WATER AND SANITATION PROGRAM: **TECHNICAL PAPER**

Monitoring sanitation and hygiene in rural Ethiopia:

A diagnostic analysis of systems, tools and capacity

Oliver Jones

June 2015

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This Technical Paper draws from experience of WSP's Scaling Up Rural Sanitation project in Ethiopia. This global project focused on learning how to combine the promising approaches of Community-Led Total Sanitation and Sanitation Marketing to generate sanitation demand and strengthen the supply of sanitation products and services at scale, leading to improved health for people in rural areas. It is a large-scale effort to meet the basic sanitation needs of the rural poor who do not currently have access to safe and hygienic sanitation. The project is being implemented by local and national governments with technical support from WSP. For more information, please visit *www.wsp.org/scalingupsanitation.*

This Technical Paper is one in a series of knowledge products designed to showcase project findings, assessments, and lessons learned in the Global Scaling Up Rural Sanitation Project. This paper is conceived as a work in progress to encourage the exchange of ideas about development issues.

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The Water and Sanitation Program is a multi-donor partnership, part of the World Bank Group's Water Global Practice, supporting poor people in obtaining affordable, safe, and sustainable access to water and sanitation services. WSP's donors include Australia, Austria, Denmark, Finland, France, the Bill & Melinda Gates Foundation, Luxembourg, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States, and the World Bank.

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Table of Contents

Annexes

Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
BoE	(Regional) Bureau of Education
BoFED	(Regional) Bureau of Finance & Economic Development
BoH	(Regional) Bureau of Health
BoWR	(Regional) Bureau of Water Resources
CSA	Central Statistics Authority
CLTSH	Community Led Total Sanitation & Health
DAG	Development Assistance Group
DHS	Demographic and Health Survey
GDP	Gross Domestic Product
GTP	Growth and Transformation Plan
HC	Health Centre
HEW	Health Extension Worker
HEP	Health Extension program
HIV	Human Immunodeficiency Virus
HH	Household
HSDP	Health Sector Development Plan
IHS	Improved Hygiene and Sanitation
JMP	Joint Monitoring Programme
JTR	Joint Technical Review
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
MoE	Ministry of Education
MoFED	Ministry of Finance and Economic Development
MoH	Ministry of Health
MoU	Memorandum of Understanding
MoWIE	Ministry of Water, Irrigation and Energy
MoWR	Ministry of Water Resource – now the Ministry of Water, Irrigation and Energy
MSF	Multi-Stakeholder Forum
NWTT	National WASH Technical Team
NGO	Non-governmental organization
NHSTF	National Hygiene and Sanitation Task Force
OWNP	One WASH National Program
ODF	Open Defecation Free
PHCU	Primary Health Care Units
RHB	Regional Health Bureau
SAP	(Hygiene and Sanitation) Strategic Action Plan
SDG	Sustainable Development Goals
SNNPR	Southern Nations and Nationality Region
SWAp	Sector Wide Approach
UAP	Universal Access Programme
UNICEF	United Nations Children's Fund
WASH	Water, sanitation and hygiene
WED	Woreda Education Department
WHD	Woreda Health Department
WHO	World Health Organization
WMS	Welfare Monitoring Survey
WOFED	Woreda Finance &Economic Development Bureau
WWD	Woreda Water Department

Executive Summary

Monitoring changes in the coverage of sanitation[1] and hygiene facilities continues to be a challenge faced by many governments in the developing world. Effective monitoring is further complicated by the need not just to count related infrastructure but to also track changes in individual, household and community behaviors, as well as the economic and health impact of these changes. The 2014 GLAAS report highlights, for example, that "most sector decisions are not evidence-based due to the widespread lack of capacity for monitoring, inconsistent or fragmented gathering of data and limited use of information management systems and analysis"[2].

The responsibility for monitoring sanitation and hygiene interventions in Ethiopia rests with the Ministry of Health, however the prevailing trend in recent years has been to align the planning, monitoring and reporting of the drinking water, sanitation and hygiene (WASH) sector. To achieve this there has been increased dialogue and coordination between the Ministry of Health, Ministry of Water, Irrigation and Energy, Ministry of Education, and Ministry of Finance and Economic Development. This has resulted in some progress in the establishment of systems to effectively monitor the status of water and sanitation services in Ethiopia against sector targets.

This report is based on a four year initiative by WSP undertaken at the request of the Ministry Health to improve the monitoring protocols of sanitation in an effort to provide clear evidence for decision-makers. For the first time, this report brings together an analysis of the multiple monitoring systems that have been developed by the WASH sector Ministries. The report aims to systematically analyze the evolution of the systems, tools and capacity in place to capture and analyze sanitation and hygiene related monitoring data. The recommendations in this report aim to inform the Ministry of Health, and wider One WASH National Program (OWNP), to further strengthen the monitoring of sanitation and hygiene interventions going forward.

[1] For the purposes of this document any reference to sanitation is deemed to refer to 'on-site sanitation' and primarily the containment of human excreta.

[2] UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS), "Investing in Water and Sanitation: Increasing Access, Reducing Inequalities, 2014.

While the WASH sector in Ethiopia has improved mechanisms to align planning and programming, in an effort to move towards a Sector Wide Approach (SWAp), the systems to enable the relevant Ministries to collate and analyze monitoring data are still weak. This gap is hampering efforts to achieve the goals of having one coordinated plan, budget and report for the WASH sector.

Despite the improvement of Health Monitoring Information System's indicators, there is still misalignment between the indicators, and their definitions, used by different institutions and systems. This issue results in continued confusion over the "correct" coverage figures and hampers the effectiveness of strategic decision-making. However the progress made in aligning indicators has increased the sector's ability to accurately report progress against targets.

The analysis in this report provides evidence that there is still a lack adequate resources to establish and effectively run the WASH monitoring system at the Federal, Regional and Woreda levels. The inability to identify and retain personnel with the right mix of skills, continues to be a bottleneck to the implementation of a fully functioning monitoring system within the sector. This is further compounded by lack of financial resources available, specifically at the Woredas level, to undertake data collection and supportive supervision activities.

A well-functioning monitoring system in the sanitation and hygiene sector is essential to effectively target resources, identify emerging lessons and make modification to program approaches, as well as report progress against targets. Underpinning this is the availability of good quality data and the ability to analyze and share the findings. Due to the unreliability of data gathered and poor capacity to manage it, currently data is not effectively analyzed and used for management decisions or learning.

While some progress has been made in monitoring the availability of services, the more nuanced monitoring of access to and use of services is still not being systematically captured. In relation to sanitation and hygiene, methodologies and systems to monitor behavior change in relation to toilet use and hand washing practices are

still not in place. Without monitoring the sustainability of services and behaviors the reliability of access and use figures continues to be questionable.

To improve the monitoring of sanitation and hygiene interventions this report concludes that four main areas should be addressed. The first of these is the harmonizing of indicators and their definitions across different sector surveys and monitoring systems. This process should also include the further alignment of indicators with sanitation and hygiene targets.

The second area related to the strengthening of the Hygiene and Environmental Health program monitoring systems. In addition to the establishment of a stronger and more relevant set of standard indicators, those implementing the program monitoring system require clearer guidance and tools to support data collection and analysis. It is also proposed that the monitoring system should be shifted from being a system focused on upward reporting, to a system of two way information flows, which promotes feedback and supports the dissemination of analyzed data and emerging knowledge. Technology, specifically mobile phone technology, could be more effectively harnessed to ensure information is more readily available to decision makers.

The third area relates to the resources available to support the monitoring systems and their implementation. An adequate number of trained personnel, with knowledge of both monitoring system and sanitation programs, as well as a clear mandate, need to be deployed at all levels to undertake monitoring and program analysis activities. In addition, financial resources need to be available to support them undertake their roles effectively, and enable ongoing supportive supervision and ensure quality control protocols are fully implemented.

Finally increased focus should be placed on enabling the OWNP monitoring system, to facilitate the development of one plan, one budget and one report for the wider WASH sector. With an MOU in place between the key sector Ministries, commitment to improve the monitoring of sanitation and hygiene needs to be made at the very highest level. Critical to this is the strengthening of coordination structures and mechanisms to improve dialogue between the relevant Government agencies and development partners. This would improve common understanding and facilitate the flow of information and knowledge to realize the OWNP.

I. Introduction

1.1. Sanitation and Hygiene in Ethiopia

According to the latest Joint Monitoring Program (JMP) of United Nations Children's Fund (UNICEF) and World Health Organization (WHO) basic and improved household sanitation coverage in Ethiopia is estimated to be at 63%. As a result it is estimated that around 37% of the population (over 35 million people) still don't have access to any form of toilet and therefore defecate in the open. Within this there are disparities between the rural and urban context, with 43% of people living in rural area defecating in the open compared to 8% in urban areas. Consistent with global trends, in Ethiopia those lacking access to improved sanitation are those in the bottom poverty quintiles, with more than three quarters of the poorest quintile practicing open defecation compared to just 12% of the richest.[3]

The lack of access to improved sanitation and the practice of open defecation have significant socio-economic impact on the households without access and those living in communities where access to sanitation is low. While it is clear that access to latrines in Ethiopia is still low, trends show a slow increase in those people adopting fixed place defecation. Latrine coverage in Ethiopia has increased to 63% in recent years, however high levels of unhygienic latrines (62% of all latrines) and the practice of open defecation (37%) result in a continuing disease burden. The lack of robust monitoring processes and accurate data is hampering the ability to track progress, analyze the effective of interventions and ultimately inform decisions on targeting those without access.

1.2. Rationale and Objectives of the Report

The International Development Association (IDA) and UK Government's Department for International Development (DFID) supported the Water Supply and Sanitation Project concluded in 2014 and invested US$ 166 million over a period of 9 years. During this period over 5 million people gained access to improved water services as a result of the project. In line with Government of Ethiopia policy the project also supported the promotion of sanitation services in rural and urban areas. However despite the resource allocated to sanitation activities and some evidence of progress on the ground, it was very difficult for the program to report accurately the achievements and contribution in relation to improvements in sanitation coverage.

The World Bank's Implementation Completion Report (ICR) for Water Supply and Sanitation Project (P076735) noted that while the project made a "significant contribution to hygiene promotion, sanitationmarketing, and the integration of hygiene, sanitation and water; this sub-sector was notadequately monitored and data on sanitation aspects is poor."[4] DFID's Project Completion Report (PCR) of its parallel intervention points to the lack of community based monitoring systems, inadequate reporting by the health sector and inadequate follow up by the WSSP Program Management Unit. Both the World Bank and DFID's completion reports identify that weakcoordination between the three sector ministries (Water, Health and Education) at all levels made it difficult to report sanitation and hygiene progress.

This report aims to systematically analyze the current systems, tools and capacity in place to capture and analyze monitoring data on sanitation and hygiene related interventions. It will make recommendations to inform the Ministry of Health, and wider OWNP, to strengthen the monitoring and reporting of sanitation and hygiene interventions and impacts. This will included informing the new Hygiene and Environment Health Strategy, and guide the indicators and systems put in place to monitor theagreed objectives.

This report also aimsto contribute to the Ministry of Health's commitment to strengthen the monitoring system for environmental health activities made through the Sanitation

[3] UNICEF-WHO, Joint Monitoring Report, "Progress on Drinking Water and Sanitation, 2014 Update", 2014

[4] World Bank the Implementation Completion and Results Report for Ethiopia Water Supply and Sanitation Project (P076735) Pg. 16

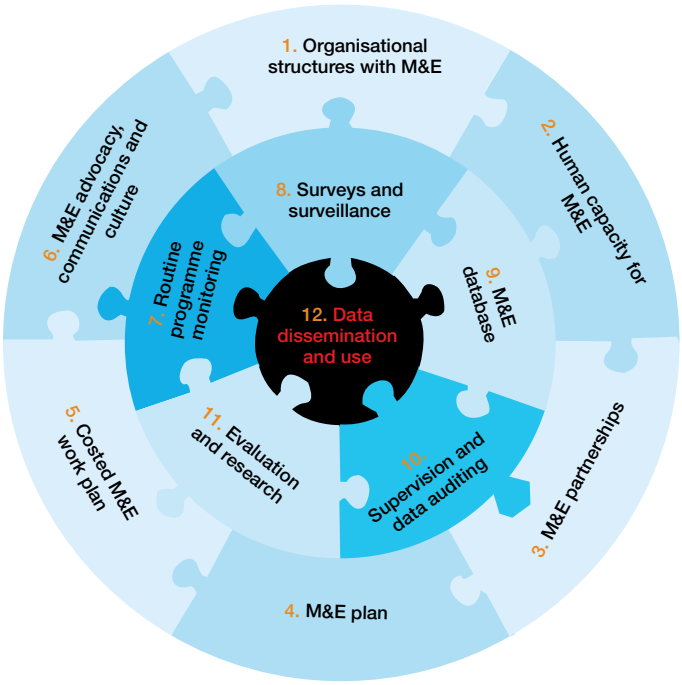
and Water for All[5] (SWA) process. While the report will focus on sanitation and hygiene monitoring the report will place sanitation and hygiene monitoring in the context of wider WASH sector monitoring. As a result it is expected that this report will provide significant inputs to guiding the technical assistanceto strengthen the monitoring of the OWNP, to be provided by DFID and the World Bank.

1.3. Methodology

The analysis undertaken in this report has been guided by a framework developedby Water and Sanitation Program (WSP) of the World Bank's Water Global Practice to review Ethiopia's sanitation and hygiene monitoring system. The framework was adapted from a tool developed by USAID to support the review of national HIV/AIDS monitoring systems. The USAID tool was chosen as it is considered to be one of the most robust frameworks for analyzing monitoring systems in the health sector. It consists of twelve components, set out in the diagram below (the full framework is included in Annex 1).

The methodology adopted to undertake this diagnostic analysis included a mix of analysis of existing systems, a literature review, stakeholder consultations (see Annex 2 for semi-structure questionnaire used) and workshops. This analytical work formed part of a broader effort of WSP technical assistance, requested by the Ministry of Health, focused on shifting the enabling environment in order to accelerate the access to rural sanitation.

FIGURE 1: COMPONENTS MONITORING & EVALUATION SYSTEM ASSESSMENT TOOL



Dialogue was facilitated with and between the following Government of Ethiopia entities; Ministry of Health (MoH), Ministry of Water, Irrigation and Energy (MOWIE), Ministry of Education (MoE), Central Statistics Agency (CSA), Regional Health Bureaus (RHB), Regional Water Bureaus, Woreda Health Bureaus and Woredas Administrations. In addition consultations were held with many development partners, including UNICEF, WHO and DFID.

[5] Sanitation and Water for All is a global partnership of over 90 developing country governments, donors, civil society organizations and other development partners working together to catalyze political leadership and action, improve accountability and use scarce resources more effectively

II. WASH Sector Monitoring

2.1. National Statistics and Surveys

The CSA implements a wide range of nationally representative household surveys. In the 2008 review of the Health Monitoring Information System (HMIS), the Ministry of Health acknowledged the importance of the Demographic and Health Survey (DHS) and Welfare Monitoring Survey (WMS) in providing health information, including access to drinking water and toilet facilities, as well as waste disposal.

The DHS provides baseline data to support the M&E system of the Growth and Transformation Plan (GTP), as well as various sector development policies and programs. The WASH indicators used by the DHS align with those provided by the Joint Monitoring Program for Water and Sanitation (JMP) of the World Health Organization (WHO) and UNICEF, which is mandated by the UN to track global progress towards the water and sanitation MDG targets.[6]

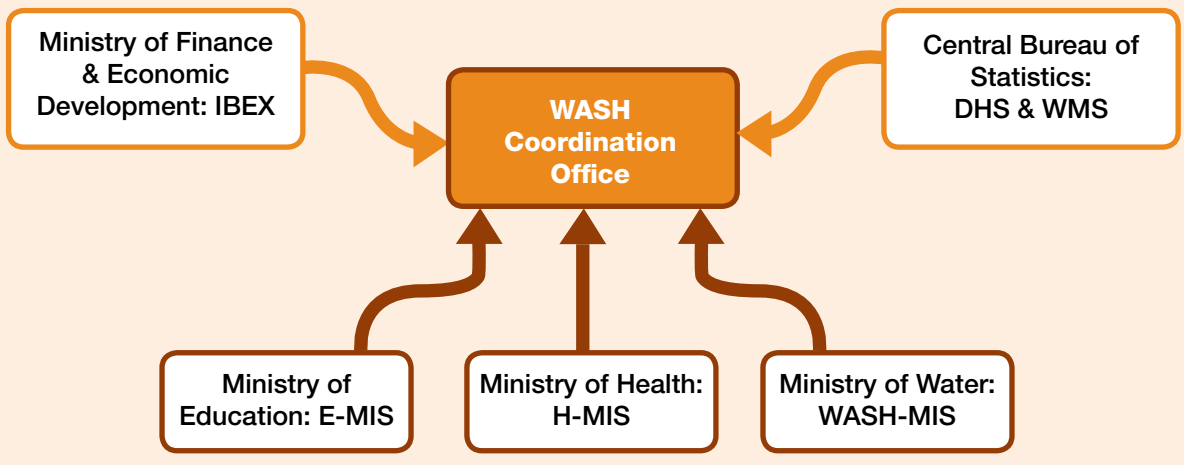
The Ministry of Health recognizes that in order to improve consistency between national surveys and other data sources, including the HMIS, the establishment of common definitions and understanding on how to interpret the results are essential. While some progress has been made in this regard the full alignment of indicators and their definitions has not yet been achieved.

2.2. WASH Monitoring and Evaluation Framework

The WASH sector has taken a number of progressive steps in recent years to move toward a more efficient and effective approach to sector-wide monitoring. The key milestones and events in regard to WASH sector monitoring are set out in Annex 4.

The sector's M&E system set out in the WASH M&E Framework & Manual aims to operationalize the conceptual WASH M&E model developed in 2007 (see Figure 2).

FIGURE 2: CONCEPTUAL MODEL FOR WASH MONITORING SYSTEM



[6] See Annex 3 for latest sanitation related data

With data on WASH service provision in Ethiopia captured through a number of different channels, the WASH Implementation Framework (WIF) and subsequent M&E Framework confirms the need for a harmonized monitoring and evaluation system to serve the WASH sector.

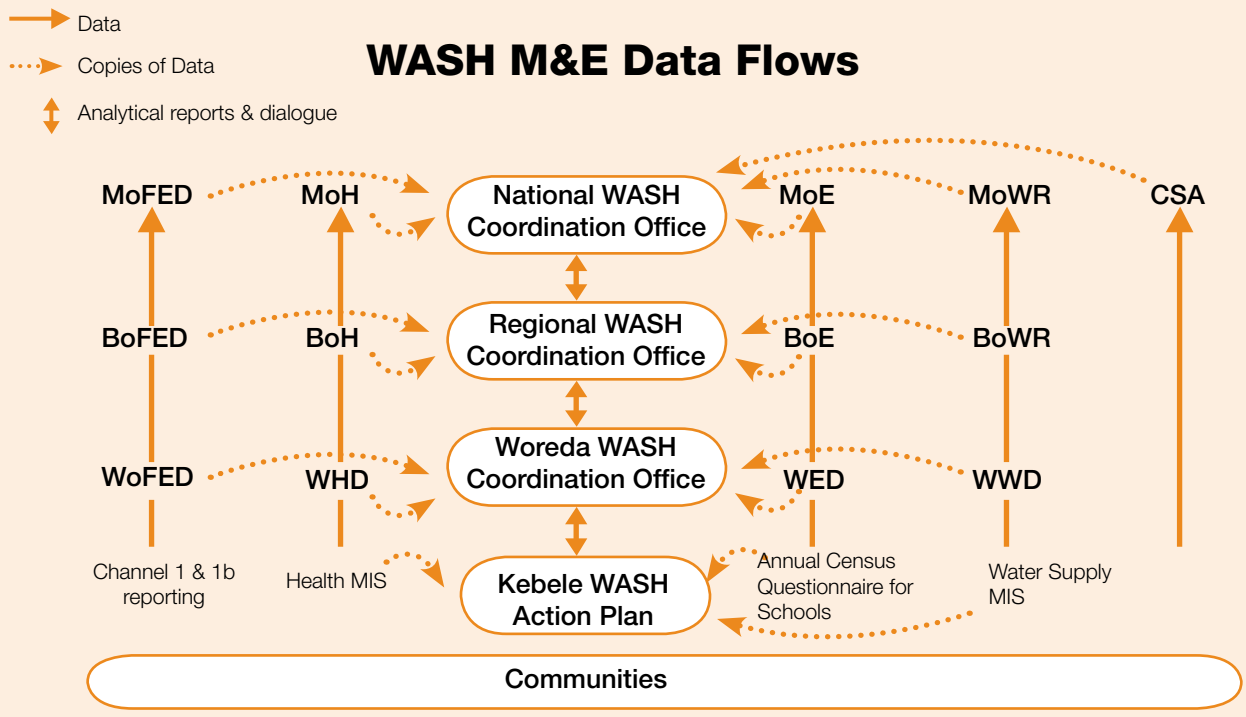
Through the harmonizing of indicators and drawing of data and analytical narrative from different systems the aim wasto enable the sector toproduce a report containing multi-sectoral WASH perspectives from the MOWIE, MoH, MoE, MOFED and beyond. The different data gathered through various surveys and system provides a good basis for cross verification of information reported, however the inconsistencies between coverage figures and the collation of different data sets also pose significant challenges for the sector.

To support the review of sector progress, the sharing of lessons learnt and planning processes a number of sector mechanisms were put in place at different levels. The overarching coordination structures is the Water Sector Working Group, which is supported by a number of technical committees. In addition, the critical monitoring and review process are the WASH Sector Joint Technical Review (JTR) and the Multi-Stakeholder Forum (MSF). A summary of the purpose, content and outputs of the JTR and MSF are included in Annex 5.

2.3. WASH M&E Management Information System

The WASH M&E Management Information System (WASH MIS) is a web-based software solution, managed by the MOWIE, to support the implementation of the WASH M&E Framework & Manual (as summarized in Figure 3). WASH MIS is aimed at gathering and analyzing WASH sector data, but currently only focused on water related data and does not collect sanitation and hygiene data. Under the OWNP it is aimed that WASH plans will be developed at all levels through an aggregation of all Woreda plans, further decentralizing the planning activities now carried out in the Regions. While still some way off, the longer term objective is to eventually also integrate the WASH MIS with financial management and procurement of WASH-related services from the Integrated Budget and Expenditure system (IBEX) system of MOFED.

FIGURE 3: OVERVIEW OF WASH DATA FLOWS AND DATA USE BY DIFFERENT LEVELS OF GOVERNMENT



With support from the World Bank, an assessment of the functionality of the WASH MIS undertaken in 2013 showed mixed results. The review shows relatively good performance in the areas of; (i) data usage across the system, (ii) data collection and reporting forms/tools, (iii) links with national systems, and (iv) organization and staffing. However the following areas still showed significant need of improvement; (i) training provided to staff, (ii) data reporting requirements, (iii) indicator definitions, (iv) data management processes, (iv) data quality mechanisms, and (v) sanitation and hygiene indicators are not being systematically collected.

2.4. National WASH Inventory

In 2010 and 2011, the Ministry of Water, Irrigation and Energy (MoWIE), with financial supported from the World Bank and UNICEF, carried out a National WASH Inventory in all Regions, apart from Somali which was added in 2014. The NWI combines WASH related data from 12 million households with scheme inventories of communal water supplies, and in doing so has established a sector baseline using methods that were scrutinized by the CSA. While the first NWI was a success, until it is institutionalized within the wider WASH monitoring system, the impact of the NWI can have on harmonizing and aligning the data and systems of different Ministries is limited.

It was envisaged that the NWI would be undertaken annually. However, the high cost and large logistical processes involved has meant that to date the NWI has not been repeated. The streamlining of the process through the piloting of a mobile phone based system has enabled plans to be put in place to repeat the process maximizing technology. The methodology is under development for the next NWI during 2015, and this initiative should support the mainstreaming of the NWI within the WASH M&E systems.

Hand washing with soap and water from locally made hand washing station in Eastern Amhara

III. Sanitation and Hygiene Targets

3.1. National Targets

The targets in the Growth and Transformation Plan (GTP) (2010-2015) are those that drive the Government of Ethiopia planning and budgeting processes. However due to the low priority placed on sanitation and hygiene at the time of the GTP's development, there were no specific targets related to sanitation and hygiene included. The GTP does however include targets related to reductions in child and infant morbidity and mortality (see Annex 6), and these are reflected as the highest level target in the National Hygiene and Sanitation Strategy.

The inclusion of a sanitation related target in GTP II (2016-2020), currently under development, would help increase the profile of sanitation in Government planning processes and supporting adequate budget allocation in future years. At the time of drafting this report, the draft version of GTP II includes a target to increase the proportion of households using latrines to 93% by 2017.

MOWIE and MOH's Universal Access Plan II (UAP II) developed in 2011 includes the ambitious targets of 100% access to and use of basic hygiene and sanitation by end of 2015. It is now unlikely that either target will be achieved. In addition, the Health Sector Development Program IV, 2010/11 – 2014/15 (HSDP IV) and Hygiene and Sanitation Strategy and Strategic Action Plan of 2005 also include target related to sanitation and hygiene. More details of the different targets and their relationship are included in Annex 7.

3.2. International Targets

The target on sanitation under Millennium Development Goal 7 on Environmental Sustainability is the international target most regularly referred to in GoE sector documents. The JMP data released in 2014 showed that while the MDG target for water is likely to be achieved; the target for sanitation is unlikely to be met[7]. Coverage and access figures from the respective Ministries monitoring systems do not fully align with the DHS figures, which are the basis of the JMP's calculation of progress towards the targets.

It should be noted that the JMP calculation uses a regression analysis and some estimates to modify the DHS data to provide its final estimated coverage. For examplesince an agreement between GoE and the JMP team in 2011, JMP's calculation applies a formula that estimates that 50% of "pit latrines without slab" in Ethiopia should be considered as improved facilities. As a result there is a significant variation between the improved latrine coverage reported in DHS and the improved latrine coverage reported by the JMP, despite the fact they use the same data set.

In signing the eThekwini commitments, established through the AfricaSan process, the Government of Ethiopia committed to make progress in nine areas, set out in full in Annex 8. One of the two commitments reported by the GoE as being off track relates to the establishment of an effective monitoring and evaluation system for sanitation. At the SWA alliance high level meeting in 2014, the Government of Ethiopia reinforced their prioritizing of improving monitoring systems by including one commitments related directly to this area.

[7] For Ethiopia to meet the MDGs targets requires an increase in access to water from 40% to 73% and national sanitation improved sanitation coverage to increase from 12% to 56% by the end of 2015.

IV. Sanitation and Hygiene Monitoring System Review

As part of the assistance provided by WSP to the Ministry of Health, a multi-year effort was supported to work across different levels of government to strengthen the monitoring of sanitation and hygiene. Through this intervention technical assistance was provided to the One WASH National Programme Coordination Office, the Hygiene and Environmental Health Case Team in the MoH, four Regional Health Bureaus[8] (RHB), and targeted 104 Woredas selected due to their inclusion in the World Bank's Water Supply and Sanitation Project[9].

After a review of the existing system and in line with the objectivesof the OWNP, it was agreed with the MoH to focus the assistance on strengthening the Hygiene and Environmental Health Program Monitoring System from Woredas upwards. In turn this process was able to inform the updating of Health Monitoring Information System, and increase alignment between the systems. In addition technical assistance was focused on policy dialogue with sector ministries, establishing coordination platforms to support sector monitoring and learning, and aligning national strategies and protocols to support sector monitoring. This assistance coincided with broader efforts of the MoH to improve access to improved sanitation. In each Region a capacity building program, also supported by WSP[10], was implemented to enhance the enabling environment for changes in sanitation and hygiene behavior amongst communities and to ensure frontline health workers had the tools and skills to facilitate these changes.

4.1. Health Monitoring Information System

The aim of the Health Monitoring Information System (HMIS), as opposed to the WASH MIS operated by MOWIE, is to support the MoH's goals for performance assurance and improvement. While an ambitious and necessary initiative, the implementation of HMIS has not been without it challenges. The HMIS Business Process Re-engineering Assessment Report (2006) and HMIS/ M&E Strategic Plan for Ethiopian Health Sector (2008) both raise consistent areas for improvement.

These concerns included the deployment and development of sufficient human capacity to institutionalize the system to enable improvement in data collection, integration of reporting and data collection, and the more effective analysis and use of the data. For a system of this type to be operationalized effectively sufficient financial and human resources need to be dedicated to it implementation.

The new HMIS indicators, finalized in March 2014 and implemented from July 2014, are structured into eight categories based on the HSDP IV strategic objectives and contains a total of 122 indicators covering each of the MoH's interventions – a full summary is provided in Annex 9.

Previously there were just two Hygiene and Environmental Health indicators, one related to latrine access and one to access to safe water. The indicator on access to safe water has been dropped. The HMIS team shared that this indicator was rarely reported on, and, due to its duplication with indicators on water access more frequently used by the sector and collected by MOWIE's WASH M&E MIS, its omission seems logical. The three new indicators are as follows:

1. Proportion of households' access to any type of latrine facilities
2. Proportion of households that use latrine for defecation purpose properly
3. Proportion of Kebeles declared open defecation free

Further details of the changes to the Hygiene and Environmental Health indicators in HMIS, as well as the formula for calculation, disaggregation and sources of data are included in Annex 10.

[8] Amhara, Oromia, Tigray and SNNPR
[9] Ethiopia Water Supply and Sanitation Project - P076735
[10] Building Capacity for Sanitation - P132078 - Ethiopia

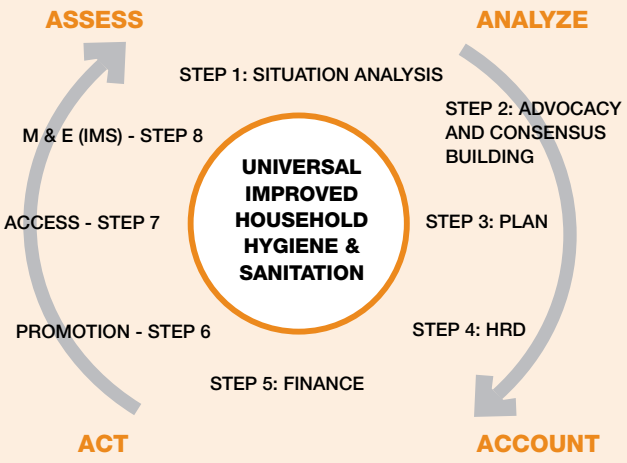
4.2. National Hygiene and Sanitation Strategy and National Protocol

While not containing detailed guidance on monitoring, the National Hygiene and Sanitation Strategy (2006) articulates that one of the key processes to support the development of a public financing strategy for sanitation and hygiene will be to "design a performance monitoring framework that allows measurement of cost effectiveness, benefits and implementation processes, and application of mid-course corrections."[11]

The National Hygiene and Sanitation Strategy does not include specific indicators but instead includes suggested indicators – see Annex 11 for more detail. The suggested indicators reflect the three pillars in the Strategy and are set out below:

- Numbers with safe dry season water access within 300 meters;
- Safe excreta management systems;
- Hand washing after contact with feces;
- The number of households actually practicing the full safe water chain.

FIGURE 4: PLANNING AND PROGRAMING CYCLE FOR HYGIENE AND SANITATION[12]



The National Protocol for Hygiene and On-Site Sanitation (2006) sets out that the planning framework, and provides indicators, as well as the means of verification, to monitor and measure progress to deliver specific planned outputs within the framework of the "One Plan, One Report and One Monitoring and Evaluation System".

The National Protocol for Hygiene and On-Site Sanitation sets out 18 "Sanitation and Hygiene Improvement" indicators (full listed included in Annex 12), cluster around 7 themes, as set out below. These indicators are supposed to be gathered at the time of baseline and during ongoing monitoring, although the document contains no guidance on methodologies or frequency.

1. Health Impact Indicators
2. Essential Family Practices
3. Access to Hardware
4. Community Water Systems
5. Sanitation and Solid Waste
6. Household Technologies & Materials
7. Behaviour

While a number of sector documents provide good guidance and proposed structures for monitoring (see Annex 13), there is limited linkages and referencing between documents, which has resulted in confusion amongst sector actors. In addition, due to the decentralize nature of the system, the Regional Health Bureaus have been instructed to select or develop their own indicators based on the guidance included in the National Protocol for Hygiene and On-Site Sanitation. This has resulted in a lack of consistency between Regions.

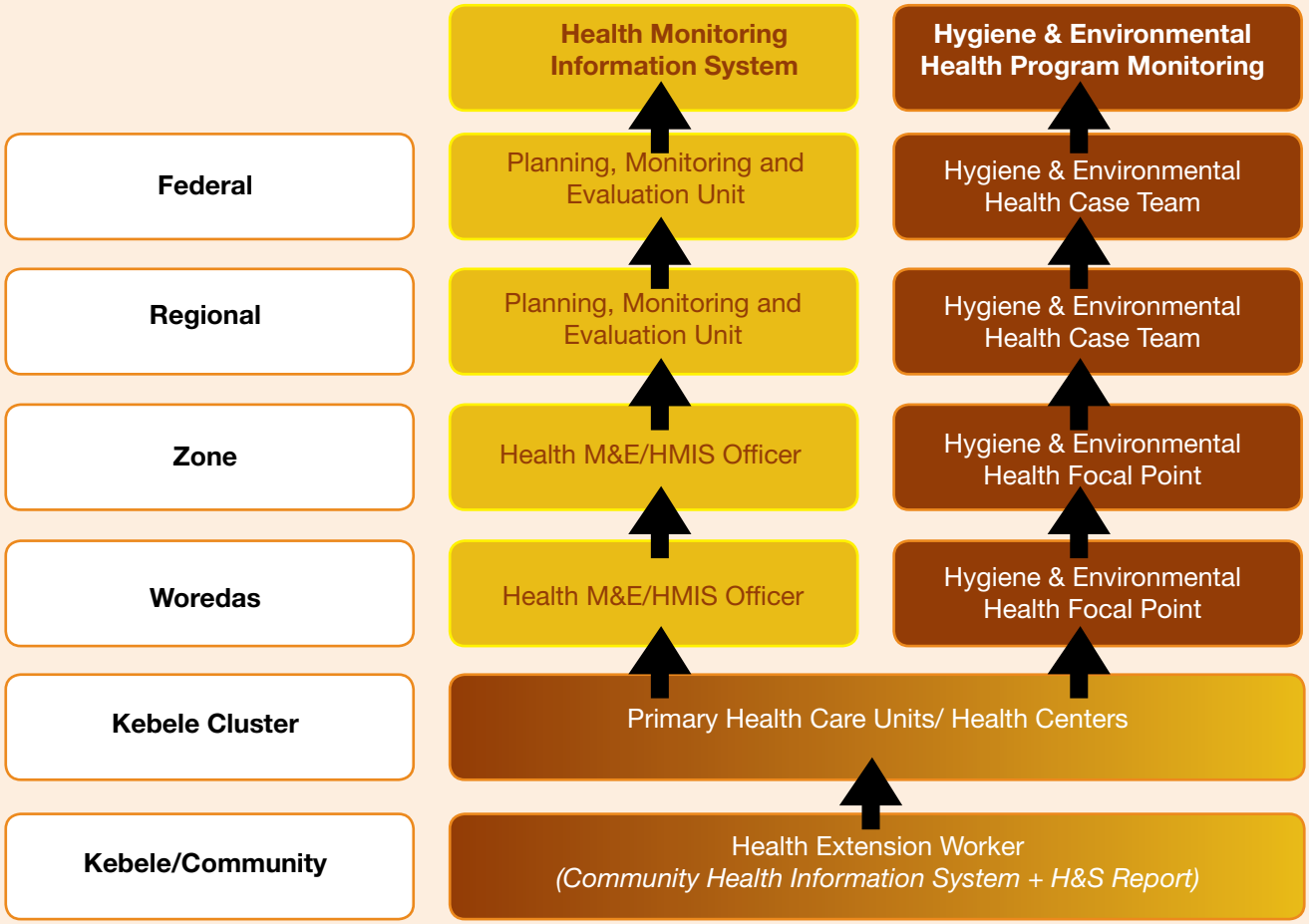
4.3. Hygiene & Environmental Health Program Monitoring System

The monitoring of Hygiene and Environmental Health program has harnessed both the HMIS and program specific Hygiene and Environmental Health Program Monitoring System. The systems have been designed to enable monitoring to be carried out at community/Kebele, Woreda, Regional and Federal levels. As a result information should cascade between levels to support respective layers of management to monitor performance. The system varies between Regions but broadly the flow of information following the process in figure 5.

[11] Ministry of Health, "National Hygiene and Sanitation Strategy", October 2006, Pg. 44

[12] Ministry of Health, "National Protocol for Hygiene and "On-Site" Sanitation", June 2006.

FIGURE 5: DATA FLOW IN HMIS AND HYGIENE & ENVIRONMENTAL HEALTH PROGRAM MONITORING SYSTEM



Most data is gathered at the community level by Health Extension Workers (HEWs) and Community Health Practitioners (CHPs). This data is collated at Primary Health Care Unit (PHCU)/Health Centre (HC) level through the manual Community Health Information System and specific program reports before being passed onto the Woreda Health Bureau.[13]

At the Woreda level the flow of information is split in two separate processes; (i) HMIS and (ii) Program Monitoring, in this case through the Hygiene & Environmental Health program monitoring system. The HMIS Units at Regional level do not endorse parallel reporting systems. However RHB's management recognize that forsome programs the HMIS indicators do not provide sufficient information to monitor objectives and inform management decisions.

At the Regional and Woreda levels progress between Woredas and Kebeles, respectively, should be compared to support identification of good practices and support needs. The system includes a feedback mechanism through the dissemination of reports, but in practice this is not regularly done due to other commitments and no clear guidance or formats to support the process.

[13] The revised HMIS indicators document (2014) has proposed to move this to computer based system however this plan has not be operationalized as yet, and it is currently not clear how this will be financed.

Ultimately the information arrives at the Ministry of Health through the two channels (HMIS and Hygiene and Environmental Health Program Monitoring System). HMIS data is reviewed and analyzed by the MoH Planning Unit and Hygiene and Environmental Health Program Monitoring data is reviewed by the Hygiene and Environmental Health case team. However the inconsistency of data provided makes it difficult for the MoH to compile comprehensive comparative reports. A comparative summary of the monitoring responsibilities of the institutions at different levels identified by the National Protocolfor Sanitation and Hygiene and the WASH Implementation Framework in Table 1.

4.4. Financial Monitoring

The web-based Integrated Budget and Expenditure system (IBEX), introduced in 2005, is operated by the Federal Ministry of Finance and Economic Development (MOFED), Regional Finance Bureaus and Woreda finance desks. The accounts module of IBEX records the financial transactions of budgetary institutions and the aggregated monthly accounting reports. In addition, it provides accounting reports in the form of ledgers, financial statements, management reports and transaction listings. Within the system, transactions can only be specifically identified where it is made by a recognized WASH budgetary institution, its program, sub-agency, sub-program or project. Thus expenditure on sanitation and hygiene promotion made through other budgetary institutions is not easily identifiable. In addition, IBEX does not report on outputs and therefore does not link easily to WASH monitoring systems, such as WASH HMIS and HMIS.

Despite the National Financing Needs Assessment for Hygiene and 'on-site' Sanitation Improvement (2007) proposing the existing monitoring system be expanded to include the financial indicators[14], it has yet to be implemented. The failure to integrate financial indicators continues to impede unit cost and value for money analysis within the sector.

Hand washing and water collection from piped water scheme in Eastern Amhara

[14] % Woredas Improved Hygiene and Sanitation (IHS) fund absorption = expenditure;% Kebele IHS community sanitation fund utilization and % of vulnerable covered; and % increased share of IHS budget by government and private sector.

TABLE 1: MONITORING RESPONSIBILITIES AT DIFFERENT LEVELS

National Protocol for Hygiene and On-Site Sanitation		WASH Implementation Framework	
Institution	Responsibilities	Institution	Responsibilities
Kebele WASH Committee	To lead into an integrated WASH implementation cycle; baseline, planning, implementation, management, monitoring.	Kebele WASH Teams	– Support WASHCOs to complete Annual WASH Inventory – Review WASH status in schools and health posts – Study data and complete analysis of Kebede WASH situation – Use M&E result to prepare Kebede Annual WASH Plan – Forward data to Woreda WASH Team – Prepare monthly, quarterly and annual WASH progress reports and send the Woreda – Conduct quarterly WASH progress review meeting with WASH stakeholders – Participate in Woreda level quarterly WASH progress review meeting
Woreda Sectorial Desks	The provision of a sustainable system for supportive supervision and monitoring of sanitation and hygiene promoters. This includes sanitarians, health extension workers and contact women	Woreda WASH Team	– Support Kebele perform their roles of data gathering, WASH analysis and action planning – Conduct technical assessment every 3 years – Verify Kebele summaries against paper record for accuracy; make any corrections – Enter data from Kebele summaries onto computer spreadsheet – Perform analysis between Kebeles &previous years – Use M&E result to prepare Woreda Annual WASH Plan – Prepare monthly, quarterly and annual WASH progress reports and send the Zone/Regions – Conduct quarterly WASH progress review meeting with WASH stakeholders – Participate in Regional/Zonal level quarterly WASH progress review meeting
Regional Health Bureaus	Undertake disease and impact monitoring.	Region/ Zone Coordination Office	– Support Woredas perform their roles – Verify Woredas summaries against paper record for accuracy; make any corrections – Recruit and Supervise data entry contractors – Consolidate all Woreda records into one filefor the complete Region/ Zone – Perform analysis between Woredas and previous years – Use M&E result to prepare Regional Annual WASH Plan – Send spreadsheet and summary analysis to National WASH Coordination Office – Prepare monthly, quarterly and annual WASH progress reports and send the NWCO – Conduct quarterly WASH progress review meeting with WASH stakeholders – Participate in National level quarterly WASH progress review meeting
Regional Sanitation and Hygiene Coordinating Forum	Responsible for overseeing the sanitation and hygiene promotion work of the bureaus, monitoring progress and ensuring a coordinated, complementary and linked approach is being followed		
National Coordinating Forum	Implement policy overview and co-ordination, including the development of impact monitoring systems and assessments of national sanitation	National WASH Coordination Office	– Consolidate all Regional data – Use M&E data to prepare JTR and internationally with AMCOW, JMP etc. – Prepare& propose investment plan, loan/grant applications and national Annual WASH Plan – Provide National WASH Technical Team (NWTT) with a consolidated WASH M&E Report – Prepare monthly, quarterly and annual WASH progress reports and send the NWTT – Conduct WASH progress review meeting quarterly &Organize annual MSF

V. Comparative Analysis of Sanitation and Hygiene Indicators

The section below compares household sanitation& hygiene indicators, and their definitions, from the main sector monitoring surveys and tools. There is both overlap in the indicators and definitions used by different monitoring tools at the national level, as well as no clear alignment between these tools.

This lack of consistency has traditionally contributed to the differing coverage figures quoted in the sector. However it should be noted that the harmonization of the DHS and NWI indicators, two of the largest surveys gathering sanitation and hygiene data, has supported an increased clarity and alignment of coverage figures in recent years. The recent changes to the HMIS are also aimed at supporting increased alignment of coverage figures in the future. A summary of the terminology used in different systems is given in Table 2.

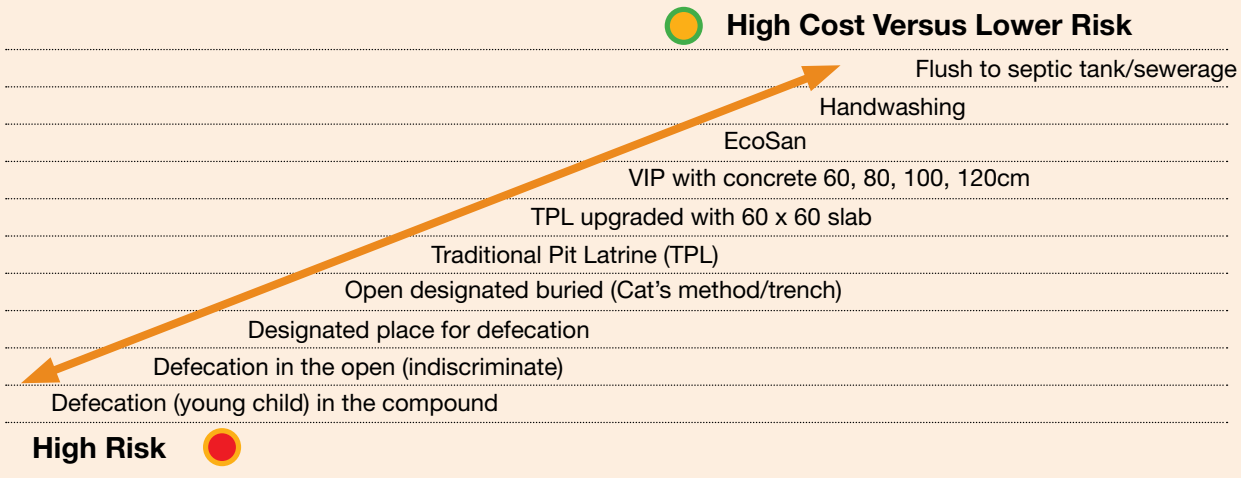
5.1. Latrine Access

The **DHS** indicators and definitions align with the guidance provided by the **JMP**, which enables reporting against the MDG targets. DHS has three different categories of sanitation facilities; (i) improved,not shared facility, (ii) shared facilities, and (iii) non-improved facilities. It should be noted that DHS is the only monitoring mechanism in Ethiopia that acknowledges and collects data on shared latrines.

The **National Protocol for Hygiene and On-Site Sanitation** includes an indicator on the percentage of households with access to a "minimum standard and hygienic latrine". In the same way the **WASH Monitoring System**[15] proposed that as part of its Key Performance Indicators that the HMIS sanitation indicators be modified to collection data on the percentage of households with a "functioning latrine meeting minimum standards". See Annex 14 for information on the proposed WASH Monitoring System Indicators.

For a latrine to meet the "minimum standard" the **WASH Monitoring System** proposed that it must; (i) have a screen for any ventilation pipe, (ii) be clean and maintained, and (ii) have a latrine house. While the concept of a "minimum standard" latrine in the WASH Monitoring System proposal appears to align with the indicator in the National

FIGURE 6: SANITATION LADDER[16]



[15] The recommendations in the WASH Monitoring System have only be partially adopted by the Ministry of Health, and some are still not fully integrated into the monitoring system of MOWIE.

[16] Ministry of Health, "National Hygiene and Sanitation Strategy", October 2006

TABLE 2: COMPARISON OF LATRINE TERMINOLOGY DEFINITIONS BETWEEN MONITORING SYSTEMS

	DHS & JMP	Welfare Monitoring Survey	Health MIS	National Sanitation & Hygiene Strategy	National WASH Inventory	WASH M&E Framework and Manual
Improved Latrines	– Flush/pour flush to piped sewer system – Flush/pour flush to septic tank – Flush/pour flush to pit latrine – Ventilated improved pit (VIP) latrine – Pit latrine with slab – Composting toilet	– Flush toilet – Pit latrine (ventilated)	– Hand washing facility – Slab – Ventilation pipe – Superstructure	– *Not Used*	– Covered or VIP – Cement slab/ sand plate – Cleanable, even surface – Flies cannot exit	– *Not Used*
Shared Latrines	– Flush/pour flush to piped sewer system – Flush/pour flush to septic tank – Flush/pour flush to pit latrine – Ventilated improved pit (VIP) latrine – Pit latrine with slab – Composting toilet	– *Not Used*	– *Not Used*	– *Not Used*	– *Not Used*	– *Not Used*
Minimum Standard latrine	– *Not Used*	– *Not Used*	– *Not Used*	– Terminology used but no definition provided	– Covered – Basic slab – No gaps – Cleanable, even surface – Flies cannot exit	– Screen for any ventilation pipe, – Clean and maintained, – Latrine house.
Unimproved Latrines	– Flush/pour flush not to sewer/septic tank/ pit latrine – Pit latrine without slab/open pit – Hanging toilet/ hanging latrine – No facility/bush/field – Other – Missing	– Pit latrine (not ventilated) – Bucket – Field/forest	– Simple pit latrine without ventilation	– *Not Used*	– Uncovered Pit – Rudimentary – Uneven, difficult to clean 'slab' – Allows flies to exit *NB referred to as "Traditional Pit Latrine"*	– *Not Used*

Protocol for Hygiene and On-Site Sanitation, the lack of clear definition in this document makes it impossible to compare them. While the National Sanitation and Hygiene Strategy sets out the sanitation ladder according to different latrine types (see Figure 6), there is no mention of which constitutes the minimum standard or a hygienic latrine. There is significant confusion over what constitute a "minimum standard" latrine, and its relationship to an improved or unimproved latrine.

The new indicator on latrine access incorporated into the **HMIS** aligns with the DHS terminology and required latrines to be disaggregated by "improved" and "unimproved" latrines. Despite the similar use of terminology the definitions don't align fully. The presence of a slab is included in both definitions, but the HMIS definition suggests that a ventilation pipe is also a requirement, which is not the case in the DHS data, despite VIP latrine being included within the DHS definition. In addition, the HMIS definition requires that presence of a hand washing facility at the latrine, which again is not a requirement of the DHS definition of improved latrine.

In relation to unimproved facilities, the HMIS definition only takes a sub-set of the DHS definition, the simple pit latrine. The DHS definition includes a wider definition including the practice of open defecation, however due to the disaggregated nature of the DHS data it should be possible to align the information based on data collected.

Despite the desire of the **National WASH Inventory** to align with the WASH Monitoring System and the WASH MIS it used another set of categories and definitions; (i) improved latrine, (ii) basic pit toilet or Minimum Standard Latrine, and (iii) traditional pit latrine. Improved latrine under the NWI clearly aligns with the DHS definition, and traditional pit latrines could also be assumed to align with non-improved facilities in the DHS definitions. Based on the definition it would appear that "basic pit toilet or Minimum Standard Latrine" in the NWI is a subset of the DHS definition of improved latrines. See Annex 15 for an overview of sanitation and hygiene indicators in the NWI.

5.2. Latrine Use

The recent inclusion of an indicator in HMIS on latrine use is in line with the proposal made by the WASH M&E Framework and Manual. The WASH M&E Framework and Manual suggested that use (also referred to interchangeably as "functionality" in the document) should be incorporated into the HMIS through the addition of an indicator to measure the percentage of households "using a properly cleaned toilet facility". The criteria to assess usage adopted by HMIS are very similar to what was set out in the WASH M&E Framework and Manual, as presented below. Such alignment is a positive example of coordination between the respective Ministries and guidance documents.

TABLE 3: CRITERIA FOR ASSESSING LATRINE USE

Proposal in WASH M&E Framework and Manual	Health Monitoring Information System
(i) Feces in the pit, (ii) Absence of feces around the household, (iii) Superstructure maintained, (iv) Absence of cobwebs.	(i) Feces in pit, (ii) Absence of feces around HH or pit latrine, (iii) Well maintained superstructure, (iv) Absence of spider webs, (v) Visible access.

The inclusion of an indicator on latrine use in the HMIS is a significant step forward for the sector. However the criteria for assessment could be further strengthened. The absence of feces around the household is not a good indicator of latrine use, as open defecation practices in most Ethiopian cultural contexts would result in individuals (with the exception of infants and children) defecating away from household in privacy of bushes. The criterion on "visible access" is not clear, and without clear guidance and definition it is very subjective. It would be worth considering replacing this with a criterion relating to the ability of all household members to use the latrine. This would take into consideration latrine being user friendly for children, the elderly and differently able.

The terms "functionality" and "use" are used interchangeably in many sector definitions. Increased clarity on these two terms is needed, as they are fundamentally different concepts. Functionality should refer to the latrines psychical condition and the ability of the infrastructure to perform

its primary tasks, which is to remove fecal matter from the environment and contact with humans and vectors. Latrine use refers to the behavior of the owners of the latrine, and the fact that the latrine is their primary place of defecation, opposed to open defecation. The presence of fresh feces in the pit, rather than just feces, would be a more precise criterion to assess recent latrine use.

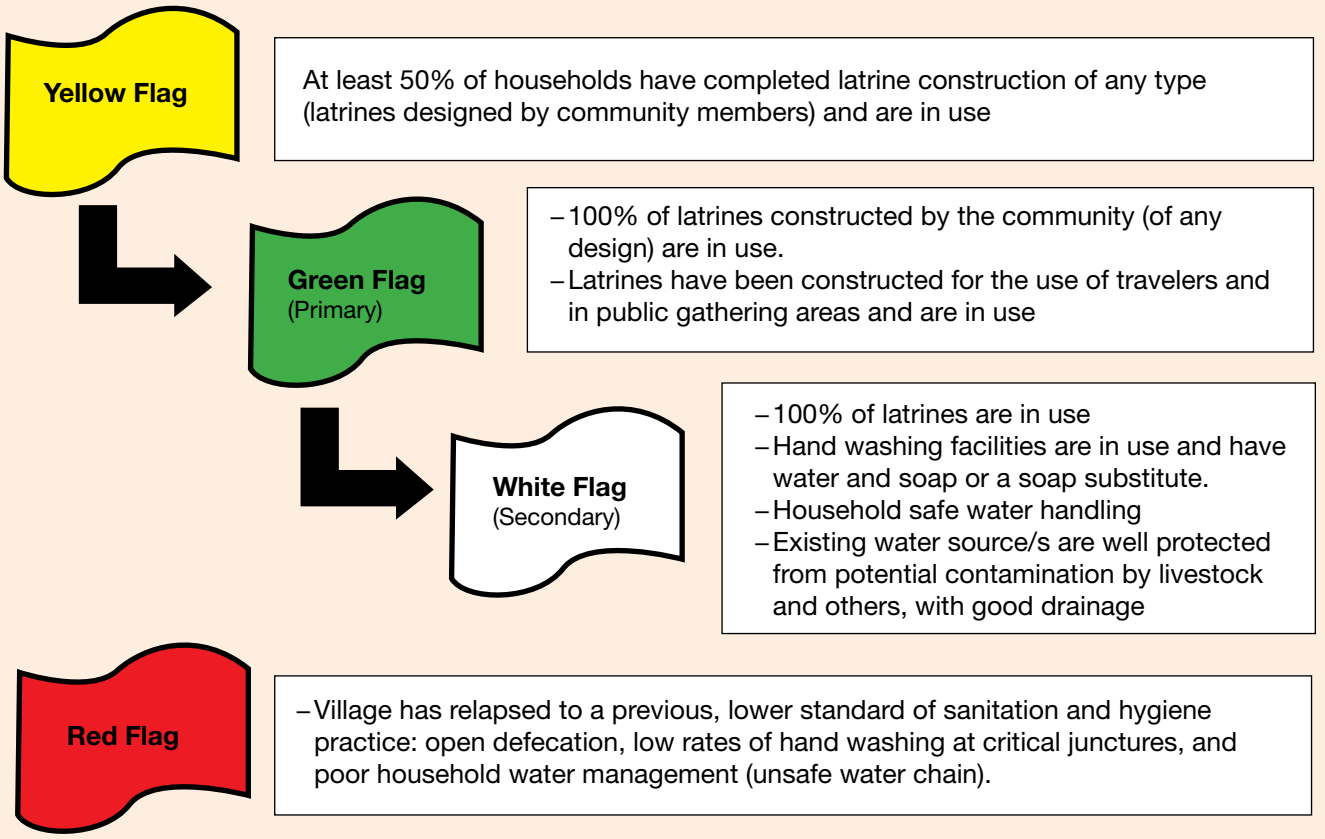
5.3. Open Defecation

Despite the existence of national targets on the achievement of open defecation free (ODF) Kebeles, none of the national surveys currently include any indicators in regards to ODF communities. The CLTSH Verification and Certification Protocol, approved in January 2012, aimed to support the monitoring of open defecation and standardizing the verification and certification process carried out by RHBs and Woreda Health Offices to declare Kebeles as ODF.

This Protocol sets out a clear process for both verification and certification, as well as the roles and responsibilities of actors at different stages. The Protocol includes two phases of ODF; Primary and Secondary certification. As set out in Figure 7, the Protocol also goes on to explain three stages of ODF, which were represented through different flags, and tracks a community's or Kebele's progress toward sustained collective community behavior change.

The recent inclusion of the ODF indicator in the HMIS is further demonstration of the Ministry of Health's desire to gather data on ODF and align with the national target. However the HMIS indicator makes no reference to the CLTSH Verification and Certification Protocol, and does not clearly align with the process or definitions set out within the document. Whereas the Protocol sets out two phases and three stages of ODF status, the HMIS indicator has just one ODF step.

FIGURE 7: COMMUNITY MONITORING MECHANISM: THE FLAG SYSTEM



The HMIS ODF indicators mention the following requirement for the entire community (households, schools, religious institutions, etc.) to be declared ODF: Stop the practice of open defecation; proper practice of hand washing; and household water handling.

This would appear to align most closely with the indicators mention under the Secondary phase (or White Flag status) in the Protocol, with the admission of the protection of water sources. However while the HMIS indicator mentioned that these practices should be sustained for "at least three months" to be declared ODF, the Protocol sets out that Green Flag status can only be achieved after six months and White Flag status after one year. This discrepancy in timing makes the two systems hard to align.

5.4. Broader Hygiene & Environmental Health Indicators

The sector's monitoring documents contain a number of indicators to support Woredas monitor hygiene behaviors, but these have not been systematically implemented. As with the sanitation indicators, there is little consistency or alignment between documents and systems. In relation to hygiene practices the areas the GoE has looked to monitor are: hand washing, management of child feces, safe water handing practices, safe food management, and solid waste disposal. A detailed comparison of the hygiene relation indicators used in the sector is included in Annex 16.

HMIS does not contain any indicators on the wider mandate of Hygiene and Environmental Health Case Team, as set out in the Health Sector Development Programme IV. With the support of WSP, the Case Team is currently in the process of developing a Hygiene & Environmental Health Strategy to increase the clarity on their mandate and objectives. This could support the development of appropriate indicators in this area. More detail on this issueis contained in Annex 17.

It should also be noted that previous HMIS reviews have criticized the system for having too many indicators, and therefore should additional Hygiene and Environmental Health related indicators be added they would need to be strategically chosen to add value to the planning and monitoring of the Hygiene and Environmental Health program at all levels.

TABLE 4: COMPARISON OF SANITATION TARGET AND INDICATORS

Source	Target	Indicator (& Source)
Millennium Development Goal Target	– Sanitation coverage has to increase from 12% to 56% by the end of 2015	– Percentage distribution of households and de jure population by type/latrine facilities (DHS) – Proportion of households' access to any type of latrine facilities (HMIS)
Universal Access Plan II	– Access to basic hygiene and sanitation by end of 2015	
	– Use of basic hygiene and sanitation by end of 2015	– Proportion of households that use latrine for defecation purpose properly (HMIS)
Health Sector Development Program IV	– Increase tahe proportion of households utilizing latrine from 20% to 82% by 2015	
	– Increase proportion of households using household water treatment & safe storage practices from 7% to 77%	– *No indicator in the system currently*
	– Increase the proportion of villages (Kebeles) free of open defecation from 15% to 80% by 2015	– Proportion of Kebeles declared open defecation free (HMIS)
Hygiene and Sanitation Strategy and Strategic Action Plan	– 100% open defecation free Ethiopia by 2015	

5.5. Alignment of targets and indicators

Until recently the only national sanitation target that could be systematically reported on related to latrine coverage. The effectiveness of this reporting was also questioned due to the misalignment between the DHS, HMIS, NWI and other sector indicators. The modification to the HMIS in recent months has resulted in increased alignment with key national targets. Table 4 sets out the alignment between sector indicators and targets.

5.6. Monitoring Sustainability of Behavior Change & Inequality of Access

After 2015, the MDGs will be replaced by the Sustainable Development Goals (SDGs). It is expected that the indicators for the sanitation related SDGs will focus on the elimination of open defecation and the progressive elimination of inequalities in access. If the Government of Ethiopia ratifies the SDGs the sector's monitoring systems, including the DHS indicators, will need to be reviewed and modify to enable reporting against the new targets.

The recent inclusion of a target and indicators on latrine use is a positive step toward monitoring the sustainability of sanitation and hygiene behavior change. However behavior change is not a linear process, with evidence in the sanitation sector showing that individual behavior in relation to latrine use and hand washing practices, as well as community outcomes such as stopping open defecation, change over time. Regular reporting on behaviors is a difficult process and often relies on proxy indicators, such as presence of hand washing facilities. To monitor behavior change effectively is also time consuming and requires using a number of different tools and methodologies to triangulate evidence.

Over time the collecting of data on latrine use will provide some indication of changes in behavior, as long as households that once used latrines and have reverted to open defecation are captured and reported. The Government of Ethiopia is right not to include a more complex indicator to monitor sustainable sanitation and hygiene behavior change in their regular monitoring and reporting system. However tracking the sustainability of behavior change is essential to understand the effectiveness of sanitation and hygiene interventions.

Based on its analysis in 94 countries around the world, the 2014 GLAAS report concludes that in many countries even where plans exist for reducing inequalities in access by targeting disadvantaged groups they are not effectively monitored and less than half of countries make any effort to regularly track progress in extending sanitation services to the poor. Disaggregated data is essential in order to fully understand where and how discrimination occurs with respect to access to sanitation. In Ethiopia, currently only the DHS data enables the disaggregation of sanitation data to analyze variance in coverage between different socio-economic groups. While Ethiopia's universal access targets aim to reach everyone, sector documents currently don't contain specific targets or strategies to reach disadvantaged groups.

It should also be noted that the implementation and monitoring of hygiene and sanitation interventions in agrarian and pastoral areas of Ethiopia require very different approaches. Currently these areas are monitored using the same methodologyand indicators, which often leads to inappropriate and misleading conclusions. The development of monitoring approaches and tools for sanitation and hygiene interventions in pastoral communities requires more attention, in order to gain an accurate picture of the effectiveness and sustainability of interventions in some of Ethiopia's poorest and most vulnerable communities.

The Sustainable Development Goals are expected to focus on reaching the most disadvantaged individuals and groups will require federal level monitoring systems to disaggregate data on their actions to realize the human right to sanitation, as well as the related outcomes. This would require an 'elimination of inequalities' metric to be integrated into monitoring processes in order to address disparities in access to sanitation.

VI. Review of the Implementation of the Monitoring System

6.1. Coordination of MoH and wider WASH monitoring

The ICR of the World Bank-supported Water Supply and Sanitation Project completed in 2013, identified that "coordination among the WASH MIS, the Health MIS, and the Education MIS is among the (Water) Ministry's critical remaining tasks."[17] The report goes on to state that the sanitation and hygiene outputs of the project where affected by weak coordination among the three sector ministries (Water, Health and Education) at all levels and weak monitoring systems.

The One WASH National Program and the NWI has contributed to bringing the sector silos towards an integrated WASH planning and monitoring system. Through the support of developing partners, including WSP, the GoE has established coordination structuresenvisaged under the OWNP at Federal and Regional levels. However these structures' functionality still needs to be increased to support planning, monitoring and learning activities.

The modification to the Environmental Health indicators in the HMIS is positive step in the creation of a single WASH monitoring system. However it is expected that the MoH and MoE should report on the progress of hygiene and sanitation progress through the National WASH Coordination Office, there is still no systematic process in place to bring data together from the respective Ministries to enable a single WASH report at Federal, Regional or Woreda levels.

The political commitment shown through the establishment of the OWNP and development of supporting MOU and WIF documents has had a positive impact. However additional political commitment is requiredon an ongoing basis at various levels to ensure that the spirit with which this initiative was launched is carried through into the implementation phase.

[17] World Bank, "Ethiopia Water Supply and Sanitation Project (P076735), Implementation Completion and Results Report (IDA-39010, IDA-47130, IDA-H0850, TF-91704), Report no: ICR00002933" April 2014, Pg. 10.

6.2. Aligning Ministry of Health Monitoring Systems (HMIS and Hygiene and Environmental Health Program Monitoring)

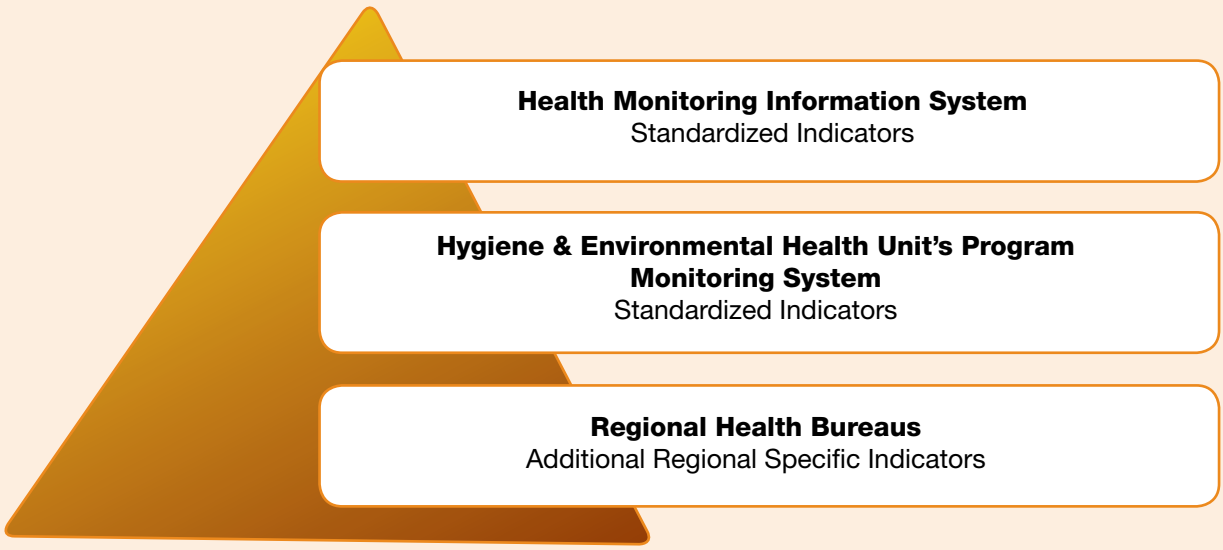
At the Regional level and below many of these guiding documents on monitoring sanitation and hygiene are not readily available and staffs' knowledge of these documents varies. With the support of WSP, the MoH has provided guidance to staff within Regional Hygiene and Environmental Health units at Regional and Woredas level through specific training and regular review meetings. While this has increased the frequency and in some part consistency of reporting,there is evidence that monitoring knowledge has notyet to be institutionalized and the quality of data and reports is still an issue.

With the support of WSP, the RHBs have made progress in relation to establishing tools to monitoring sanitation and hygiene interventions. An analysis of the reporting tools and formats used by four Regions (Amhara, Oromia, Tigray and SNNPR) shows that similarities exist, with the following information included in all the tools:

- Household access to basic latrine and improved latrines;
- The utilization, functionality and operational status of the household latrines;
- On the status of Kebele level ODF achievement;
- Availability of hand washing facilities;
- Use of hand washing facilities.

However the definitions and means of calculation used to capture this information are not consistent across the Regions, and within the Regions definitions and means of capturing information are not clearly laid out for Woredas and PHCUs to follow. As a result some information included in the toolis in practice not well captured, such as the disaggregation of latrine types. For example Oromia's reporting format does not provide disaggregated data on newly built household latrines, just an accumulative figure.

FIGURE 8: PROPOSED STRUCTURE FOR TIERED HYGIENE AND ENVIRONMENTAL HEALTH PROGRAM MONITORING SYSTEM & INDICATORS



Within the Ministry of Health's own reporting system a clearer delineation of indicators is required between those being reported through the HMIS and through the Hygiene and Environmental Health program monitoring system. In addition, there is a need to standardize Hygiene and Environmental Health program indicators and definition to enable the consistent capturing of agreed data. As with the monitoring systems of other health programs, such HIV/AIDS, the HMIS should be harnessed to collected results based indicators. The program monitoring system used by the Hygiene and Environmental Health focal points and units at the sub-national level should be harnessed to gather output and activity based indicators.

This could be achieved by establishing a three tiered system (as set out in Figure 8). In addition to the existing standardized indicators in the HMIS, an additional tier of standardized Hygiene and Environmental Health program monitoring indicators should be established for collection by all Regions. Through the review meetings of Hygiene and Environmental Health Case team, support by WSP, and building on the consistencies of existing indicators gathered by the Regions, a draft list of Hygiene and Environmental Health program indicators has been developed. These indicators and their definitions need further review before being implemented. Once in place, in addition to bringing consistency to the monitoring Hygiene and Environmental Health interventions, this additional tier would enable more output and process based information to be available to Regions and Woredas. This information would enable more effective tracking of progress, identification of issues and comparison between locations, in turn increasing the relevance of the monition data to practitioners and managers.

The final tier would provide flexibility and autonomy, by allowing RHBs to collect additional indicators to address unique program interventions or circumstances. For example, this would enable Regions receiving funds from the Global Sanitation Fund to incorporate the donor's specific reporting requirements into their system. In addition, in Regions where emergency sanitation and hygiene interventions have taken place appropriate indicators to monitoring these interventions could be added at this level.

6.3. Verification and Quality of Data

While trends show an increase in the amount of data gathered in recent years, the effectiveness of any monitoring system is underpinned by the quality of the data gathered. Assessments have shown that data is not reported consistently between different Woredas and Regions, and

data is report irregularly and data for some indicators ismissing altogether. In addition, comparisons of the data recorded on hardcopy reports and those entered into the computerized system showed significant disparities. The reason for this is in part due to different interpretations of indicators and methods of calculating coverage figures between software and the hardcopy reports.

HMIS has two mechanisms to review data quality within the system; Lotus Quality Survey (LQS) and Data Quality Survey (DQS). LQS is used to check consistency of reported figures with record books and tally sheet at health center level. However Program Management Teams at PHCU level have limited knowledge and skills on how to conduct LQS. In terms of the Hygiene and Environmental Health program monitoring system, there is no process in place to verify data reported.

While not as often as planned, DQS is used at the Federal, Regional and Zonal levels to review the quality of the reports submitted. Where inconsistencies and arithmetic errors in the data are identified reports are requested again from lower levels. However report resubmissions are often not followed up and actioned, resulting in incorrect data remaining at lower levels and gaps in data at the Regional and Federal levels.

To improve the effectiveness of data quality, those tasked with gathering and recording data need additional training on the use of the system, as well as the definition and means of calculation of indicators. Following the recent updating of the HMIS indicators some orientation on the new indicators has been provided, but at the Regional and Woredas level there is a feeling that ongoing support is needed until the system is well established and fully operational.

The reporting of Hygiene and Environmental Health program results, both in the HMIS and the program monitoring system, could be significantly improved through the development of and thorough dissemination of standardized national guidelines covering; indicator definitions, data collection methodologies, data compilation methods, analysis and cleaning technics, and data use.

The confidence in data currently being collected and reported is also hampering its effective use. With limited ownership of the data in the system the motivation of officials to apply it to benchmark different Regions and Woredas or use it to inform planning processes, including resource allocation, is reduced. However the weak quality of data is not the only reason for it not being effectively used. The systems for analyzing data and providing feedback are also hampering the application of monitoring data by decision makers.

6.4. Supportive supervision and follow up

Currently there is limited attention paid to, or resources allocated to, supportive supervision by Regional and Woreda Health Bureaus. The functions supportive supervision play in terms of quality assurance and human resource development have the ability to address existing challenges in the system, such as the reporting of poor quality data and high staff turnover.

The value of training on new program approaches or monitoring has proven to be reduced where structured supportive supervision is not put in place afterwards. Supportive supervision is only regularly happening in donor supported areas and/or where development partners have a regular presence. The lack of supportive supervision means there isa lack of effective personnel management and quality assurance mechanisms.

In its target Woredas, WSP has supported Woredas Health Offices to develop tools and processes to effectively undertake supportive supervision activities. This has enabled Regional and Woreda level officials to provide mentoring support to those Kebeles official that have received training on hygiene and environmental health. In addition, these support visits have enabled progress to be reviewed, and facilitate critical discussion on challenges that are hampering effective implementation and reporting. The institutionalization of supportive supervision that combines mentoring, quality assurance and accelerate results has proven to be a cost effective intervention to support upfront investments and the sustainable achievement of outcomes.

6.5. Appropriate budget to deliver monitoring systems and plans

The lack of specific budget allocated to monitoring activities at different levels is hampering the monitoring of hygiene and sanitation interventions. Capital investment in training and infrastructure, are needed for Government officials working on both Hygiene and Environmental Health implementation and monitoring officers working on HMIS. Development partners can play a role in meeting these resources needs, but for the long term success of the monitoring system a reliable method of meeting these recurrent expenses is required.

Not since 2007 has the GoE made some estimates on the level of funding needed to support the monitoring of hygiene and sanitation (see table 5). While these costs were included in a national level planning document, these budget lines have not been included in plans at the Regional, Woredas or Kebele levels. It is therefore hard to know whether these estimates are sufficient, but based on comparison with other sectorsit would appear that these budget allocations would be too small to support the regular collection of data and necessary supportive supervision.

If Hygiene and Environmental Health program monitoring is to be strengthened and improved sufficient budget needs to be allocated at various levels to support these efforts. This budget would need to support more human resources dedicated to monitoring, training activities focused on understanding and implementing monitoring systems, ongoing supportive supervision and logistical support, in the area of technology hardware and transport.

6.6. Human Resource Capacity

Previous reviews of the HMIS have shown that the lack of the permanent senior technical and middle management staff members in the Planning and Program Department is hampering the implementation and reform of the HMIS. The reviews have highlighted a weakness in interpreting information and problem solving skills, as well as the absence of guidelines, was resulting in the non-availability or poor utilization of the computerized system for the purpose of data collection, aggregation and reporting across various levels.

The capacity of government officials both working on HMIS and tasked with monitoring the Hygiene & Environmental Health program at the Woredas and Kebele levels, varies considerably, as well as their access to equipment, such as vehicles and computers. The lack of health-IT professional continues to hamper the Regional and Woreda Health Bureaus from recruiting staff to manage the HMIS with appropriate skills. Some efforts have been made to provide IT professionals recruited with training on public health issues, to support them to interpret data more effectively.

TABLE 5: ESTIMATED UNIT ANNUAL COST FOR RURAL M&E INCLUDED IN NATIONAL FINANCING NEEDS ASSESSMENT FOR HYGIENE AND 'ON-SITE' SANITATION IMPROVEMENT (2007)

Description of costed item	Unit	Cost in US$ per unit	Total cost in US$ per year
At Federal Level			
Development of MIS	Lump Sum	2,000	2,000
External evaluation done once in three years	Per Year	5,000	5,000
At Regional Level : Supportive supervision and monitoring	Per Year	1,000	9,000[18]
At Woredas Level: Supportive supervision and monitoring	Per Year	250	167,500[19]
At Kebele Level: Supportive supervision and monitoring	Per Year	25	450,000[20]
		TOTAL	**633,500**

[18] Figure excludes Addis Ababa and other city administrations

[19] Figure assumes 670 rural Woredas

[20] Figure assumed an estimated 18,000 rural Kebeles

Within PHCUs and Health Centre it is rare to find staff with specific professional training on hygiene and sanitation. The inability of staff to understand relevant technical term in the area of sanitation and hygiene significantly impacts their ability to effectively gather and analyze monitoring data and compile accurate reports.

As in other areas, those Woredas that have benefit from the support of donor investment generally have a higher capacity and are better equipped. However staff turnover rates means that unless capacity development is institutionalized, rather than a one-time activity, even in donor supported Woredas human capacity is lagging. In Woredas where human capacity and logistical support is missing their ability to effectively gather the required monitoring data and effectively analyze it to influence planning processes is significantly hampered.

6.7. Appropriate incentives for data collection and use

Underpinning any monitoring system is the inclusion of appropriate incentives to motivate those collecting data to complete their task in a timely and effective manner. Financial incentives are obviously one form of motivating people. In the Ethiopian context there is not a reliance on volunteers to gather health data, and therefore health officials are being remunerated for their endeavors. However health workers, especially Health Extension Workers, have a significant work burden with responsibilities covering a number of program interventions.

One of the most important incentives is that data gathered and reported up the line by frontline health workersis useful for their own day to day work. The motivation of those tasked with collecting data is reduced when theydon't see the value in the data they are requested to gather. Ensuring frontline workers have access to data collected, such as the NWI and HMIS results, is also important to enable health officials to make decision concerning prioritizing resources and time.

Where value is added to the original data, by turning data into information or even knowledge, an even stronger sense of the value of collecting data is created. The current lack of feedback in the system is hampering the desire of health officials to prioritize monitoring activities in their congested work program. Access to technologies, such as a smart phone, can also be used as an incentive to motivate the regular collection and use of monitoring data, as well as facilitate more effective feedback and information sharing.

Recognition of program achievement is another proven form of incentivizing monitoring systems. This can be done through direct feedback systems, but also through more public forms of recognition, as done by the Hygiene and Environmental Health program during it regular review meetings. Other countries have used benchmarking and league tables to compare progress between regions and districts. Such competition has proven to both motivate officials to achieve results and report them accurately.

Currently there are limited links between the undertaking of regular and accurate monitoring activities and health officials own internal performance appraisals and career development. More alignment between both the undertaking of monitoring and the successful achievement of agreed results with promotions, would be an effective way of motivating focus in this areas. In addition, the establishment of a performance base budget allocation systems for Woredas and Regions would provide a good incentive for the implementation of effective monitoring.

6.8. Use of technology solutions

The effective implementation of WASH MIS and HMIS relies on both improvements in access to hardware and internet connection, specifically at the Woreda level. Through the support of the World Bank's PBS program, computer hardware and supporting servers has been provided to most Woreda WASH offices to manage the WASH MIS.

The roll out of Woreda Net broadband communications infrastructure, by Ethiopia Telecommunications Company and the Ministry of Capacity Building, is still being implemented and realistically will take another few years before there is 100% connectivity across the country. Even when the hardware and connectivity is in place, significant capital and recurrent investment in training and in electrical infrastructure maintenance will be needed to deploy to ensure systems remain functional.

The mobile phone network across Ethiopia is increasing at a far greater speed than broadband internet coverage. The harnessing of the mobile phone network using "smart phones" and the 3G network provides opportunities where internet coverage and computer hardware are not yet available. The piloting of the NWI using mobile phone technology and harnessing of the Akvo FLOW's mapping software[21] in Somali Region in 2014 has been very positive experience and arguably shows the future direction for sector monitoring. The speed and cost of the NWI activities in Somali Region showed significant saving, and provided hope that such surveys can be updated on a regular basis without draining significant human and financial resources.

It should however be noted that household sanitation data was not collected through the mobile phone supported NWI in Somali region. It is therefore not currently known how much additional time and cost would be needs to collect household sanitation data in the Ethiopian context. However the ability to captures photos of latrines, as with water points before, provides the opportunity to strength the verification process and also check definitions are being applied correctly to different latrine types and consistently across Regions.

In recent months, the data collected through the paper based NWI has been uploaded onto the Akvo FLOW software, and there is further work ongoing to enable the Akvo FLOW software to be compatible and feed data into the WASH MIS. If this can be achieved the ability to use mobile phone as either the primary data collection tool or as a supporting tool for the WASH sector could be a reality. To date there have been limited discussions about making Akvo FLOW compatible with the HMIS, and as discussed above this goes beyond software, as it also requires an alignment of indicators and definitions.

Many Woreda level staff have complained that the current monitoring and reporting system is a one way system (from bottom to top), technology has the potential to create a two way system to make data and analysis available to inform management decisions at lower levels.

Health Extension Worker in Amhara Region

[21] Akvo FLOW is a multi-language tool for collecting, evaluating and displaying any quantity of geographically referenced data - using Android smartphones and an online dashboard. It support the development of maps on the real-time situations on the ground and monitor changes over time.

VII. Recommendations

Based on the findings set out in this report the recommendations have been organized around four main themes:

(i) Alignment of sanitation and hygiene targets, indicators and definitions;
(ii) Strengthening the Hygiene and Environmental Health program monitoring systems;
(iii) Ensuring appropriate resources are allocated to the sanitation & hygiene monitoring;
(iv) Operationalizing the One WASH National Program vision for monitoring and learning.

To harmonize sanitation and hygiene monitoring systems it is essential that a **standard set of sector indicators, with clear definitions, are agreed upon**. This has not been possible before due to the absence of a detailed diagnostic of the existing indicators. However this report can provide the basis for a comprehensive review and alignment of sector indicators. The focus of the new set of indicators should be to support the Government of Ethiopia to report against national and international targets. A proposal for some core indicators based on strengthening the existing HMIS indicator definitions is included in Annex 18. All monitoring systems and surveys should use the standard set of indicators as a reference when identifying relevant indicators. This can be achieved through the following activities:

- National Hygiene and Sanitation Task Force should initiate a consultative process with relevant stakeholders, including key Ministries, CSA and development partners, to identify a standard set of Hygiene and Environmental Health indicators.
- This process should aim to strengthen the definitions of Hygiene and Environmental Health indicators within the HMIS to increase common understanding amongst users.
- Indicators should be developed to support the monitoring of the objectives set out in the Hygiene and Environmental Health Strategy, including household water quality, treatment and handling, which are currently not well represented.
- The outcome of the process should ensure the new GTP and SDG targets on sanitation and hygiene are supported by corresponding indicators.
- The indicators to be collected through different national surveys and sector systems, and at what frequency, should be identified from the standardized list.

With changes to the HMIS indicators not likely to be made until 2016 at the earliest, the priority of the Ministry of Health should be to **develop and implement a more robust Hygiene and Environmental Health program monitoring systems,** to be adopted by all Regions. The lessons learnt from implementing this system and collecting these indicators over the coming two years will provide a useful input into the next HMIS revision process.This can be achieved through the following activities:

- In line with the process set out above, identify the indicators from the standard set of Hygiene and Environmental Health indicators that should be monitored in the program monitoring systems, and their frequency of collection;
- Develop and disseminate a standardized national guidelines on Hygiene and Environmental Health monitoring covering; indicator definitions, data collection methodologies, data compilation methods, analysis and cleaning technics, and data use. Ensure it is translated and distributed to the Regions, with appropriate orientation, training and supportive supervision.
- Establish systems to gather data and enable the analysis of disparities in access between different groups (e.g. social, economic, and cultural) and use this information to support targeting of investment and interventions to address these disparities.
- In order to achieve the progressive elimination of inequalities the monitoring system needs to gather relevantdata to enable the following analysis to be undertaken:
- Compare the access to sanitation of the worst-off population group with the better-off population to establish the disparity.

- Determine the necessary rate of progress for both worst-off and better-off groups in order to meet the target.
- If the progress of both the worst-off and the better-off groups follows or even exceeds the determined rate of progress, and if the disparity between the two population groups narrows accordingly, inequalities will be progressively eliminated.
- Through training and increased resource allocation, strengthen the mechanisms to improve the quality of data gathered and the availability of analyzed data to Woreda and Kebele level officials to support management decisions making and resource allocation.
- Place increased focus on shifting the program monitoring system from being a system focused on upward reporting, to a system of two way information flow, which promotes feedback and supports the dissemination of analyzed data and emerging knowledge.
- Further investigation of the use of technology, specifically mobile phone technology, should be undertaken to supportcapturing, analysis and transfer of information. Technology should be use to enable information to be is more readily available to decision makers and ground level implementers to support them to undertake their roles.
- Develop a standard methodology for conducting Hygiene and Environmental Health behavior change studies, and agreed whom is responsible to fund and implement such studies and their frequency.

The monitoring of the Hygiene and Environmental Health program is being hampered by the lack of appropriate resources allocated to enable the planned system to be fully implemented. This can be addressed through the **development of a resourcing plan** to support the strengthening and implementation of Hygiene and Environmental Health program monitoring system. The resourcing plan should address the following:

- Allocation of appropriate human resources to support and implement Hygiene and Environmental Health program monitoring activities.
- Identification of human and financial resources to undertaken capacity development activities focused onstrengthening the health officials' skills in data gathering, reporting and verification to improve the reliability of data within the system.
- Allocation of human and financial resources to undertake supportive supervision, mentoring, and quality assurance activities to support upfront investments and achievement of sustainable outcomes.
- Allocation of finance resources to address logistical support, specifically in the area of technology hardware and transport needed to facilitate monitoring and supportive supervision activities.
- Articulation of methodologies to ensure resources are allocated to Regions and Woredas in an equability mannertaking into consideration need, performance and resources allocated from other donors.
- The Government of Ethiopia should also invest resources to accelerate their commitment to integrate the IBEX financial monitoring system with the WASH MIS and HMIS, to facilitate the more effective tracking of investments, as well as unit cost and value for money analysis.

As a signatory of the One WASH National Program the Ministry of Health has a responsibility to ensure the **operationalizing the OWNP monitoring system**, to enable the development of one plan, one budget and one report for the wider WASH sector. This can be achieved through the following activities:

- Increased political commitment at the highest level should be sort to support the implementation of the ONWP monitoring systems.
- Strengthening of the OWNP coordination structures at Federal and Regional levels, and below, to fulfil their mandate in relation to monitoring, and enable them to more effectively facilitate joint planning, learning and reflection activities.
- Establishment of systems at Federal and Regional levels to ensure that data from MOH monitoring systems, both the HMIS and Hygiene and Environmental Health program monitoring system, contribute toward the ONE National WASH program's planning, budgeting and reporting processes.
- MoH and MOWIE should work together to ensure that the NWI is aligned and institutionalized within the wider WASH monitoring system, and contribute to the monitoring of Hygiene and Environmental Health targets and objectives.

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Annex 1: Framework to Review Ethiopia's Sanitation and Hygiene Monitoring System

Adapted from UNAIDS "12 Components Monitoring & Evaluation System Assessment Tool" for national HIV/AIDS monitoring systems

Components		Areas of Enquiry
1	Organisational structures with monitoring	– Is an M&E unit at MoH responsible for sanitation and hygiene? – Is a unit at MoH responsible for routine health information? – Identify the agency responsible for coordinating national household surveys – Identify agencies responsible for sanitation surveillance – Is there M & E unit/sub-unit at sub national level? If so is it responsible for sanitation and hygiene? – Number of full-time and/or part-time M&E posts (filled or vacant) at MoH including those at sub-national levels – What documents are in place that provides the policy and legislative framework for the overall health management information system?
2	Human capacity for monitoring	– Is a human capacity building plan for monitoring health indicators more generally, as well as sanitation indicators? – Is the existing human capacity building plan is based on assessment results? – Does a national level M&E capacity gaps are addressed by the national sanitation plans or strategies? – Are sub-national level M&E capacity gaps, including gaps in crosscutting functions such as reporting and data management, addressed by (1) national sanitation plans; (2) plans for strengthening the overall HIS; and/or (3) M&E plans for other public health programmes? – Is there a nationally endorsed curricula to address these M&E capacity gaps? – Obtain any documents describing the following: • Plans to increase the number of epidemiologists, IT specialists and/or database managers in key agencies the HMIS unit and other programmes of the MoH • Plans for pre-service training and/or recruitment of well qualified data managers at district level • Plans for in-service training of service providers in record keeping and reporting • Plans for in-service training of district data managers in management of routine health data
3	Monitoirng partnerships	– Is there are M&E technical working group/committee (TWGs) coordinated by MoH, and if so which agencies are represented on any M&E TWGs? – Are there TORs for TWGs coordinated by MoH; compare if the TORs are in line with intended objectives of the respective TWGs – Is there an inventory of stakeholders for sanitation M&E and it is periodically updated? Obtain the list of agencies that are considered stakeholders of the sanitation M&E system. – Is there a list of stakeholders for the overall HMIS? Obtain a list of the agencies considered stakeholders of the overall HMIS. – Compile a set of all of the forms, whether or not they are related to sanitation, that government health facilities are asked to submit each month to their Woreda/Regional health office.

Components		Areas of Enquiry
4	Monitoring plan	– Is a national strategic plan for sanitation, and does it contains an M&E plan for sanitation? – Review the sanitation M&E plan and check if: • All the building blocks of performance for each component are described including: partnerships/ coordination of stakeholders; advocacy and communications; development of organizational structures; strengthening human resources for sanitation M&E; supervision and data auditing; evaluation and research; strengthening surveys and surveillance; strengthening the M&E database; and improving dissemination and use • Does the sanitation M&E plan has an estimate of the resources/budget required for M&E? • Does the M&E plan include indicators to monitor the progress and performance of the sanitation M&E system? • Are the indicators of the national sanitation M&E Plan aligned with objectives of the national strategic plan for sanitation? • Data sources of indicator values are specified in the national sanitation M&E Plan? • Is the measurement of each indicator is defined in the national sanitation M&E Plan? • Are the frequencies of data collection for indicator values are specified? • Is the data use plan is described? • Are baseline values are included for indicators? • Are targets are set for each indicator? – Review the sanitation M&E plan, NSP or other relevant documents and calculate: • Percentage of total sanitation program funding from government allocated for the sanitation M&E plan • Percentage of total sanitation program funding from development partners allocated for the sanitation M&E plan • Percentage of total sanitation program funding from all sources (government and development partners) allocated for the sanitation M&E plan Review the list of those who participated in development of the sanitation M&E plan to see if it includes a good range of stakeholders
5	Costed monitoring plan	– Is there a National Sanitation M&E Work Plan? – Is there a work plan for the National Sanitation program? – Is the National sanitation M&E Work Plan costed, has timeline for implementation, responsible partners are identified for implementation of each activity? – Review the sanitation M&E work plan, sanitation program work plan or other relevant documents and calculate: • Percentage of total sanitation program funding from government allocated for the sanitation M&E work plan • Percentage of total sanitation program funding from development partners allocated for the sanitation M&E work plan • Percentage of total sanitation program funding from all sources, including government and development partners, allocated for the sanitation M&E work plan

Components		Areas of Enquiry
6	Monitoring advocacy, communications and culture	– Does the National Sanitation Policy or Strategic Plan or other similar document include M&E policy issues and strategies?
7	Rountine programme monitoring	– Are there are guidelines on data recording, collecting, collating and reporting for reach Region/Program? – Are there national guidelines on how data quality should be maintained (e.g., avoid double counting, assure reliability and validity) from routine health information (sanitation-related or otherwise)? – Are there national guidelines and a system for monitoring: • Latrine typologies, specific whether they are hygienic or "improved" according to JMP, • Access to a latrine, e.g. number of people using or disable/child friendly, • Use of latrines • Community sanitation outcomes, e.g. open defecation free status • Hand-washing facilities, • Hand-washing behaviors, • Sanitation promotion interventions • Availability of sanitation related product and services • Safe water management
8	Surveys and surveillance	– Has there been inventory of surveys (sanitation-related or WASH) conducted in the country? If so, when the inventory was last updated? – Is a multi-year plan to coordinate household surveys (sanitation related or WASH related) – Prepare a summary on how frequently each of the following surveys are conducted in the country: • National surveys or surveillance on sanitation infrastructure; • National surveys or surveillance with sanitation behavioral component in the general population; • National level school-based sanitation survey; • Health facility surveys in sanitation-related services
9	Monitoring Databases	– Review the breadth, depth and quality of existing national and sub-national sanitation databases
10	Supervision and data auditing	– Are there reports of data quality studies and data audits done on health - related data in the past 12 months; these may be national or sub-national, general or program/project-specific? – Is there a national protocols on supervision of recording keeping and reporting by health facilities?
11	Evaluation and research	– Check if there is a national sanitation evaluation and research agenda? If yes, when was it last updated and how was it used
12	Data dissmenination and use	– Obtain samples of the information products from various databases and HMIS that are used in sanitation-related reporting – Obtain copies of reports prepared in the past 12 months, which are citied in the national sanitation M&E plan. – Obtain copy of any annual statistical report. – Review any national or program/project-specific websites that contain sanitation M&E related information – Document what statistics and statistical reports can be viewed and downloaded from the web site of the MoH and other health-related agencies

Annex 2: Semi-Structure Questionnaire for discussion on Regional Monitoring Systems

Components		Areas of Enquiry
1	Organisational structures with monitoring	– Who is responsible for gathering and recoding routine health information? – Are these the same people who are responsible for gathering hygiene and sanitation information? – What is the number of full-time and/or part-time M&E posts (filled or vacant) within the Regional Health Bureau? – Are any specifically dedicated to hygiene and sanitation information? – What documents are you aware of that provide the policy and legislative framework for the overall health management information system? – What document are you aware of at the national level developed by MoH to guide monitoring of sanitation and hygiene?
2	Human capacity for monitoring	– Is there a human capacity building plan for monitoring health indicators more generally, as well as sanitation indicators? – Is the existing human capacity building plan is based on an assessment? – Obtain any documents describing the following: • Plans to increase the number of epidemiologists, IT specialists and/or database managers in Regional Health Bureaus • Plans for pre-service training and/or recruitment of well qualified data managers at district level • Plans for in-service training of service providers in record keeping and reporting • Plans for in-service training of district data managers in management of routine health data
3	Monitoirng partnerships	– Is there are M&E technical working group/committee (TWGs) coordinated by Regional Health Bureau, and if so which agencies are represented on any M&E TWGs? – If not, is M&E included under other working group led by the RHB? – Is there an inventory of stakeholders for sanitation M&E and it is periodically updated? Obtain the list of agencies that are considered stakeholders of the sanitation M&E system. – Is there a list of stakeholders for the overall HMIS? Obtain a list of the agencies considered stakeholders of the overall HMIS. – *Compile a set of all of the forms, whether or not they are related to sanitation, that government health facilities are asked to submit each month to their Woreda/Regional health office.*
4	Monitoring plan	– Is a regional strategic plan for sanitation, and does it contains an M&E plan for sanitation? – Does the sanitation M&E plan has an estimate of the resources/budget required for M&E? – Are the regional indicatorsaligned with objectives of the national strategic plan for sanitation? – Data sources of indicator values are specified? – Are the frequencies of data collection for indicator values are specified, and if so what are they? – Are baseline values are included for indicators? – Are targets are set for each indicator?

Components		Areas of Enquiry
5	Costed monitoring plan	– Is the sanitation M&E Work Plan costed, has timeline for implementation, responsible partners are identified for implementation of each activity?
6	Rountine programme monitoring	– Are there are guidelines on data recording, collecting, collating and reporting? – Are you aware of national guidelines on how data quality should be maintained (e.g., avoid double counting, assure reliability and validity) from routine health information (sanitation-related or otherwise)? – Are there national guidelines and a system for monitoring: • Latrine typologies, specific whether they are hygienic or "improved" according to JMP, • Access to a latrine, e.g. number of people using or disable/child friendly, • Use of latrines • Community sanitation outcomes, e.g. open defecation free status • Hand-washing facilities, • Hand-washing behaviors, • Sanitation promotion interventions • Availability of sanitation related product and services • Safe water management
7	Surveys and surveillance	– How were you engage in the National WASH inventory? – How has the National WASH Inventory supported your reporting and monitoring processes? – Has the National WASH Inventory support your management decision in regards to targeting and implementing sanitation and hygiene interventions?
8	Monitoring Databases	– What is the process for feeding in data sanitation and hygiene into the HMIS at the regional level? – Are the indicators in the HMIS on sanitation and hygiene useful for your management purpose? – Who you add or change any of the HMIS indicators on sanitation and hygiene? If yes, how?
9	Supervision and data auditing	– Are there reports of data quality studies and data audits done on health - related data in the past 12 months? – Are you aware of a national protocol on supervision of recording keeping and reporting by health facilities? – Has the Regional Health Bureaus developed its own protocols on supervision of recording keeping and reporting by health facilities?
10	Evaluation and research	– Are you aware of a national sanitation evaluation and research agenda at the regional level? – Is a sanitation evaluation and research agenda at the regional level?
11	Data dissmenination and use	– Obtain samples of the information products from various databases and HMIS that are used in sanitation-related reporting – Obtain copies of reports prepared in the past 12 months, which are citied in the national sanitation M&E plan.
12	General	– What gaps do you feel currently existing in the monitoring and reporting of hygiene and sanitation? – What are some of the challenges you face in gathering sanitation and hygiene data for reporting purposes? – What do you believe are your achievement in regards to monitoring and – What additional support/resources do you require to improve monitoring of hygiene and sanitation?

Annex 3: DHS – Sanitation Data, 2011

Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Ethiopia 2011

Type of toilet/latrine facility	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility	**14.1**	**6.6**	**8.3**	**18.2**	**6.8**	**8.8**
Flush/pour flush to piped sewer system	1.9	0.0	0.5	2.4	0.0	0.5
Flush/pour flush to septic tank	1.2	0.1	0.4	1.6	0.1	0.4
Flush/pour flush to pit latrine	1.4	0.9	1.0	1.7	1.0	1.1
Ventilated improved pit (VIP) latrine	1.2	1.0	1.0	1.7	1.0	1.1
Pit latrine with slab	7.2	1.1	2.5	9.2	1.1	2.6
Composting toilet	1.2	3.5	3.0	1.6	3.6	3.2
Shared facility[1]	**32.2**	**2.8**	**9.5**	**26.7**	**2.2**	**6.7**
Flush/pour flush to piped sewer system	0.5	0.0	0.1	0.4	0.0	0.1
Flush/pour flush to septic tank	0.8	0.1	0.3	0.9	0.1	0.2
Flush/pour flush to pit latrine	1.5	0.2	0.5	1.3	0.2	0.4
Ventilated improved pit (VIP) latrine	2.0	0.3	0.7	1.7	0.2	0.5
Pit latrine with slab	24.4	1.0	6.3	20.2	0.8	4.3
Composting toilet	2.9	1.2	1.6	2.3	0.9	1.2
Non-improved facility	**53.7**	**90.6**	**82.2**	**55.0**	**91.0**	**84.5**
Flush/pour flush not to sewer/septic tank/pit latrine	0.1	0.1	0.1	0.2	0.1	0.1
Pit latrine without slab/open pit	37.1	45.4	43.5	38.3	47.7	46.0
Hanging toilet/hanging latrine	0.1	0.0	0.0	0.2	0.0	0.0
No facility/bush/field	15.9	44.8	38.3	16.1	43.0	38.2
Other	0.3	0.2	0.2	0.2	0.1	0.1
Missing	0.1	0.1	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Weighted number	3,780	12,922	16,702	13,939	63,438	77,377
Unweighted number	5,112	11,590	16,702	18,917	56,738	75,655

[1] Facilities that would be considered improved if they were not shared by two or more households

Annex 4: Key milestones in WASH Sector Monitoring

1) In 2006, an MOU was signed between Ministries of Education, Health and Water Resources (currently the Ministry of Water, Irrigation and Energy) in recognition of the multi-sectorial nature of WASH.

2) The institutionalization of the semi-annual Joint Technical Reviews (JTR) andan annual Multi Stakeholder Forum (MSF) have provided a mechanism for systematic review of the sector progress, achievements and challenges.

3) In late 2007, a conceptual framework was agreed which aimed to harness the existing data gatheredby the three related Ministries. In addition, it is also aimed to incorporate WASH data from CSA and financial reporting fromthe Integrated Budget and Expenditure system (IBEX).

4) In 2010/11, the undertaking of the WASH inventory provided the sector with consistent data from the whole country, in doing so establishing the first national baseline for the sector. The successful piloting of mobile phone software to capture WASH inventory data in the Somali Region during 2014 has created more possibilities for future data gathering and analysis[22].

5) The establishment of the One WASH National Programme in 2013, and related WASH Implementation Framework (WIF), has increased alignment in the sector and create the platform to further strength sector monitoring and reporting activities.

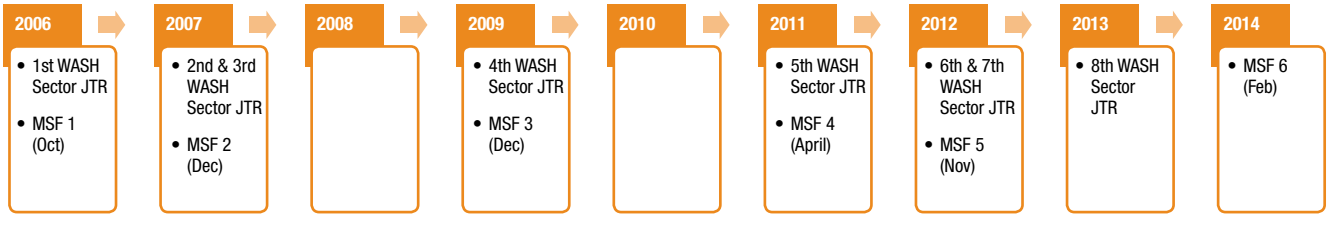
[22] This initiative has been supported by UNICEF and engaged the service of Akvo FLOW.

Annex 5: Summary of Joint WASH Technical Review and Ethiopia WASH Multi-Stakeholder Forum[23]

A summary of the purpose, content and outputs of these meetings is included in the table below.

Event	Joint WASH Technical Review 1	Ethiopia WASH Multi-Stakeholder Forum	Joint WASH Technical Review 2
Purpose	Review physical and financial progress of National WASH program	Review progress on policy issues and commitements	Review progress on actions agreed at JTR 1 and WASH program implementation
Timing	Semi Annual: October	Annual: 4 weeks after JTR 1 - November	Semi Annual: May
Content	– Use data from previous financial year and latest construction season – Assess efficiency of implementation – Appraise plans and procurement for the year ahead – Government confirmes official sector progress – DAG-TWGW confirms financial resources available	– Open multi-stakeholder forum – Review acheivements of last 12 months – Review progress on WASH Capacity Building – Present priorities for next 12 months – Reach consensus on strategic and policy actions – MSF undertakings – Issueagreed MSF Statement	– Monitor implementaton, including monitoring field trips, and make recommendations for next year work program and budget. – Assess quality of work and approaches – Review region specifica issues – Review consuldate WASH plans – Review progress on sector initiatives
Report	Annual JTR 1 Report	– Agree Aid Memoire from JTR 1 – Progress report on MSF Undertakings – Progress report on WASH Capacity Building	JTR 2 Report – progress report on action from JTR 1 Regions' progress reports on implementation
Participation	Selected participants from Government, DAG-TWGW, Civil Society, Private Sector	Broad selection of invite participants from Government, DAG-TWGW, Civil Society, Private Sector, academia, researchers	Selected participants from Government, DAG-TWGW, Civil Society, Private Sector

At the time of writing there have been 8 WASH Sector JTRs and 6 MSFs, as depicted in the diagram below. However it should be noted that due to poor coordination between the relevant Ministries and conflicting Government priorities, in the nine years since the JTRs was initiated it has only been held twice in a year on two occasions in 2007 and 2012. The MSF was also envisaged at the Regional level on an annual basis, but these have not yet materialized. The WIF also sets out a vision of Kebele, Woredas and Regional WASH Teams having quarterly and annual WASH progress review meetings, but again these are happening in an ad-hoc manner.



[22] Girma and Suominen, IRC, "Sector collaboration: a case study from Ethiopia", August 2013

Annex 6: Health Target in Growth and Transformation Plan

GTP Targets for Health

Description of Targets	2009/10	2014/15
1. Decrease maternal mortality rate per 100,000 mothers	590	267
2. Decrease under 5 mortality rate per 1,000 children	101	68
3. Infant mortality rate (per 1,000 live births)	77	31
4. Increase family planning service (CPR) (%)	32	66
5. Increase Penta 3 immunization coverage (%)	82	96
6. Reduce HIV/AIDS incidence (%)	0.28	0.14
7. Increase TB Case Detection Rate (%)	36	75
8. Reduce Malaria incidence (%)	32.2	<0.7

Annex 7: Misalignment of Sanitation and Hygiene Targets

MOWIE and MOH's Universal Access Plan II (UAP II) developed in 2011 includes the ambitious targets of 100% access to and use of basic hygiene and sanitation by end of 2015.It is now unlikely that either target will be achieved. The Health Sector Development Program IV, 2010/11 – 2014/15 (HSDP IV) includes three targets on sanitation and hygiene, which on the face of it looks to be set lowers that those in UAP II. The targets in HSDP IV are:

- Increase the proportion of households utilizing latrine from 20% to 82%
- Increase the proportion of villages (Kebeles) free of open defecation from 15% to 80%
- Increase proportion of households using household water treatment & safe storage practices from 7% to 77%

It should be note that "the proportion of households utilizing a latrine" is considered an outcome indicator in the HSDP IV document. There is also an output indicator of "the proportion of households with a latrine", for which the target is set at 95% and therefore closer to the UAP III target of total coverage.

The Hygiene and Sanitation Strategy and Strategic Action Plan of 2005 aligns with the UAP II indicator on access to sanitation, it also includes a target of achieving 100% open defecation free Ethiopia with all households having access to and using a basic 'minimum' standard of toilet by end of 2015. This is clearly more than the 80% set out in the HSDP IV document. The Hygiene and Sanitation Strategic Action Plan targets also included references to all households practicing hand washing at critical times, which is not include in other planning documents.

Annex 8: The eThekwini Commitments and New Indicators

eThekwini Commitments on Sanitation		New indicator	Criteria		
			Good progress (0.66-1)	In Progress (0.33-0.65)	Little progress (0 -0.32)
3a	To establish, review, update and adopt national sanitation and hygiene policies within 12 months of AfricaSan 2008	Is there a rural / urban sanitation policy agreed by stakeholders and approved by cabinet (either gazetted as part of a national policy or as a standalone policy)	Policy agreed and gazetted	Policy yes, but not agreed or gazetted	No policy
3b	To establish one national plan for accelerating progress to meet national sanitation goals and the MDGs by 2015,	Is there a sanitation plan (roadmap, strategy, eThekwini action plan, AfricaSan 3 Priority Action plan, SWAp etc.) including clear roles and responsibilities, financing plan, timeframes and M+E system?	Defined and implemented	Being defined	None
3c	and take the necessary steps to ensure national sanitation programs are on track to meet these goals	Is there an annual review in place to monitor subsector performance and to set new targets / undertakings?	Review and setting of new undertakings	Review but no setting of new undertakings	No review or setting of new undertakings
4	To increase the profile of sanitation and hygiene in Poverty Reduction Strategy Papers and other relevant strategy related processes	Are there rural / urban sanitation targets in the PRSP or national development plan?	Yes	No	No PRSP or national development plan
5a	To ensure that one, principal, accountable institution takes clear leadership of the national sanitation portfolio	Is there a government agency with a clear mandate to lead and coordinate the policy development and planning of the rural / urban sanitation and hygiene subsector?	Lead agency coordinating the sector	Coordination but no lead agency	No lead agency and no coordination
5b	To establish one coordinating body with specific responsibility for sanitation and hygiene, involving all stakeholders, including but not limited to those responsible for finance, health, water, education, gender and local government	Is the ministry of education/health/ water participating in sanitation coordination?	Yes, very active	Yes, fairly active	No
6a	To establish specific public sector budget allocations for sanitation and hygiene programs	Is there a separate and clearly defined budget line for sanitation?	Yes, at both national and local level	Yes, at either national or local level	No

6b	(our aspiration is that) these allocations should be a minimum of 0.5% of GDP for sanitation and hygiene	Total sanitation CAPEX allocations as a proportion of GDP.	Total planned public CAPEX sanitation (per yr. 2009-11) is at least 0.5% or more of the GDP.	Total planned public CAPEX sanitation (per yr. 2009-11) is between 0.1%-0.5% of the GDP.	Total planned public CAPEX sanitation (per yr. 2009-11) is less than 0.1% of the GDP.
7a	To use effective and sustainable approaches, such as household and community led initiatives, marketing for behavior change, education programs, and caring for the environment,	Please estimate the population covered by demand-led approaches to sanitation over the past five years	TBC	TBC	TBC
7b	(which make a) specific impact upon the poor, women, children, youth and the unserved	Has the impact of equity policies on the achievement of sanitation targets for vulnerable and marginalized groups been measured to ensure these groups have adequate access?	Results measured and success shown in progressing to targets	Results measured and little progress to targets shown	Results not measured
8	To develop and implement sanitation information, monitoring systems and tools to track progress at local and national levels	Is there a national information system that covers sanitation and that is used to inform decisions/ strategy and resource allocation for sanitation?	Yes and used	Under development	No
8b	(and to) work with global and regional bodies to produce a regular report on Africa's sanitation status, the first of which to be published by mid-2010	Are the national sanitation commitments made at regional and global level monitored? (MDGs, regional sanitation conferences, eThekwini and Sharm-el-Sheik for Africa)	Yes, progress assessed and publicly reported	Yes, but not reported publicly	No
9	To recognize the gender and youth aspects of sanitation and hygiene, and involve women in all decision making levels so that policy, strategy and practice reflect gender sensitive approaches to sanitation and hygiene	Do national sanitation policies/ strategies include specific provisions for women, including menstrual hygiene management needs?	Yes, and refers to MHM needs	Yes, but does not refer to MHM needs	No specific provision
		What percentage of sanitation personnel is made up of women?	More than 50%	10-50%	Less than 10%
10	To build and strengthen capacity for sanitation and hygiene implementation, including research and development, and support knowledge exchange and partnership development	Do national sanitation strategies or sector reviews address or have targets for human resources?	Yes, and HR programs are implemented	Yes, but HR programs still under development	No
		Does the government have a private sector development program for rural / urban sanitation?	Yes and is effective	Developing	None

Annex 9: Summary of HMIS Revised Indicators and Processes

The HMIS captures information from service and administrative records, reported on a monthly, quarterly, and annual basis. The HMIS project is an ambitious effort by the Government of Ethiopia to improve the collection and storage of critical health data. The gathering of consistent indicators through the HMIS enables information to be collated and compared across Ethiopia to support decision making within the Ministry of Health to maintain and improve service delivery.

The process for updating the HMIS indicators was guided by inputs from the Regional Health Bureau, who provided suggestions on revised and new indicators. This process varied from Region to Region. In some regions a consultative process was followed where programmatic units were asked to provide input into the proposed list of new indicators. In other regions the HMIS Unit developed the list of indicators with limited or no consultation with the relevant program units. In total over 30 new Environmental Health indicators were proposed from the Regions, via the Hygiene and Environmental Health Case Team, to the Ministry of Health's Planning Unit, responsible for HMIS. As mentioned above, finally only three were incorporated. There is a feeling amongst Regional Hygiene and Environmental Health Units and the relevant case team within the Ministry that there are still not enough indicators to monitor the initiatives they are tasked with implementing.

The 122 HMIS indicators are divided into eight major categories based on the HSDP IV strategic objectives, and these are split into further sub-categories as set out below:

C.1.: Improve Access to Health Services (97 Indicators)
C.1.1. Maternal and Child Health (35 Indicators)
C.1.1.1. Maternal Health (13 Indicators)
C.1.1.2. PMTCT (7 Indicators)
C.1.1.3. Child Health, including Expanded Program on Immunization (15 Indicators)
C.1.2. Nutrition (6 Indicators)
C.1.3. Hygiene and Environmental Health (3 Indicators)
C.1.4. Prevention and Control of Disease (53 Indicators)
C.1.4.1. All diseases (3 Indicators)
C.1.4.2. Communicable diseases (45 Indicators)
C.1.4.2.1 HIV/AIDS (14 Indicators)
C.1.4.2.2 Tuberculosis (16 Indicators)
C.1.4.2.3 Leprosy (3 Indicators)
C.1.4.2.4 TB/HIV (5 Indicators)
C.1.4.2.5 Malaria (5 Indicators)
C.1.4.2.6 Neglected tropical diseases (2 Indicators)
C.1.4.3. Non Communicable diseases (5 Indicators)
C.2. Community Ownership (2 Indicators)
F.1. Resource Mobilization and Utilization (4 Indicators)
P.1. Quality of health services (6 Indicators)
P.3. Pharmaceutical Supply and Services (1 Indicators)
P.5. Evidence Based Decision Making (4 Indicators)
CB.1. Health Infrastructure (4 Indicators)
CB.2. Health Capital and leaders (4 Indicators)

Annex 10: Overview of HMIS' Hygiene and Environmental Health Indicators

C.1.3.1. Proportion of households' access to latrine facilities

Definition	Proportion of households' access to any type of latrine facilities						
Formula	*Number of households with any type of latrine facilities (both unimproved and improved)*						X 100
	Total number of households						
Interpretation	Use of latrines is known to reduce the morbidity of communicable diseases, particularly those transmitted by the fecal oral route, such as diarrhea, hepatitis, etc. Access to a latrine must be accompanied by appropriate utilization and availability of hand washing facilities in use. This is usually assessed by survey; in Ethiopia, routine visits to each household by Health Extension Workers (HEWs) offer an alternative method to surveys. Improved Latrine = Hand washing facility + slab + Ventilation pipe (superstructure) Unimproved = simple pit latrine without ventilation						
Disaggregation	– Improved Latrine – Unimproved Latrine						
Source	Service delivery tally (for HP)						
Frequency of Reporting	**HP**	**HC/Clinic**	**Hospital**	**WorHO**	**ZHD/ScHO**	**RHB**	**FMOH**
	Quarterly	Quarterly*		Quarterly	Quarterly	Quarterly	Quarterly

** N.B. HC aggregates reports received from HPs & sends to WorHO*

The first indicator is very similar to the previous HMIS sanitation related indicator however the words "to any type" have been added for clarification. As with the previous indicator, the new indicator stipulates that the latrine "must be accompanied by appropriate utilization and availability of hand washing facilities after use". The new definition also requires the data to be disaggregated in "improved latrines" and "unimproved latrine." Improved latrines are defined as those with hand washing facility, slab, ventilation pipe and a superstructure. Unimproved latrines are defined as simple pit latrine without ventilation. This disaggregation is an improvement from the previous system, and brings the system closer in line with other sector systems as discussed in the next section.

C.1.3.2 Proportion of HHs using Latrines

Definition	Proportion of households that use latrine for defecation purpose properly						
Formula	*Number of households utilizing latrines properly*						X 100
	Total number of HHs with latrine in the catchment area						
Interpretation	Use of latrines is known to reduce the morbidity of communicable diseases. This is particularly true of diseases transmitted by fecal oral route such as diarrhea and evidenced when there is feces in pit, visible access, absence of spider webs, absence of feces around household or pit latrine, and well maintained superstructure.						
Disaggregation	None						
Source	Administrative Records						
Frequency of Reporting	**HP**	**HC/Clinic**	**Hospital**	**WorHO**	**ZHD/ScHO**	**RHB**	**FMOH**
	Quarterly	Quarterly*		Quarterly	Quarterly	Quarterly	Quarterly

** N.B. HC aggregates reports received from HPs & sends to WorHO*

The addition of an indicator on the use of latrine also strengthens the system. To support the monitoring of this indicator, proxy evidence of use is described as "feces in pit, visible access, absence of spider webs, absence of feces around household or pit latrine, and well maintained superstructure." It should be noted that the indicator does not disaggregated between the usage of improved and unimproved latrines. However the addition of an indicator on latrines use responds to the proposal set out when the WASH monitoring system was established, where it was suggested that the term 'access' in HMIS sanitation indicator be replaced with 'use'.

C.1.3.3 Kebele declared "Open Defecation Free"

Definition	Proportion of Kebeles declared open defecation free						
Formula	*Number of Kebeles that have been declared open defecation free*						X 100
	Total number of Kebeles						
Interpretation	Open defecation free (OF) indicates the entire community (households, schools, religious institutions, etc.) stopped the practice of open defecation and continue to maintain this status for at least three months showing almost no indication of reverting to this practice. For this purpose, the rigorous verification and certification procedures are followed before Kebeles are declared ODF Village coordination committee requests Kebele for verification of ODF status, proper practice of hand washing and household water handling at their respective villages. Similarly, Kebele CLTS Coordination Committee request Woredas for verification of ODF status, proper practice of hand washing and household water handling at home in their respective Kebele (HH and institution)						
Disaggregation	None						
Source	Administrative Record						
Frequency of Reporting	HP	HC/Clinic	Hospital	WorHO	ZHD/ScHO	RHB	FMOH
		Quarterly		Quarterly	Quarterly	Quarterly	Quarterly

The inclusion of an indicator on open defecation free Kebeles, bring the HMIS into line with current sector trends on monitoring community outcomes in sanitation and aligns with HSDP IV and UAP II targets. The indicator definition makes it clear that to achieve this the "entire community (households, schools, religious institutions, etc.) should stop the practice of open defecation and continue to maintain this status for at least three months showing almost no indication of reverting to this practice." The indicator does not make any reference to the types of latrines that households need to be using. While the indicator makes reference to a rigorous verification and certification procedure, it makes no direct reference to the CLTS-H Verification and Certification Protocol, developed by the MoH in 2012.

Annex 11: Monitoring and Evaluation Component of National Hygiene and Sanitation Strategic Action Plan, 2011-2015

1. **Ensure Inventory catches key sanitation and hygiene data**
   It is important that the NSHTF engages in final discussions on the roll out of the national WASH inventoryto ensure key hygiene and sanitation priority indicators are captured and can inform the development ofrobust baseline data to inform the advocacy and planning process.

2. **Develop and revise reporting formats for each level of health services (health post, Woreda, Regional, national)**
   Linked to the national WASH inventory is the report card which provides a simple reporting format to trackprogress towards key milestones. Some modification might be required

3. **Annual review meeting to track effective implementation of hygiene & sanitation program**
   Currently the annual multi-stakeholder forum provides the best opportunity for an annual tracking of andreporting on progress. In line with most Sector Wide review processes such high-level meetings aregenerally informed by sub-sector reviews reporting on annual progress against the SAP milestones.

4. **Facilitate continuous supportive supervision and monitoring at all levels**
   Cascading supportive supervision at all levels is essential to monitor individual staff performance as well asprogress against delivery of outputs and achievement of undertakings and key indicators.

A.6	MONITORING AND EVALUATION							
OUTPUT	Accurate hygiene and sanitation data collected tracking progress on increasing access, ODF status, key hygiene behaviours, SAP milestones and financial tracking							
TASK	ACTIVITY	TIME FRAME	LEVEL OF INTERVENTION	WHO LEADS	WHO SUPPORTS	INPUTS	UNIT	COST in USD
A.6.1	Ensure Inventory catches key Sanitation/hygiene data	Annually in 4th quarter of the first year	Federal Level	NH&S task force	NWASH team	Refreshment expense	Lump sum	600.00
A.6.2	Develop and revise reporting formatsfor each level of health services (health post, Woreda, regional, national	In the 4th quarter of the 2nd Ethiopian fiscal year of implementation	Federal Level	Concerned departments at the Ministry of Health	Federal WASH coordination office	Consultancy fee, travel and other expenses	Lump sum	11,600.00
A.6.3	Annual review meeting to track effective implementation of hygiene & sanitation program	Annually in 4th quarter ranging from 1st to 5th year	Federal Level	NH&S task force	NWASH team	Refreshment expense	Lump sum	450.00
			Regional Level	RH&S task force	RWASH team			200.00
			Woreda Level	WH&S task force	WWASH team			150.00
			Town Level	KH&S task force	KWASH team			300.00
			Rural Kebele Level	TH&S task force	TWASH team			90.00
			Urban Kebele Level	KH&S task force	KWASH team			38.00
A.6.4	Continous supportive supervision	Annually in the 4th quarter starting from the 1st year of implementation	Woreda Level	WHRO	WWASH team	Transport and per diem expenses	Lump sum	720.00
			Woreda Level	WHRO	WWASH team	Transport and per diem expenses	Lump sum	480.00
			Town Level	THO	TWASH team			480.00
			Rural Kebele Level	HEW's supervision	KWASH team			100.00
			Urban Kebele Level		KWASH team			28.00

Annex 12: Indicators for Baseline Survey and Sanitation & Hygiene improvements from National Protocol for Hygiene and "On-Site" Sanitation

1. Health Impact Indicators
   - % of children < 36 months of age with diarrhea in the last month

2. Essential Family Practices
   - % of population washing hands properly with soap and at appropriate times
   - % of children whose feces were disposed safely
   - % of households that practice safe drinking water management
   - % of caretakers who practice safe food management

3. Access to Hard ware
   - % of Households with access to improved water sources
   - % of Households with access to minimum standard and hygienic latrine
   - % of Households with access to hand washing place with soaps or substitutes

4. Community Water Systems
   - % of Households that have sufficient quantities of water
   - % of Households with access to improved water sources during dry and wet seasons

5. Sanitation and Solid Waste
   - % of Households that have a hygienic solid waste disposal system

6. Household Technologies & Materials
   - % of Households that have soaps or substitute
   - % of Households that use a safe method for transferring drinking water from a container
   - % of Households that have covered and narrow neck water storage containers

7. Behaviour
   - % of Households using a properly cleaned toilet facility
   - % of Households who clean their water storage containers at least once per week
   - % of Households who have participated in community hygiene promotion activities
   - % of Households that have child-friendly feces disposal facility

Annex 13: National documents to guide the monitoring of sanitation and hygiene

- Universal Access Plan for Water and Sanitation (2005)
- National Sanitation and Hygiene Strategy (2005)
- National Protocol for Hygiene and "On-Site" Sanitation (2006)
- Needs Assessment to Achieve Universal Access to Improved Hygiene and Sanitation by 2012 (2007)
- Health Management Information System (HMIS) / Monitoring and Evaluation (M&E), Strategic Plan for Ethiopian Health Sector (2008)
- National Hygiene & Sanitation Strategic ActionPlan for Rural, Per-Urban & Informal Settlements inEthiopia, 2011- 2015 (2011)
- National Sanitation and Hygiene Implementation Guideline (2011)
- CLTSH Verification and Certification Protocol (2012)
- National Sanitation Marketing Guidelines (2014)
- HMIS Indicator Definitions, Technical Standards: Area 1 (2014)

Annex 14: Proposed WASH Monitoring System Indicators

Performance Indicator	Definition & comment	Source
No & % of health facilities with water and latrines with water	– Derived from the HMIS-Health Facilities Inventory. Analysis to show breakdown by water supply and latrine facilities as well as functionality of both.	HMIS-HFI
% of HHs with a functioning latrine meeting minimum standards	– As reported by a) the HMIS-Household Register and b) by the most recent nationally represented household survey c) as estimated by RWS-Inv. 1 (WASHCOM module) – Analytical narrative to show the trends and to compare the three sets of figures and analyses the reasons for disparities. – [open defecation, unimproved facility, improved facility, flush toilet]	HMIS-HHR CSA-HHS RWS-Inv. 1
% of HHs with a functioning hand washing facility	– As reported by a) the HMIS-Household Register and b) by the most recent nationally representative household survey c) as estimated by RWS-Inv. 1 (WASHCOM module). – Analytical narrative to show the trends and to compare the three sets of figures and analyses the reasons for disparities.	HMIS-HHR CSA-HHS RWS-Inv. 1
% of people washing hands after defecation	– As reported by a) the HMIS-Household Register and b) by the most recent nationally represented household survey c) as estimated by RWS-Inv. 1 (WASHCOM module) – Analytical narrative to show the trends and to compare the three sets of figures and analyses the reasons for disparities.	HMIS-HHR CSA-HHS RWS-Inv. 1

Annex 15: National WASH Inventory Sanitation and Hygiene Indicators

Indicators	Definitions
Households	
Number of HH with 'traditional' pit toilet	'Traditional' Pit (1) Uncovered Pit (2) Rudimentary (3) Uneven, difficult to clean 'slab' (4) Allows flies to exit
Number of HH with basic pit toilet (Minimum Standard Latrine)	Basic Pit toilet (Minimum standard latrine) (1) Covered (2) Basic slab (3) No gaps (4) Cleanable, even surface (5) Flies cannot exit
Number of HH with Improved pit toilet	Improved Pit latrine (1) Covered or VIP (2) Cement slab/ sand plate (3) Cleanable, even surface (4) Flies cannot exit
Number of toilets with evidence of use	Evidence of use (1) Feces in pit (2) No feces around HHs/ pit latrine (including child feces) (3) superstructure maintained (4) Visible access (5) No spider webs
Number of toilets with evidence of use and hand washing with soap / ash	Evidence of hand washing with soap or ash (1) Water for hand washing (2) Soap or ash available in / with 3 meters of toilet at time of inspection
Institutions – Schools & Health Centers	
Type of latrine	Type of latrine 1= No Latrine, 2= 'Traditional' Pit latrine 3= Basic Pit latrine 4= Improved Pit latrine
Physically Separate Facilities for Male / Female Patients?	
Latrine Condition	Latrine Condition 1= Locked, not inspected, 2= Filthy, unused, 3= Dirty but Used, 4= Clean, Used, 5= Clean, Unused
Is there a hand washing facility within 5m of the toilet?	Hand washing Stand 1= No Facility 2= Shared Facility 3= Facility for Men only 4= Facility for Women only
Is water available for hand washing	
Is Soap / Ash available at each hand washing stand?	

Annex 16: Comparison of Hygiene Related Indicators and Definitions

The sector also had a number of indicators aimed at monitoring key hygiene behaviors, but these receive less focus in sector documents. Neither DHS nor WMS have indicators in regard to hygiene behaviors. As mentioned above the HMIS includes the presence of a hand washing facility as part of latrine monitoring. However there is some level of confusion as to whether latrines that do not contain a hand washing facility are still eligible for recording within the system. The National Protocol for Hygiene and On-Site Sanitation include three indicators related to hand washing, as set out below:

- % of population washing hands properly with soap and at appropriate times
- % of Households with access to hand washing place with soaps or substitutes
- % of Households that have soaps or substitute

The National Hygiene and Sanitation Strategy goes into a lot of detail about hand washing practices and the appropriate times for this practice, but simple instructions have not been developed to support data gathering and monitoring this practice within communities.

As recommended for inclusion in the HMIS by the WASH monitoring system, the National WASH Inventory captured the presence of hand washing facilities with latrine. Three elements were included to judge whether the hand washing facility was functional and in use; (i) the presence of water, (ii) the presence of soap or ash, and (iii) the facility is with 3 meters of the latrine. While hand washing is included within the criteria for achieving ODF in the relevant new HMIS indicator, it is not well defined and does not appear to align with the ODF verification and verification guidelines.

The National Protocol for Hygiene and On-Site Sanitation includes indicators on (i) access to improved water sources, (ii) access during dry and wet seasons, and (iii) quantity of water. This would appear to duplicate the indicators in MOWIE's and the wider WASH monitoring system. The recent removal of the HMIS indicator on the proportion of households with access to a safe water source is a positive step to remove unnecessary duplication of indicators, and related burden of collecting them, between Ministry and related monitoring systems.

However the Ministry of Health mandate is to focus on water quality and this is currently not included in the HMIS. In fact within the wider system there are very limited indicators related to water handling and quality. The Ministry of Health does have a water testing and quality protocol, however the lack of trained staff and equipment means its implementation is still ad hoc and data gathered is not systematically captured or report on.

Annex 17: S & H versus Environmental Health indicators

Despite over 30 indicators being proposed by the Federal and Regional teams working on Hygiene and Environmental Health, the updated HMIS includes only three indicators on sanitation under the Environmental Health section. HMIS does not currently contain any indicators on the wider mandate of Hygiene and Environmental Health Case Team, as set out in the Health Sector Development Programme IV:

- Proper & safe excreta disposal system
- Proper & safe solid waste management
- Proper & safe liquid waste management
- Water supply safety measures
- Food & hygiene safety measures
- Healthy home environment
- Arthropod & rodent control
- Personal hygiene
- Community Led Total Sanitation
- Health Extension Program

Targets or objectives for these different interventions are currently not set out in any Ministry of Health strategy or policy document. At present the Hygiene and Environmental Health Case Team is guided by the Hygiene and Sanitation Strategy, and supporting documents, which does not include objectives on the wider mandate of their work. The Case Team is currently in the process of developing a Hygiene and Environmental Health Strategy to guide the wider mandate of their work. Increasing clarity on the Case Team's mandate and related objectives will support the Case Team's planning process and also in developing relevant indicators to monitor their achievements.

It would appear logical that the indicators under the Environmental Health section of HMIS address issue beyond simply latrine coverage and use, and ODF status. However until the mandate of the Hygiene and Environmental Health Case Team is clearly established it is difficult to identify appropriate indicators and make decisions on the frequency and process of their collection. It should also be noted that the Planning Team within the MoH responsible for managing HMIS does not plan to update indicators for another two years.

It should also be noted that previous HMIS reviews have criticized the system for having too many indicators, and therefore if the additional indicators were to be added they would need to be strategically chosen to add value to the planning and monitoring of hygiene and environmental health activities at all levels. Additional output and activity based indicators related to hygiene and environmental health could be included in the Hygiene and Environmental Health program monitoring system, and not included in the HMIS at this stage. The experience of collecting and reporting these indicators over the coming two years could be used to guide and influence the inclusion of additional indicators in HMIS at the time of its next review and update.

Annex 18: Proposal for Alignment of Key Sanitation Indicators and Definition

	Indicator	Definition
1.	Proportion of households' access to any type of latrine facilities	Disaggregated by: – Improved Latrine: ▪ Flush/pour flush to piped sewer system; ▪ Flush/pour flush to septic tank; ▪ Flush/pour flush to pit latrine, soak pit or cesspool; ▪ Ventilated improved pit (VIP) latrine; ▪ Pit latrine with cleanable slab; ▪ Composting toilet. – Unimproved Latrine: • Flush/pour flush not to sewer/septic tank/ soak pit/cesspool; • Pit latrine without adequate cover to isolate feces or slab; • Pit latrine with open pit; • Hanging latrine. – No facility or open defecation: • No facility; • Evidence of defecation around the household or latrine.
2.	Proportion of households that use latrine for defecation purpose properly	Disaggregated by: – Improved Latrine: – Unimproved Latrine: Evidence of use consider by: – Fresh feces in pit; – Latrine slab clean and in good condition; – Well maintained superstructure; – Access to latrine possible for all household members.
3.	Proportion of Kebeles declared open defecation free	Kebele self-declaration of ODF status verified by Woreda WASH Team and certified at least 6 months after initial verification, using the following indicators: – 100% of household verified as having access to an improved latrines; – 100% of improved latrines verified as in use; – 100% of households have system in place for child feces disposal; – 100% of institutions (including schools, health facilities, churches etc.) have adequate improved latrines; – Latrines have been constructed for the use of travelers & in public areas; – Rigorous inspection of previously identified open defecation sites are confirmed as free from open defecation.

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