evaluation of the targets.

5.2 Stakeholder Role and Responsibility

Stakeholder	Role and Responsibility
Ministry of Health	■ Support Regional Health Bureaus adopt the roadmap and avail the necessary resources (human, material, financial). ■ Coordinate planning, implementation and regular monitoring of HCF WASH interventions with relevant actors ■ Advocates allocation of necessary resources and mobilizes resources from government, development partners and Donors. ■ Facilitate the development of strategies, guidelines and training manuals on HCF WASH ■ Coordinates and strengthen technical Support on improvement of WASH services in health facilities ■ Lead regulation of WASH services availability with standard and quality in HCFs. ■ Promote engagement of private sector in supply chain for HCF WASH products and services ■ Establishes and strengthen regular M&E mechanism ■ Conduct different research ■ Facilitates documentation and sharing of lessons learned for scale up

Stakeholder	Role and Responsibility
Regional Health Bureau	■ Coordinate regional planning, implementation and regular monitoring of HCF WASH interventions with relevant actors ■ Advocates allocation of necessary resources and mobilizes resources from government, development partners and Donors ■ Coordinates and strengthen technical Support on improvement of WASH services in health facilities level ■ Regulate HCF-WASH services availability with standard and quality
	■ Adopt strategies, roadmaps, guidelines and manuals to regional contexts ■ Coordinates regional efforts on human resource development Ensure provision of WASH services in health facilities ■ Ensure provision of WASH services in health facilities ■ Conduct different regional research focusing on HCF –WASH ■ Follow reporting platform
Zonal health Bureau	■ Coordinate zonal planning, implementation and regular monitoring of HCF WASH interventions with relevant actors ■ Advocates allocation of necessary resources and mobilizes resources from government, development partners and Donors ■ Coordinates and strengthen technical Support on improvement of WASH services in health facilities level ■ Coordinates zonal efforts on human resource development ■ Ensure presences of WASH services in health facilities based on the standard. ■ Conduct different zonal level research focusing on HCF –WAS ■ Ensure implementation of reporting platform
Woreda health Bureau	■ Conduct woreda planning, implementation and regular monitoring of HCF WASH interventions with relevant actors ■ Advocates allocation of necessary resources and mobilizes resources from government, development partners and Donors ■ Coordinates and strengthen technical Support on improvement of WASH services in health facilities level ■ Coordinates woreda efforts on human resource development ■ Ensure presences of WASH services in health facilities based on the standard ■ Conduct different woreda level research focusing on HCF –WASH ■ Follow and implement reporting platform

Stakeholder	Role and Responsibility
Healthcare Facility	■ Conduct Healthcare Facility planning, implementation and regular monitoring of HCF WASH interventions ■ Advocates allocation of necessary resources and mobilizes resources from government, development partners and Donors ■ strengthen technical Support on the improvement of WASH services in health facilities level ■ Coordinates the Healthcare facility efforts on human resource development ■ Avail WASH services based on the standard ■ Conduct assessment focusing on HCF –WASH ■ Follow and implement reporting platform ■ Cross check WASH availability and service reporting data ■ Conduct WASH in HCF training need and plan training for healthcare staffs
Ministry of water and energy	■ Ensure provision of safe and adequate water supply at all settings ■ Allocate an appropriate budget expansion of water supply coverage ■ Mobilize resources for the water supply
Ministry of Education	■ Support developing plans for WASH in university hospitals ■ Mobilize resource in WASH service including O&M ■ follow and implement reporting platform
Ministry of finance	■ Allocate appropriate annual budgets for WASH in HCF
Donors/ partners	■ Provide technical and financial support. ■ Introduce new technology and approaches for healthcare facility WASH. ■ Conduct assessment and research.

5.3. Planning and Implementation

This road map guides all the government and stakeholders to ensure availability of water, sanitation and hygiene services for all (SDG6), and further to contribute to efforts of the government to access quality essential healthcare services (SDG 3.8).

5.4. Monitoring and Evaluation

This M&E framework is meant to guide the monitoring and evaluation of WASH in Healthcare facility implementation. The monitoring and evaluation of the WASH in Healthcare facility is designed based on the five main components of the program, namely, Water Supply, Sanitation, Hand Hygiene, Health Care Waste & Environmental Cleaning. All relevant indicators must be tracked regularly at monthly, quarterly, bi-annual, and annual intervals at different levels based

on agreed-upon time. The required data for monitoring and evaluation needs to be regularly registered. By maintaining accurate and up-to-date data, stakeholders can make informed decisions and measure the impact.

Baseline assessment will be conducted which aims to retrieve data of WASH in Healthcare facilities to evaluate the real conditions of the facilities. This assessment will provide a robust and realistic basis for the monitoring and evaluation of the strategic roadmap.

The performance of sectors will be reviewed quarterly at existing Hygiene & Environmental Health platforms. Midterm and final evaluation will be conducted. This evaluation will examine as systematically and objectively as possible the effectiveness, the efficiency, impact and sustainability of the strategic roadmap.

5.4.1. Monitoring and Evaluation Framework

WASH in HCF Roadmap M&E Framework				
Goal	To achieve universal Access to basic WASH services in all HCFs by 2034			
Component	Water Supply, Sanitation, Hand hygiene, HCW Waste, Environmental Cleaning			
	INPUT	OUTPUT	OUTCOMES	IMPACT
Domain Water Sanitation Hygiene Waste management Environmental cleaning Enabling environment	■ Governance leadership Policy, Guideline, Strategies ■ Human Resources ■ Finance ■ Community	■ No of assessment documents & plan ■ No of constructed & rehabilitated WASH infrastructures ■ No of trained HR on WASH program implementation ■ No of SS & RM conducted ■ Capacity building	■ Behaviour & knowledge change ■ Increased basic level service level provision ■ Increased coverage of WASH implementing HFS ■ Decreased HAIs rate at HFs ■ Increased hand washing compliance rate ■ Improved staff morale & performance ■ Increases care seeking ■ Improved IPC & reduced AMR ■ Reduced environmental pollution ■ More efficient use of resources	■ Dignify safe pregnancy & delivery and fewer preventable maternal & newborn death ■ Decreased morbidity & mortality rate ■ Healthier & more productive family & community
Data Source	DHIS2report, SPA, Assessment			
Data analysis	Data quality assurance, Triangulation of data from different sources, Comparison of performance against benchmark (Targets, baselines, standards and international & national commitments)			
Communication	Regular reporting through digital platform, regular review and other forums; evaluation, share information products to higher level by different platform			

5.4.2. Key performance indicators

SN	Components	Indicator addressed	Frequency	Data elements	Definition	Report source	Responsible
1	Water	Proportion of healthcare facilities with water service disaggregated by basic, limited, & No services	Annual	Number of health facilities with water services	Basic water service: Water is available from an improved water source and has the potential to deliver safe water on the premises. Limited water services: Water is available from improved water sources and has the potential to deliver safe water within 500 meters of the premises. The water source is not in the health facility but is within 500m from the health facility. No water services: Water is taken from unprotected dug wells or springs, or surface water sources; or an improved source that is more than 500 meters from the premises; or there is no water source.	DHIS2 report (HEALTH UNIT PHYSICAL INVENTORY)	
		Proportion of facilities with improved functional water sources	Annual	Number of functional water sources	An improved water source is one that by nature of construction or through active intervention is protected from outside contamination with faecal matter. e.g. 1. Piped water 2.Tube well 3.Borehole 4.Protected dug well Functional: sources with satisfactory/ sufficient water quantity, quality and reliability (sufficiency, adequacy and reliable)	Survey/ Assessment	

SN	Components	Indicator addressed	Frequency	Data elements	Definition	Report source	Responsible
2	Sanitation	Proportion of healthcare facilities with sanitation facilities disaggregated by basic, limited & no sanitation service	Annual	Number of health facilities with sanitation facilities	Basic sanitation service: Improved sanitation facilities are usable, 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 sanitation services: At least one improved sanitation facility is available, but not all requirements for basic service are met No sanitation services: Toilet facilities are unimproved (e.g., pit latrines without a slab or platform, hanging Latrines, bucket latrines) or there are no toilets.	DHIS2 Report (HEALTH UNIT PHYSICAL INVENTORY)	
			Annual	Privacy	lockable door	DHIS2 Report (HEALTH UNIT PHYSICAL INVENTORY)	
		Percentage of HCFs with at least one toilet for women and girls		No. of stances usable for women	Clean and intact slab		
				Availability of bin/s for menstrual hygiene	Is there a bin/s for menstrual hygiene		
				No of Accessible toilets/ latrines for women	located within 30m /100ft		

SN	Components	Indicator addressed	Frequency	Data elements	Definition	Report source	Responsible
		Percentage of useable improved toilets/latrines available at the facility	Annual	No. of accessible toilet/latrine	Located on premises within 100ft/30m;		
				No. of functional toilets	Water running; clean toilet		
				No. of functional Latrines	Clean Latrine, Firm structure		
				No. of toilets/latrines with privacy	Lockable doors		
				No. of VIP latrines	Have intact standing VIP pipes with a cover		
				No. of flashing Toilets	running water, and flushable		
				No. of pits latrines with slab	Firm floor (without any cracks)		
				Adequate toilet facilities	No. of Health facilities with toilet stance of Ratio of 1:25		
			Annual	No. of Toilets/latrines with ramps for Females	Rump /slanted path for wheelchairs for disabled persons.	DHS2 Annual Report (HEALTH UNIT PHYSICAL INVENTORY)	
				No. of Toilets/latrines with ramps for Female staff			
				No. of Toilets/latrines with ramps for Male staff			

SN	Components	Indicator addressed	Frequency	Data elements	Definition	Report source	Responsible
3	Hygiene	Proportion of health facility with hand washing service disaggregated by basic, limited & No services	Quarterly	Number of health facility with hygiene facilities	Basic hygiene service: Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely Limited hygiene service: Functional hand hygiene facilities are available either at points of care or toilets but not both. No hygiene service: No functional hand hygiene facilities are available either at points of care or toilets.	Annual report	
		Percentage of HCFs having a functional hand washing facility with soap and water in or next to the sanitation facility.	Quarterly	Number of functional hand washing facilities	A Functional hand washing facility is a device that has flowing water and soap to facilitate handwashing, it may be fixed or mobile.	Annual report	
		Percentage of HCFs having a functional hand washing facility with soap and water where patients are examined and treated.	Quarterly		A hand washing facility is a device that contains, transports or regulates the flow of water to facilitate handwashing, it may be fixed or mobile with soap.	QA and QI reports	

SN	Components	Indicator addressed	Frequency	Data elements	Definition	Report source	Responsible
4	Healthcare Waste Management	Proportion of health facilities with healthcare waste management services	Annual	No of health facilities with healthcare waste management services	Basic waste management service: Waste is safely segregated into at least three categories: bins, sharps and infectious wastes, and are treated and disposed safely. Limited waste management services: There is limited separation and/or treatment and disposal of sharps and infectious waste, but not all requirements for basic service are met. No waste management services: There are no separate bins for sharps or infectious waste, and sharps and/or infectious waste are not treated/disposed of safely.	DHS2 Report (HEALTH UNIT PHYSICAL INVENTORY)	
		Proportion of Health Facilities Segregating Healthcare waste	Annual	Create a new data element: "Waste Segregation in major points of care"	Health Facility segregates waste Using at least three colour coded/labelled bins i.e. (1) sharps (2) infectious and (3) non-infectious / general waste.	DHS2 Report (HEALTH UNIT PHYSICAL INVENTORY)	
		Proportion of health facilities safely disposing Infectious Waste	Annual	Change "Incinerator" to "Functional Incinerator", Add a sub variable to cater for Safe Sharps Temporary Collection/ storage or facilities without Incinerators.	Infectious waste includes Sharps, Used Supplies, Chemical Waste, Pharmaceutical, Anatomical parts Safe disposal involves pre-treatment of this waste then Disposed by incineration/burying on site as per standards Facilities should have in place Incinerators for HC-IVs and above. For HC-IIs & IIIs lacking incinerator should have a temporary collection/storage for safe medical waste disposal provided on-site.	DHS2 Report (HEALTH UNIT PHYSICAL INVENTORY)	

SN	Components	Indicator addressed	Frequency	Data elements	Definition	Report source	Responsible
		Proportion of health facilities Safely disposing of non-infectious Waste	Annual	Change “Incinerator” to “Functional Incinerator”, add a sub variable to cater for Safe Sharps Temporary Collection/ storage or facilities without Incinerators.	Infectious waste includes Sharps, Used Supplies, Chemical Waste, Pharmaceutical, Anatomical parts Safe disposal involves pre-treatment of this waste then Disposed by incineration/burying on site as per standards Facilities should have in place Incinerators for HC-IVs and above. HC-IVs & ILLs lacking incinerator should have a temporary collection/storage for safe medical waste disposal provided on-site.	Annual Report (HEALTH UNIT PHYSICAL INVENTORY)	
5	Environmental Cleaning	Proportion of health facilities with Environmental Cleaning Service disaggregated by basic, limited & no service	Annual		Basic environmental cleaning: basic protocols for cleaning are available, and staff with cleaning responsibilities have all received training limited environmental cleaning: there are cleaning protocols, and /or at least some staff have received training on cleaning No service: no cleaning: protocols are available, and no staff have received training on cleaning	Annual Report (HEALTH UNIT PHYSICAL INVENTORY)	

6 Research, Documentation, and Learning

In order to support informed decision-making at all levels of the WASH program, both routine and non-routine data collection mechanisms will be utilized. Routine data collection will occur at monthly, quarterly, semi-annual, and annual intervals across all levels of healthcare facilities. This will ensure continuous monitoring of progress and timely identification of areas that require intervention.

To ensure the quality of data, several measures will be implemented:

- › Standardized data collection tools and reporting formats will be made available to all facilities.
- › Clear criteria and procedures for data reporting will be established, with an emphasis on consistency, timeliness, and completeness.
- › Training sessions will be provided to professionals on the use of data collection tools and reporting formats, ensuring that staff are fully equipped to collect accurate and reliable data.

Data analysis will incorporate both qualitative and quantitative approaches, depending on the nature of the data collected. This approach allows for a more comprehensive understanding of trends, challenges, and opportunities within WASH services. The results of these analyses will be disseminated and communicated to key stakeholders on time. Communication will take place through a variety of platforms, including electronic media (e.g., emails, online dashboards, publication and reports) and printed materials, ensuring accessibility and engagement at all levels of decision-making.

Moreover, documentation of best practices and lessons learned will be an integral part of the WASH program. This will contribute to the ongoing improvement of program activities and will support the development of adaptive strategies in response to emerging challenges. Research initiatives will be encouraged to fill knowledge gaps and drive innovation in water, sanitation, and hygiene interventions. Key findings from research activities will be integrated into the program through policy updates and operational adjustments, creating a learning-oriented environment that fosters continuous improvement.

7 Costing and Financing

To translate the ambitious goals into a realistic roadmap, it is essential to estimate the financial resources needed to attain them. The costing helps identify potential funding gaps or highlight areas where additional resources might be needed, and prioritization of initiatives based on their cost-effectiveness. It also promotes accountability and transparency, allowing stakeholders to monitor developments and evaluate how well resources are being used throughout the implementation of the WASH in Healthcare Facilities roadmap.

7.1 Costing Method

The method employed to estimate the cost of implementing the roadmap involves the use of the program costing method. It mainly involves identifying and quantifying the specific activities to be costed, determining and quantifying the type of specific inputs for implementing the activities, and gathering unit costs from different sources. The activities under the strategic objectives and initiatives of the roadmap were used as costing units for the costing exercise. There were 93 activities to be costed under 20 initiatives requiring different types of inputs for execution. For the activities identified as costing units, the type and number of inputs required were then determined by the task force, considering the realization of the strategic objectives through the execution of the activities. According to the nature of the inputs and methodological advantage, the inputs were categorized into the following groups: 1) Training and workshop; 2) Supervision; 3) Infrastructure construction and equipment; 4) Supplies and Consumables; 5) Media and Print; and 6) Other costs. Unit costs for the different inputs were gathered from various sources, which

include the unit cost database available from the Strategic Affairs Executive Office (SAEO), where most of the unit costs were taken. In addition, standards and reports provided by the MOH and implementing partners were considered. If specific costs for items were not available, the costing data were drawn from an African regional or international source and noted as such in the costing tool. We have used a discounting rate of 3% and USD to ETB exchange rate of 120.

7.2 Costing Summary of Results

The total cost of implementing the WASH in Healthcare Facilities Roadmap over the eleven years is estimated to be about USD 652 million which would be USD 55, 427 and 170 million in the short-, medium- and long- term respectively. On average, this is equivalent to an average investment need of USD 59.3 million. The total cost of each phase as well as the investment needs under each strategic objective, are given in the table below.

Table 7.1: Total estimated cost under each strategic objective (Million USD)

#	Strategic Objective	2025-2026	2027-2030	2031-2034	Total
S01	Ensure a climate-resilient, reliable, and safe water supply system in HCFs	0.36	142.10	33.90	176.35
S02	Ensure the availability of inclusive and climate-resilient sanitation services in HCFs	0.46	103.54	27.06	131.06
S03	Ensure availability & sustainability of basic & inclusive hand hygiene services in HCFs to improve quality of service delivery.	17.92	40.81	21.23	79.96
S04	Ensure safe & environmentally friendly healthcare waste management in HCFs	25.31	95.60	31.06	151.97
S05	Ensure climate-resilient & inclusive basic environmental cleaning service in healthcare settings.	11.15	44.61	55.76	111.52
S06	Ensure a proper Enabling Environment for WASH in HCFs services	0.25	0.50	0.50	1.26
	Total cost (Million USD)	55.45	427.16	169.51	652.12

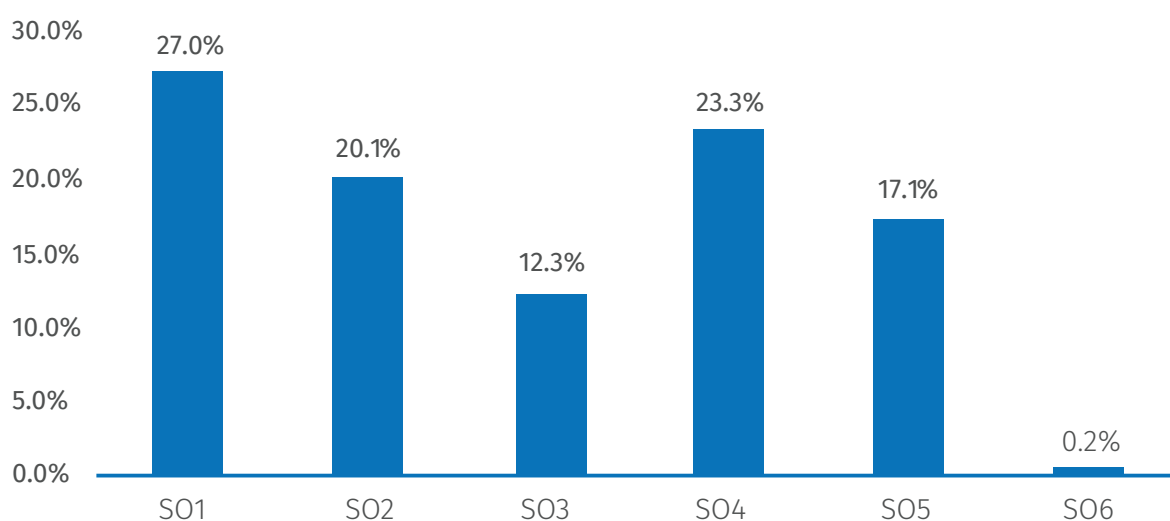


Figure 7.2: Distribution of total cost across strategic objectives

From the total cost, the strategic objective on 'SO1: 'Ensure a climate resilient, reliable, and safe water supply system within HCFs' constitutes the majority share – 27% or about USD 176 million, while 'SO4: Ensure safe & environmentally friendly healthcare waste management in HCFs requires 23.3% of the total investment or USD 121 million. The distribution of the cost by strategic objective is also shown in the Figure below. The estimated costs are further disaggregated by the fifteen key intervention areas as shown in the table below.

Table 7.3: Cost breakdown by Initiative (Million USD)

SO	Initiatives
SO1	1.1 Provide a reliable and safe, and basic water supply system for HCF
SO1	1.2 Solarization of existing diesel-powered water supply system schemes to solar power in feasible and selected HFs
SO1	1.3. Build and enhance the operation and maintenance of the water supply system
SO2	2.1 Access to basic and climate-resilient sanitation services in healthcare facilities
SO2	2.2: Enhance the liquid waste management system at HCFs
SO3	3.1 Improve access to standard hand hygiene infrastructure
SO3	3.2. Strengthen a system to address hand hygiene supplies
SO3	3.3. Enhance hand hygiene practices among the healthcare workers, patients, clients, caretakers, and public
SO3	3.4. Improve Hand Hygiene Compliance monitoring system
SO4	4.1. Improve access to standard HCWM infrastructures
SO4	4.2. Strengthen a system to address HCWM supplies
SO4	4.3. Enhance HCWM practices among the healthcare workers, patients, clients, caretakers, and the public
SO4	4.4 Improve HCWM Compliance monitoring system
SO5	5.1. Access adequate environmental cleaning supplies and equipment
SO5	5.2. Ensure implementation of Environmental cleaning Standard Operating Procedures (SOPs)
SO6	6.1. Developing and implementing policy and strategy for WASH in healthcare facilities
SO6	6.2 Strengthen institutional arrangements for WASH in healthcare facilities
SO6	6.3 Building the capacity of healthcare facility staff on WASH in HCFs
SO6	6.4 Establish a monitoring and evaluation mechanism for WASH in HCFs
SO6	6.5 Finance and budget
	Total Cost (Million USD)

The estimated costs under each type of cost-driver are also computed. Infrastructure development and equipment take the highest share (67%) followed by supplies and consumables (13%), and training and workshops (12%). Each of the remaining cost drivers such as supervision, media & printing requires less than 5% of the total estimated cost. This shows that the bulk of the required resources for implementing the roadmap goes to highly capital-intensive investments.

Table 7.4: Summary of cost by type of cost category (USD)

#	Cost Breakdown	2025-2026	2027-2030	2031-2034	Total
1	Training and Workshop	6.53	50.31	19.97	76.81
2	Supervision	2.70	20.79	8.25	31.73
3	Infrastructure and Equipment	36.97	284.77	113.01	434.74
4	Supplies or consumables	7.28	56.10	22.26	85.65
5	Media, print	1.68	12.96	5.14	19.79
6	Other cost items	0.29	2.23	0.88	3.40
	Total Cost	55.45	427.16	169.51	652.12

The infrastructure investment required is mainly for the five major priority areas of the roadmap:

water supply, sanitation, hand hygiene, waste management, and environmental cleaning. The distribution of the investment is shown in the graph below. Improvement of water supply amenities constitutes the highest share of the investment, followed by sanitation services and waste management.

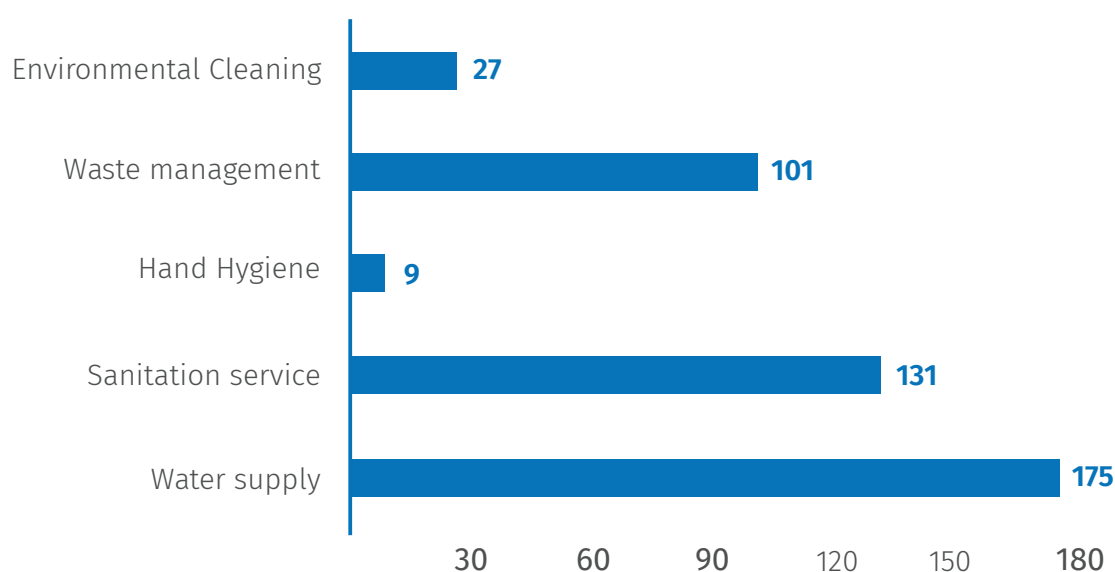


Figure 7.5: Required Investment for Infrastructure development and equipment (Million USD)

7.3 Proposed Financing Arrangement

It is planned to leverage resources from federal and regional governments, development partners, as well as through the engagement of communities. The proposed share of finance from each of these sources is given in the table below, including the expected amount over the roadmap implementation period and annually. The federal and regional government finance source primarily targets budgetary allocations, while the development partner source would need to explore loans, grants, and concessional financing from donor agencies. Developing a strong proposal that clearly outlines the strategic goals, potential impact, and cost-effectiveness is crucial for attracting financing. The financing through community engagement shall be primarily led by the respective local administrative bodies through different modalities.

Table 7.5: Proposed financing arrangement

Source of Finance	Share	Expected Budget (Million USD)				
		2025-2026	2027-2030	2031-2034	Total (2025-2034)	Annual (Average)
Federal Government	20%	11.09	85.43	33.90	130.42	11.86
Regional Government	30%	16.64	128.15	50.85	195.64	17.79
Development Partners	20%	11.09	85.43	33.90	130.42	11.86
Community	30%	16.64	128.15	50.85	195.64	17.79
Total	100%	55.45	427.16	169.51	652.12	59.28

Reference

- › WASH and Environmental Health Strategy (2021-2025),
- › Health Sector Development and Investment Plan (HSDIP)
- › WASH and Waste management in Health Care Facility WHO/UICEF JMP 2020 report
- › WASH and Waste management in Health Care Facility WHO/UICEF JMP 2023 report
- › Waste management manual
- › WASH in Health care facility Guideline
- › National Hand Hygiene for All Roadmap
- › National Infection prevention and control strategy and roadmap 2021/22-2025/26.
- › Water Aid, 2022. Water, sanitation and hygiene: a foundation of strong, resilient health systems. Global learning report May 2022
- › Service Provision and Assessment Ethiopian report, 2021/2022
- › Gammon J, Hunt J. The neglected element of hand hygiene - significance of hand drying, efficiency of different methods and clinical implication: A review. J Infect Prev. 2019 Mar;20(2):66-74
- › WASH FIT second edition
- › JMP report 2020
- › JMP report 2024
- › HEKS-EPER 2023. Assessment of WASH in selected HCFs in North Shoa and West Gojam, Amhara Region, Ethiopia
- › Derso A., et al (2023) Healthcare facility water, sanitation, and hygiene service status and barriers in Addis Ababa, Ethiopia. Journal of Water, Sanitation and Hygiene for Development Vol 13 No 12, 1001 doi: 10.2166/washdev.2023.217
- › SNV, 2019: Assessment report of WASH in Health Care Facilities in Este woreda, conducted by MoH, RHB, ZHD and Este Woreda Health Office in collaboration with SNV Ethiopia
- › FDRE MoH, MoA, and FCCC (2021) Antimicrobial Resistance Prevention and Containment strategic plan: The One Health Approach 2021-2025, Addis Ababa, Ethiopia
- › Mekengo B.M et al (2021). Distribution and antimicrobial resistance profile of bacteria recovered from sewage system of health institutions found in Hawassa, Sidama Regional State, Ethiopia: A descriptive study. SAGE Open Medicine Volume 9: 1–8. DOI: 10.1177/20503121211039097

**WASH and Waste Managment in Health Care Facilities
National Roadmap 2025-2034**



ጤና ሚኒስቴር - ኢትዮጵያ
MINISTRY OF HEALTH-ETHIOPIA