



City-Wide Inclusive Sanitation Master Plans in Ethiopia

SUMMARY

As part of its City-Wide Inclusive Sanitation (CWIS) initiative, UNICEF, in collaboration with IRC WASH Ethiopia, and with financial support from the Bill & Melinda Gates Foundation, has supported the development of CWIS master plans in four towns in Ethiopia: Sheno and Welenchiti in Oromia region, Maksegnit in Amhara region and Kebridehar in Somali Region.

The objective of the initiative was to improve coordination around sanitation in the towns, to ensure that the process was inclusive and driven by the municipalities themselves.

The main challenge in the CWIS master plan process have been the various overlapping roles of stakeholders. For example, customers are not sure whether the municipality or the water utility provides pit emptying services. The other challenge was stakeholders never met or shared information except through official reporting channels. This delayed the start of the master plan development process and required the creation of a team sprint within the towns. A coordination mechanism then brought together all the town's stakeholders to take collective action and share responsibility for leading and managing sanitation activities. The process has created a very good opportunity for communication and collaboration among the town institutions, which has never happened before. A platform has been established for regular meetings which is chaired by the town administration. After finalising and endorsing the CWIS master plan, the town stakeholders have started implementation by linking their annual plan to the overall vision and targets of their master plan.

This reference guide presents the process and the tools used.

Background

City-Wide Inclusive Sanitation (CWIS) advocates for integrating financial, institutional, regulatory, and social aspects of sanitation service delivery. The approach requires the relevant authorities to demonstrate political will, technical capacity, and management leadership to harmonize solutions with related urban services such as water supply, drainage, and solid waste management. CWIS

aims to help cities develop comprehensive approaches to sanitation improvement that encompass long-term planning, technical innovation, institutional reforms, and financial mobilization. CWIS means focusing on service provision and its enabling environment, rather than on building infrastructure.

As part of the CWIS initiative in Ethiopia, CWIS

master plans¹ were developed in four towns. The development of these long-term CWIS master plans followed a participatory process, including a diagnostic assessment of the current situation, development of a joint vision, and development of strategic directions and costed plans towards achieving the vision. Figure 1 presents the key steps in this master planning process. This reference guide describes these steps as they have been taken in the four towns and the resulting outcomes.

Figure 1: Master planning process: Source IRC



Methodology



Diagnostic assessment of the current sanitation situation

A mix of data collection methods and tools were used to collect evidence on the sanitation infrastructure and services as well as on the broader enabling environment. The assessment phase started with a stakeholder analysis which helped to identify the key stakeholders and to classify and select them on their level of interest and influence. This was followed by applying four different assessment tools, looking at various aspects. Figure 2 shows the overall process followed during the diagnostic assessment.

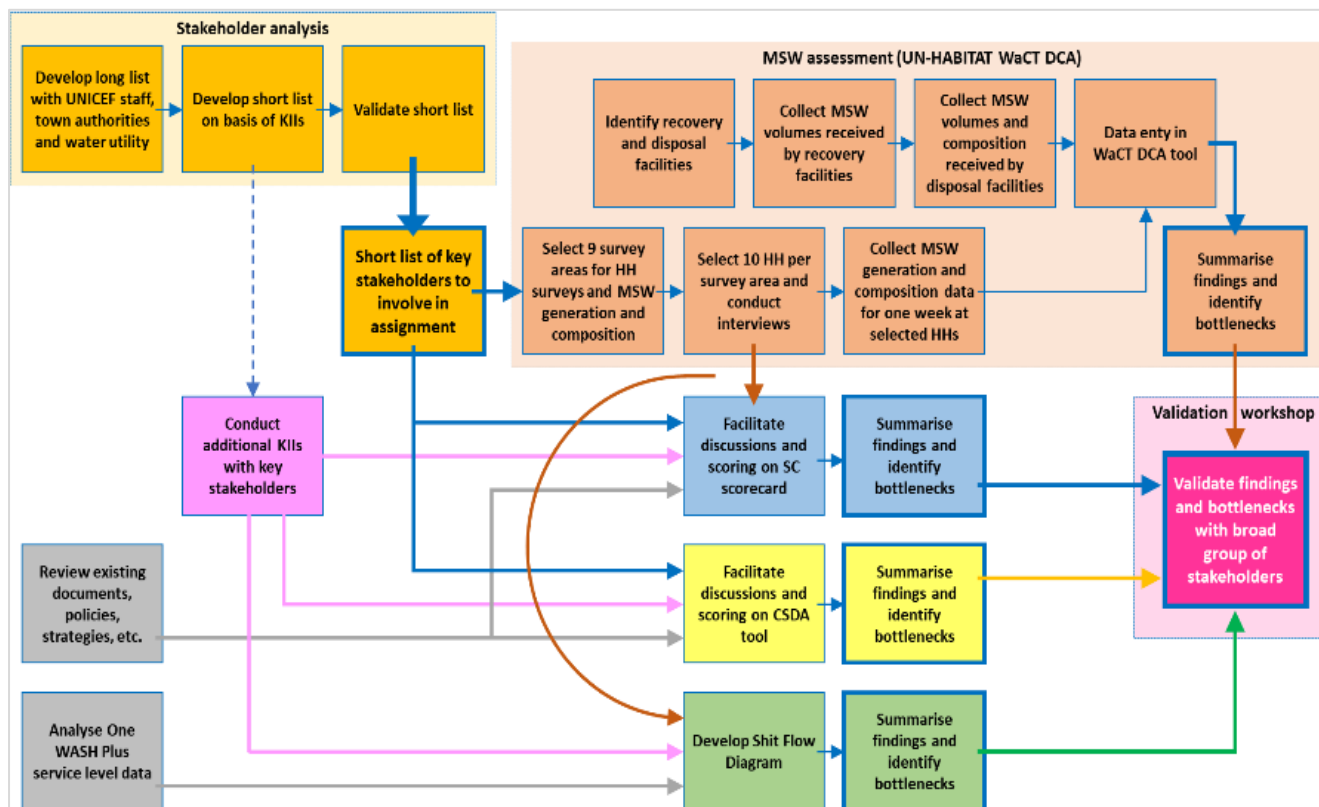
The assessment built as far as possible on existing information and therefore wherever possible secondary data sources were used. Primary data collection focused primarily on gaining insight into the solid waste management services. These consisted primarily of household surveys as well as further observations along the entire solid waste management chain. In addition to this, the household survey included data collection for the shit flow diagram and the sanitation service level.

Furthermore, Key Informant Interviews (KIIs) with key public and private sector stakeholders were conducted to validate primary and secondary data sources. A detailed review of the regulatory, financial, and institutional situation in each location (as well as the relevant national sector

¹ The master plans are not online because they are in the ownership of the towns.

policies and initiatives) was carried out as part of the assessment phase.

Figure 2: Diagnostic assessment process



Data collection and analysis tools used and adapted to Ethiopia context

The comprehensive assessments and analysis conducted used various assessment tools, existing and new tools adapted to the Ethiopia context. The tools used are:

- Stakeholder analysis tool based on stakeholder Interest versus Power or Influence
- City Service Delivery Assessment (CSDA) tool for City-Wide Inclusive Sanitation to assess mainly the overall enabling environment.
- Excreta/Shit Flow Diagram, SFD to demonstrate how faecal sludge and wastewater are being managed in a city.
- Waste Wise Cities Tool (WaCT), a diagnostic tool developed by UN-HABITAT that cities apply to assess their municipal solid waste (MSW) management performance and use as a basis

for sustainable solid waste management planning.

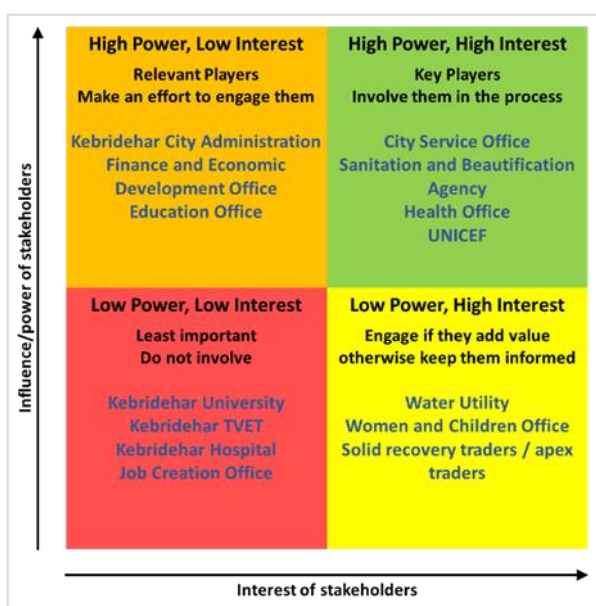
- Service level assessment tool, to assess the sanitation service level based on JMP service levels and definitions.
- Sustainability checks, a tool developed by IRC to assess and monitor the degree to which conditions for sustainable WASH services are in place at service provision and service authority levels.
- Costed sanitation master planning tool, again developed by IRC to do strategic planning and costing of WASH long-term plans at district level that we adapted for CWIS.

Stakeholder analysis

Objective: identifying and understanding stakeholders, their roles, interests, relationships, and perceptions of problems.

Method: As a first step, all potential stakeholders were identified by drawing up a long list. Stakeholder identification criteria were based on who does what regarding urban sanitation in each town. The second step was to conduct a stakeholder analysis workshop during which the influence and interest of all identified stakeholders were discussed. This discussion led to scores on the power (influence) and interest dimensions, which were mapped into a power-interest matrix, as shown in Figure 3.

Figure 3: Stakeholder analysis of Kebridehar



Municipal Solid Waste (MSW) assessment with the Waste Wise Cities Tool

Objective: To assess and monitor SDG indicator 11.6.1 “Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by the city”.

Method: The Waste Wise Cities Tool (WaCT) consists of steps to guide cities on how to collect data on municipal solid waste generated, collected, and managed in controlled facilities. The tool can help address problems such as inefficient waste collection routes, improper waste

disposal, health and environmental risks, inequitable access to waste services, waste characterization, etc. The WaCT data collection tool automatically generates a waste flow diagram which is somewhat similar to the shit flow diagram which is explained in the next section.

Figure 4: WaCT steps



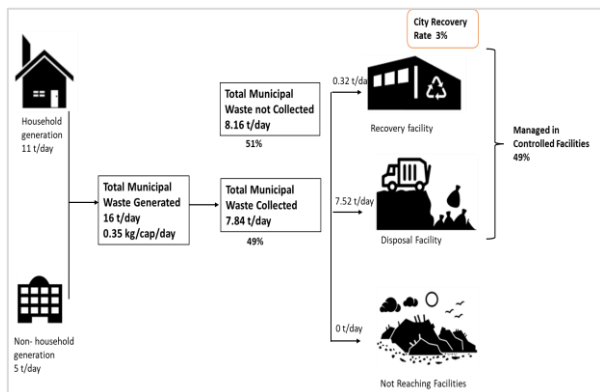
Data requirement: household solid waste weighted and sorted from at least 90 households from three income areas (high, medium, and low) for seven consecutive days, and volume and composition of solid waste at disposal facilities and recovery facilities. An Excel based data collection tool was developed to standardize the collection and analysis of the raw data. Collected data was first entered into the Excel-based WaCT data requirements tool to ensure that uniform and complete data was collected in the four towns. Upon collection of all required data, the data was entered into the automated offline version of the WaCT tool².

Results: The tool generates a flow chart based on the data entered. The flow chart includes total municipal waste generated (household and non-household), municipal waste collected, municipal solid waste disposed of, municipal solid waste reaching recovery facilities, and municipal solid

² Waste wise cities tool - EN 3.pdf (unhabitat.org)

waste not reaching any facilities. Figure 5 shows the municipal solid waste flow chart for Kebridehar town as an example.

Figure 5: Municipal solid waste flow chart.
Source: Kebridehar town master plan



Service level assessment

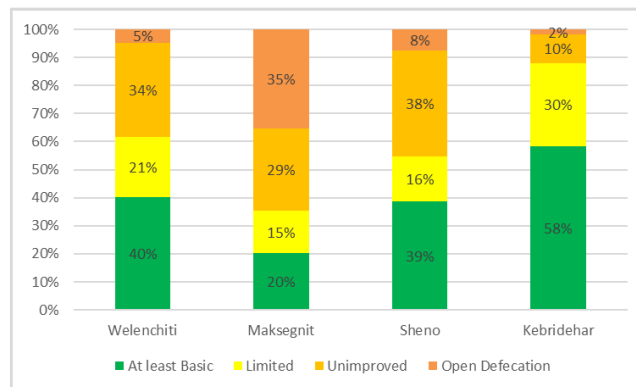
Objective: Assess the sanitation service level based on JMP service level definitions.

Method: Sanitation service levels were assessed in line with Joint Monitoring Programme (JMP) service level definitions, based on data from the 90 households surveyed for the solid waste management assessment. As data was collected in a purposeful manner, with 30 households selected in each wealth group, weighting factors based on the proportion of households in each wealth group were applied to obtain a good estimate for the total proportion of households in the town at each level of the service ladder.

Data requirement: household survey conducted using the mWater data collection tool.

Results: Using the household survey, a service level analysis was conducted using Excel. Figure 6 shows the sanitation service level for all four towns.

Figure 6: Sanitation service level. Source: town master plans



Shit flow diagram

Objective: Show how faecal sludge and wastewater move through a city with the objective of providing impactful visualisations of the status of sanitation in a city, to assist planners, decision-makers, and other stakeholders in understanding the bottlenecks and gaps and identifying where improvements are needed.

Method: To be able to utilize the shit flow diagram (SFD) tool, primary data on sanitation services and practices was collected from the 90 households selected for the WaCT tool. The online version of the SFD Graphic Generator, available on the SuSanA website³, was used to generate the shit flow diagrams.

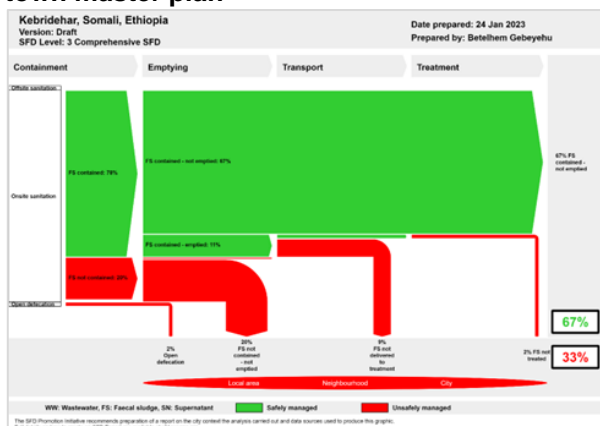
Data requirement: An Excel-based data collection tool was developed to standardise the collection and analysis of the raw data coming from the household survey. This ensured that uniform and complete data was collected in the four towns, and it made the process of data entry into the SFD Graphic Generator more streamlined and easier.

Results: The SFD Graphic Generator develops a flow chart. The flow chart includes percentages of waste contained, emptied, not emptied, reaching treatment facilities (treated and not treated), and open defecation. An example of a shit flow

³ SuSanA website: <https://sfd.susana.org/>

diagram from Kebridehar town is presented in Figure 7.

Figure 7: SFD flow chart. Source Kebridehar town master plan



Sustainability checks

Objective: Assess and monitor the degree to which conditions for sustainable WASH services are in place at service provision and service authority levels.

Method: Service levels were assessed in line with JMP service level definitions, based on data from the 90 households surveyed for the solid waste assessment. Scoring on the sustainability check indicators was done during a participatory work session with relevant stakeholders. The results of these discussions were recorded in the Excel-based Sustainability Check tool.

Data requirement: Most of the information was obtained through Key Informant Interviews (KIIs) with local municipal authorities, water utility staff, private business representatives (waste recovery apex traders) and other relevant stakeholders. Additional information was also gathered during the scoring workshop.

Results: Overall, challenges were found with the presence and performance of service providers and authorities, posing challenges for sustainable sanitation service provision. Table 1 shows sanitation service provider sustainability check scores in Kebridehar as an example.

Table 1: Town sanitation service provider sustainability check scores. Source: Kebridehar master plan (*Score of 50 or more = benchmark met)

Key performance indicators		Score*
SP-1-I	Existence of responsible entities	50
SP-2-I	Clarity on roles and responsibilities	75
SP-3-I	Town capacity to facilitate sanitation and hygiene promotion (demand creation)	25
SP-4-T	Local private sector with capacity to construct, repair and improve toilets	50
SP-5-T	Availability of pit emptying services	100
SP-6-F	Affordability of toilet construction services for households	75
SP-7-F	Affordability of pit emptying services for households	75
SP-8-F	Access to repayable finance for households	0
SP-9-F	Access to repayable finance for service providers	0
SP-10-F	Cost recovery of utility managed pit emptying services	25
SP-11-S	Public toilets built and effectively operated	25
SP-12-S	Availability of social inclusive public toilets	50
SP-13-E	Destination of faecal waste	0
SP-14-E	Safe disposal of faecal waste	0

City service delivery assessment

Objective: Examine the status of the enabling environment by investigating the underlying policy, institutional and regulatory environment and identify systemic weaknesses and areas of concern.

Method: The city service delivery assessment (CSDA) involves completing the detailed score card for the non-sewered sanitation service chain. This provides input into the development of an action plan to improve the town's sanitation status. Although an online tool is available on the Faecal Sludge Management (FSM) toolbox website, an offline Excel-based version was used.

Data requirement: Most of the information was obtained through a scoring workshop with all relevant stakeholders.

Results: In line with the findings of the sustainability checks, the CSDA generally found a weak enabling environment related to sanitation and solid waste in the towns. Figure 8 shows CSDA results for Kebridehar town as an example.

Figure 7: CSDA scoring results. Source Kebridehar master plan

Non-sewered sanitation			
	Capture & containment	Emptying & transport	Treatment & reuse
Enabling			
Policy, legislation	0.5	0.5	0.5
Planning, budgeting	0.5	0.8	0.0
Inclusion	0.5	0.5	
Delivering			
Funding	0.2	0.2	0.0
Capacity, outreach	0.5	0.5	0.0
Inclusion	0.0	0.0	
Sustaining			
Regulation, cost recovery	0.2	0.2	0.0
Institutions, service providers	0.3	0.3	0.0
Inclusion	0.0	0.0	0.0
Overall average scores	0.27	0.29	0.08

4 <https://www.cmpethiopia.org/content/download/3975/16543/file/ODF%20Campaign%20Framework,%20Final.pdf>



Town CWIS vision

Town visions and vision targets were developed by town stakeholders in a workshop setting, based on insights on the current situation from the diagnostic assessment.

Overall visions: By 2030, **All Four Towns** will be a green town, providing a safe, healthy, and conducive environment for all citizens. The towns will have an adequate enabling environment in place for ensuring the efficient management of equitable and sustainable sanitation, liquid, and solid waste management services by 2030.

Common targets:

- In line with the government's TSEDU Campaign strategy⁴, the towns will be open defecation free by 2024.
- By 2030, all people in the town will have access to at least basic sanitation services.
- By 2030, all the municipal solid waste (MSW) will be collected and disposed of properly.
- When applicable, recycling and reuse practices will be applied in the towns.



Strategic Directions

After having clarity on where the towns are (diagnostic assessment), where the towns want to go to (vision) and what the challenges and opportunities are for getting there, different strategic directions and options were explored. These were identified and discussed in a workshop setting with town stakeholders and worked out in more detail by the support team.

Some of the challenges to achieve the vision in these towns are:

- **Open defecation practices** and use of unimproved latrine facilities because of lack of awareness and demand creation.
- **Affordability** of sanitation technology options. And the unavailability of subsidy or repayable finance options in the towns.
- **Limited availability of products** (e.g., washable slabs) required for construction of improved latrines.

The main opportunities that the towns can build on include the presence of health extension workers, availability of vacuum trucks and solid waste collection trucks, presence of constructed public toilets, and presence of a sludge drying bed.

Strategic options to ensure access to improved latrines, and safe disposal of liquid waste in the towns include:

- **Awareness and demand creation**, which requires strengthening of health office systems and capacities, especially of urban health extension workers.
- **Evidence-based advocacy** to raise the commitment of key towns, regional and national governments for ensuring continuous training and resources for environmental health assistants to undertake awareness creation and monitoring activities.
- Providing **smart and targeted subsidies**, getting soft loans for low-income households, sanitation products and services providers.

- Ensure the presence of **well-managed public latrines**.
- Ensure **availability of facilities and mechanisms** for safe and sustainable transport, treatment, and disposal of faecal waste, depending on current and future requirements (e.g., through procurement of a vacuum truck).
- Ensure **good and sustainable management of the sludge drying bed**, where needed, by constructing a new sanitary landfill.

Strategic options to ensure that solid waste from all households is collected, transported, and disposed of include:

- **Social and Behavioural Change Communication (SBCC) activities** on solid waste generation reduction and sorting for all households can be designed and carried out together with the municipality.
- To give all households access to solid waste collection services, it may be necessary to **exempt or cross-subsidize low-income households**. This would mean a small rate differential between high- and middle-income households and low-income households.
- Capacity building of the established solid waste microenterprise. Ensure continuous support, supervision, and monitoring, and regular refresher training of the microenterprises.
- **Provision of additional materials and equipment**, such as pushcarts for microenterprises.
- **Capacity building** for dedicated staff, which should include both technical and managerial skills.
- **Exchange visits** to similar sized towns with good solid (and liquid) waste management systems and processes to build capacity, interest, and political commitment.
- Where needed, construction of **improved sanitary landfills and proper management of existing sanitary landfills**.



Costed plans

The costing approach (life-cycle cost approach) is applied, considering the existing and projected population, technologies

needed for service delivery, and the costs for providing sustainable services. The life-cycle cost approach provides the cost components for delivering sustainable WASH services, which can be summarized as follows:

- **Capital expenditure costs (CapEx):** the costs for providing WASH infrastructure and in particular the costs related to new assets to capture, transport, and dispose of liquid and solid waste.
- **Capital maintenance expenditure costs (CapManEx):** the costs for replacing or rehabilitating the assets which include major maintenance activities.
- **Operating and maintenance expenditure costs (OpEx):** the costs for routine day-to-day operations and minor maintenance of liquid and solid waste management assets and services.
- **Direct support costs (ExpDS):** the costs for supporting service delivery, which include monitoring, planning, supervising, technical support, backstopping, capacity building, coordinating, and strengthening of local systems and the enabling environment.
- **Indirect support costs (ExpID):** these are related to strengthening of local and national systems, e.g., through policy and strategy development, evidence-based advocacy etc.

An overview of the sources of funding for the projected costs required for reaching the vision are:

- **Taxes:** Expenditure by government, paid for through tax revenues.
- **Tariffs:** User contributions, in the form of volumetric or time-based (e.g., monthly) tariffs and other user contributions, such as

contributions to CapEx for water schemes or household connections. Tariffs refer to expenditure by users. This includes what is traditionally known as tariffs, i.e., payments for provided services, but also includes user contributions to investment costs (e.g., household connections or in-kind contributions to construction).

- **Transfers:** Funding from development partners and NGOs.

To facilitate costed planning, an Excel tool was developed for sanitation and solid waste management services. The tool has six main sections: town profile, baseline, planning assumptions, planning, service level and cost overview, and source of finance.

In the town profile section, general information about the town and information such as exchange rates and inflation rates are included.

In the baseline section of the plan, information, and calculations for different components of sanitation and solid waste management services are included.

For sanitation services, the results of the diagnostic assessment are presented. Once the service level is defined, it looks at containment, emptying, transport, and treatment components of the sanitation service chain.



assessment.

For solid waste the baseline includes components for municipal solid waste generated, collected, disposed of and/or recovered based on the diagnostic

The next section deals with the **planning assumptions** and lists the calculations for the costed plan. The assumptions are based on

evidence from different sources, and consultations with town stakeholders.

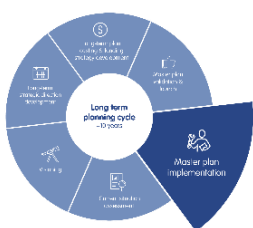
The sanitation and solid waste management of the planning assumptions section lists the unit costs for all the life cycle costs (CapEx, CapManEx, OpEx, ExpDSC) for sanitation facilities including containment, emptying transport, and treatment.

In the **planning** section of this plan, expected activities to achieve the town's vision and a timeline are included. For sanitation, there is a planning component for latrine construction and purchase of vacuum trucks. For solid waste, the planning concentrates on the purchase of pushcarts, transfer stations and trucks.

The **service level and cost overview** section starts with an overview and changes in service levels for sanitation based on the number of sanitation facilities planned annually until 2030. It then shows the cost overview for all life cycle costs for sanitation and solid waste management with the overall cost for achieving the town's vision.

The **source of finance** section shows the expected contribution from different sources (taxes, tariffs, and transfers) based on discussions with the town stakeholders.

Launching the master plans



In order to ensure sector coordination and ownership of the CWIS master plans, the master

plans were launched in each town in February and March 2023 in the presence of all the relevant stakeholders working in sanitation and municipal solid waste in the towns.

Way forward: Coordination, implementation, and monitoring of the master plan

As illustrated in Figure 9, the coordination and implementation of the CWIS master plan involves several medium-term planning and implementation cycles, each consisting of several annual planning and implementation cycles. At the beginning of each cycle, goals and targets need to be set against which progress can be monitored.

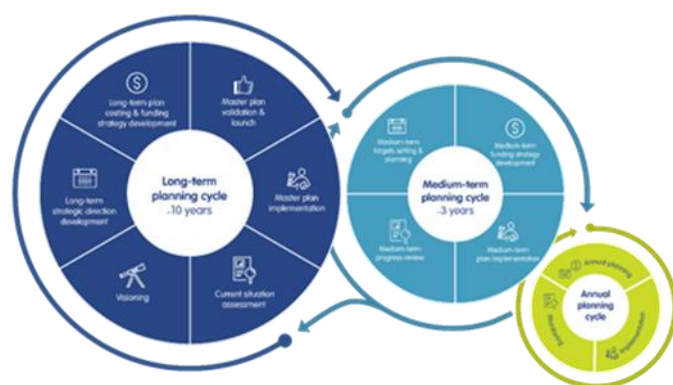


Figure 9: Master plan implementation process

Master plan coordination and implementation require collective action from the stakeholders involved in the development and implementation of the master plan. The CWIS master plan coordination and implementation in the towns will be led by a core group, consisting of key partners and sector offices that have been identified in the stakeholder mapping of the 2022 diagnostic assessment. In each town, a key institution will own and lead the implementation of the CWIS master plan. In Kebridehar, for example, the Kebridehar town sanitation and beautification agency will own and lead the implementation of the CWIS master plan. While in Welenchiti, the woreda is responsible for implementation of the master plan. UNICEF will play a role in supporting and facilitating the process in close collaboration with the town.

The CWIS master plan coordination and implementation partners will meet on a quarterly basis to review progress and annually to develop and agree on the annual plan for the next year. In

2025, the key partners will review the medium-term progress, and agree on medium-term plans going forward. In 2030, which is the end of the master plan period, the key partners will review

progress made and develop a plan for moving forward beyond 2030.

Some monitoring data may be collected on an ongoing basis, while other data may be collected at certain moments, e.g., at the end of each (long-term, medium-term, and annual) implementation cycle. At the end of each cycle, monitoring data needs to be processed, analysed, discussed, and disseminated. These analysis moments include annual review of progress, medium-term review of progress, and evaluation of the long-term master plan implementation period (endline).

Monitoring of the CWIS master plan will include monitoring of inputs, activities, outputs, and outcomes as outlined in Table 2.

Table 2: Monitoring the Master Plan

Type	Indicator	Frequency
Input	CapEx, CapManEx, ExDS and OpEx through tariffs, taxes, and transfers	Annual
Activity	Number of trainings organized for health professionals	
Activity	Number of organized high-level meetings	
Activity	Number of established microenterprises	
Activity	Number of capacity building trainings for small and microenterprises	
Output	Number of new improved latrines constructed, not shared, and properly utilized	Annual
Output	Number of existing latrines upgraded to improved, and properly utilized	
Output	Proportion of households that moved from OD to utilization of improved latrines	Annual
Outcome	Proportion of households with basic and safely managed sanitation services	Medium term
Outcome	Proportion of human waste which is safely managed	Medium term
Outcome	Proportion of households with access to formal solid waste collection services	Medium term
Outcome	Proportion of solid waste which is recycled and disposed of in a safe way	Medium term

KEY POINTS

- *The master planning process starts with understanding the current situation through a diagnostic assessment.*
- *Any tool or methodology used can and needs to be adopted to fit the context of the towns and the country. For ease of facilitation, Excel-based tools are important.*
- *Vision setting, defining challenges, identifying strategic directions, and preparing costed plans require a workshop in the presence of all relevant stakeholders working in the town.*
- *The master plan needs to be launched in the presence of town stakeholders and leadership to create ownership and facilitate implementation.*
- *The implementation of the CWIS master plan involves several medium-term planning and implementation cycles, each consisting of several annual planning and implementation cycles.*
- *A monitoring framework with specific roles and responsibilities is critical for effective implementation of the master plan.*

RECOMMENDATIONS

- Document the process.
- Engage all stakeholders equally in the process.
- Include the private sector (for example solid waste collectors who may not be able to read or write) and give them a voice in the process.
- Clearly communicate the process to all stakeholders to manage expectations and get them interested in the process.
- It is good to use tools but start small and adapt them to the circumstances.
- When working on CWIS master plans in several towns, start in one and learn from the process before starting in the other towns.
- Finances may seem daunting to stakeholders, so reassure them and explain that most of the money will come from household contributions.
- Stakeholders need to raise awareness with households on the need for sanitation.
- Town administration is mainly involved in coordination and communication.

References for master planning process using tools in consecutive order

Stakeholder mapping based on stakeholder Interest versus Power or Influence using Mendelow's matrix:

Boardmix, 'Mendelow's Matrix: What is it and how to use it', Hong Kong, < <https://boardmix.com/about> >, accessed 2 May 2024. and/or

Martins Serra, Carlos Eduardo, 'Stakeholders Analysis: Power/Influence-Interest Matrix', Projectizing, < <https://projectizing.com/stakeholders-analysis->

[powerinfluence-interest-matrix](#) >, accessed 2 May 2024.

Municipal solid waste assessment using the WaCT tool:

UN-Habitat, *Waste Wise Cities Tool* - Step by step guide to assess a city's municipal solid waste management performance through SDG indicator 11.6.1 monitoring, UN-Habitat, Geneva, Switzerland, 2021, < <https://unhabitat.org/www-tool> >, accessed 2 May 2024.

Service level assessment:

mWater, Surveys for assessing service levels, mWater, USA, < www.ircwash.org/resources/surveys-assessing-service-levels >, accessed 2 May 2024

Shit flow diagram analysis:

SDF Promotion Initiative, 'Shit Flow Diagram', < <https://sfd.susana.org> >, accessed 2 May 2024

Sustainability checks:

United Nations Children's Fund, Sustainability Check Tool, version 2.0., UNICEF, New York, USA, < www.unicef.org/documents/unicef-sector-wide-sustainability-check-tool >, accessed 2 May 2024.

City service delivery assessment:

Blackett, Isabel, Hawkins, Peter. (2019), *City Service Delivery Assessment for Citywide Inclusive Sanitation* - Tool and user guide. Inclusive Sanitation in Practice, United Kingdom, < www.susana.org/en/knowledge-hub/resources-and-publications/library/details/3700?directdownload=1 >, accessed 2 May 2024.

Costed sanitation master planning:

IRC, 'Finance', < www.ircwash.org/tool-subcategory/finance >, accessed 2 May 2024.

About the Authors

Lavuun Verstraete is Programme Manager for the UNICEF Eastern and Southern Africa Regional Office based in Nairobi. He has over 22 years of

experience in water resources management, water supply, urban and rural sanitation, providing technical and strategic support in the design, implementation, monitoring and evaluation of climate resilient programmes mostly in Eastern and Southern Africa. Between 2019 and 2023, Lavuun managed the UNICEF Urban WASH Programme in Ethiopia. Lavuun holds a Master in Bioengineering from KU Leuven University (Belgium), and a MSc from SupAgro, Montpellier (France).

Tamene Gossa is an Urban WASH Specialist based in Addis Ababa who works for UNICEF Ethiopia. He has over thirty years of experience in WASH, of which eighteen have been with UNICEF. He has a special interest in urban WASH programming for small and medium-sized towns, as well as utility systems and capacity strengthening. Tamene graduated from Addis Ababa University with a bachelor's degree in chemistry and from IHE in the Netherlands with an MSc in water quality management.

Jo Westwood†. In loving memory of Jo Westwood, who passed away in 2023 and contributed significantly to this work. At the time of drafting this paper, he was UNICEF WASH Specialist for UNICEF Ethiopia as a chartered engineering project manager with nine years expertise in project development, management and design in South Asia and East Africa.

Marieke Adank, IRC NL: Marieke is a WASH expert with over 20 years of experience and has a special interest in small town WASH, participatory strategic planning processes and evidence-based decision making in WASH. Marieke has led and

participated in action-research studies in Ghana, Ethiopia, Uganda, Bangladesh, and Zimbabwe. She has an MSc. in Irrigation and Water Engineering from Wageningen University, Netherlands.

Michael Abera, IRC Ethiopia: Michael Abera is program manager at IRC Ethiopia and has 20 years of development experience in water, health, and environment especially around planning, monitoring, and learning. Michael has been project manager for the City-Wide Inclusive Sanitation (CWIS) project, implemented in 4-towns in Ethiopia and he studied Statistics, Computer Science and Project Management at Addis Ababa University.

Betelhem Gebeyehu, IRC Ethiopia: Betelhem is a research and systems strengthening officer at IRC WASH Ethiopia. She has over six years of experience in the WASH sector with a focus on knowledge management, systems strengthening approaches, evidence generation and master plan development. Betelhem holds a MSC in Environmental Sciences (water systems and global change) from Wageningen University and Research (The Netherlands) and BSC in Civil and Environmental Engineering from Addis Ababa University (Ethiopia).

Dedication

This learning paper is dedicated to the memory of Jo Westwood†, who contributed significantly to this City-Wide Inclusive Sanitation work supported by UNICEF in Ethiopia.

About the Series

UNICEF's water, sanitation and hygiene (WASH) country teams work inclusively with governments, civil society partners and donors, to improve WASH services for children and adolescents, and the families and caregivers who support them. UNICEF works in over 100 countries worldwide to improve water and sanitation services, as well as basic hygiene practices. This publication is part of the UNICEF WASH Learning Series, designed to contribute to knowledge of good practice across UNICEF's WASH programming. In this series:

Discussion Papers explore the significance of new and emerging topics with limited evidence or understanding, and the options for action and further exploration.

Fact Sheets summarize the most important knowledge on a topic in few pages in the form of graphics, tables and bullet points, serving as a briefing for staff on a topical issue.

Field Notes share innovations in UNICEF's WASH programming, detailing its experiences implementing these innovations in the field.

Guidelines describe a specific methodology for WASH programming, research or evaluation, drawing on substantive evidence, and based on UNICEF's and partners' experiences in the field.

Reference Guides present systematic reviews on topics with a developed evidence base or they compile different case studies to indicate the range of experience associated with a specific topic.

Technical Papers present the result of more in-depth research and evaluations, advancing WASH knowledge and theory of change on a key topic.

WASH Diaries explore the personal dimensions of users of WASH services, and remind us why a good standard of water, sanitation and hygiene is important for all to enjoy. Through personal reflections, this series also offers an opportunity for tapping into the rich reservoir of tacit knowledge of UNICEF's WASH staff in bringing results for children.

WASH Results show with solid evidence how UNICEF is achieving the goals outlined in Country Programme Documents, Regional Organizational Management Plans, and the Global Strategic Plan or WASH Strategy, and contributes to our understanding of the WASH theory of change or theory of action.

COVID-19 WASH Responses compile lessons learned on UNICEF's COVID-19 response and how to ensure continuity of WASH services and supplies during and after the pandemic.

Readers are encouraged to quote from this publication but UNICEF requests due acknowledgement. You can learn more about UNICEF's work on WASH here: <https://www.unicef.org/wash/>

www.unicef.org/wash

© United Nations Children's Fund (UNICEF)

The statements in this publication are the views of the authors and do not necessarily reflect the policies or the views of UNICEF.

United Nations Children's Fund
3 United Nations Plaza, New York, NY 10017, USA

For more information, please contact: WASH@unicef.org