

Small town sanitation learning series 20 towns programme, Ethiopia

July 2020



▼ Eniyish Ayana, waste collector in Finote Selam



WaterAid/ Behailu Shiferaw

Key messages

1. Small but well-targeted capacity investments can have powerful impacts.
2. Capacity building is effective with a range of methods, and a good choice of mentors, such as peer water and sanitation operators.
3. Shit-Flow Diagrams are an effective tool to mobilise municipalities and identify early sanitation priorities.
4. Linking solid and liquid waste management helps create political momentum and find creative solutions.



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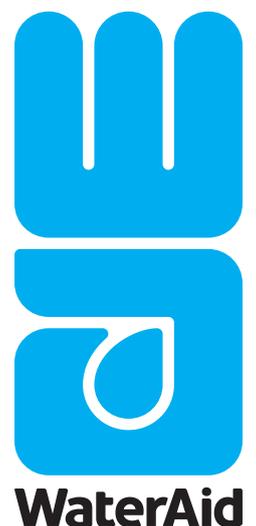
1. Introduction

WaterAid Ethiopia (WAE) has been leading a programme to improve water, sanitation and hygiene (WASH) in 20 small towns since 2014. This programme has been focused on building the capacity of urban WASH actors, and has been [well documented](#) already. This note focuses on the sanitation element of the programme, which arrived later: how work on sanitation has been gradually introduced, how tools such as Shit-Flow Diagrams (SFDs) have been used, which improvements have happened as a result, and the main lessons.

2. Context

There are more than one thousand urban towns in Ethiopia, and since 2007 each has its own water and sanitation utility, set up as a public enterprise. Most of these small utilities are struggling to provide good quality services and keep pace with urban expansion. Water supply has its own issues, with non-revenue water (i.e. water pumped but not paid for) at 39%; the sanitation situation is often poorly known, and both solid and liquid waste management suffers from unclear institutional mandates, weak coordination and little planning and investment. As a result, it is common to have waste collection performed by informal businesses with manual handling, no treatment and illegal dumping, causing health issues. Ethiopia has however developed a major sector-wide programme ([One WASH](#)) aimed at universal access, and the Second Growth and Transformation Plan ([GTP II](#)), which has similarly ambitious targets by 2025.

WaterAid Ethiopia started a capacity building programme in 2014 to support 20 small towns in four regions. They built this programme based on the experience of a previous urban project in seven towns, and on the lack of capacity building in other interventions, identified as a critical gap: the utilities' capacity is often very low, and support projects often provide only one-off training.



3. The project and its results



Project history: the capacity building approach

The project focused on the main town WASH stakeholders and especially the water utility and municipality, with the aim of “turning it around”, i.e. making sure it would stop losing money and be able to extend its services to all residents. The capacity building programme centred on:

- Management, including clearer understanding of roles and strategies, human resource management, and business planning.
- Technical aspects, such as Integrated waste management, leakage management, water safety and quality, and operations and maintenance.
- Asset management, including GIS and database management.
- Governance and customer relationships, for instance setting up and strengthening Integrated Urban WASH Forums, a Water Board, customer forums, improving customer service and billing.

Many methods were used, including context assessment, peer-to-peer learning; competition and awards; training and developing related action plans; mentoring; and the provision of equipment and micro-grants.

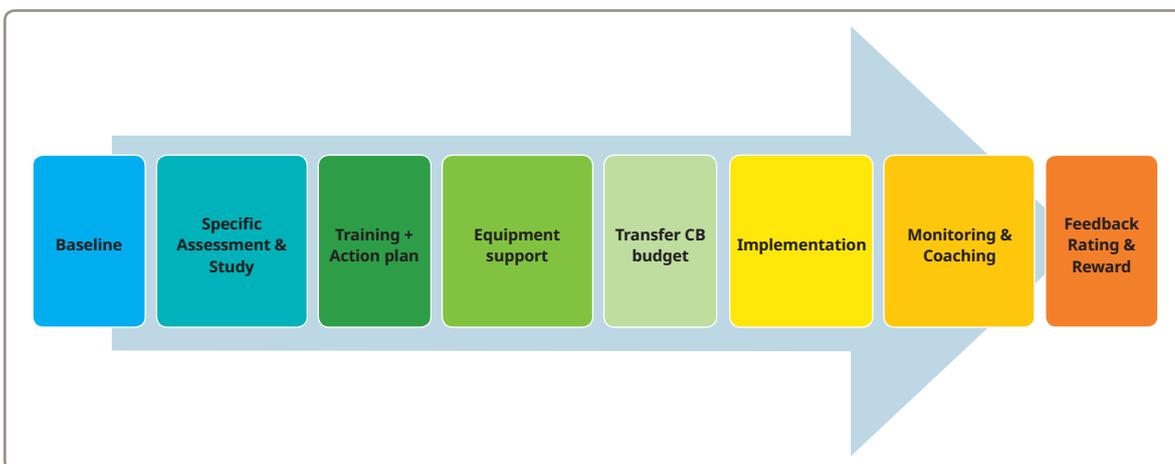
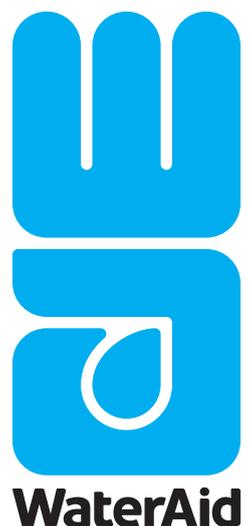


Figure 1 - WaterAid Ethiopia capacity development framework of 20 towns project



Solid waste management

Many capacity building activities initially focused on general utility management and on water services. This was understandable given the high level of non-revenue water, largely from leakage and lack of trust from customers. These issues had to be addressed before investments in other areas could be feasible.

Before faecal waste, WAE initially worked more on solid waste management: a WASH baseline assessment was conducted in all project towns to analyse the context and identify capacity gaps. Based on this, training manuals developed in areas that identified to fill the capacity gap. WAE organised 3 to 5 days main and refresher training sessions for the main town WASH stakeholders (municipality, water utility and health department) on integrated solid waste management, to look at policy and practical aspects. This was followed by a waste characterisation study and development of an Integrated Solid Waste Management (ISWM) plan. The study conducted in 20 towns uncovered the state of waste generation and management, including service provision, attitudes, and financials aspects.

Following these, each town developed detailed solid waste action plans. WAE provided microgrants to train micro-enterprises on ISWM and health and safety, and urban health extension workers on waste management and community awareness and mobilisation. Among the best performing, six project towns were provided with two three-wheel waste collection trucks from WAE; municipalities provided transfer to micro enterprises on a revolving credit basis.



WaterAid/ Haile Dinku

▲ Fig.2: Solid waste collection performed by Small Micro-enterprises using 3-wheel waste collection trucks in Finote Selam town, Amhara, Region, Ethiopia

The mentoring approach: partnership with Yorkshire Water

Starting from April 2013, WAE facilitated a partnership with Yorkshire Water, a UK water company, to provide specialist training in some of the areas above. This included initial exposure visits to Ethiopia and to the UK, theoretical and practical training sessions, and the provision of some equipment. This partnership was effectively set up like a WASH Operator Partnership (WOP), a common capacity building methodology used between mentor and mentee utilities.

The need to focus on sanitation however highlighted the limits of this partnership, given the significant differences between mostly sewered sanitation in the UK and mostly on-site in the target towns. The project enlisted the support of another Yorkshire-based partner, the University of Leeds (UoL), where significant expertise exists on faecal sludge management (FSM).

Shit-Flow Diagrams and FSM training

Given the lack of reliable data on sanitation in the target towns, WAE and the UoL decided to use the [Shit-Flow Diagram](#) (SFD, also called Excreta Flow Diagram) tool, developed in 2014 by a group of consultants and researchers, including from UoL. SFDs include a report about the state of sanitation in a given town, and a graph of the estimated proportions of faecal waste being safely managed or not, respectively in green and red. SFDs are more than a report: very often, the process of developing them and feeding them back affords the possibility of meetings the main stakeholders, discuss sticky issues (the boundaries of the town, whether the treatment station is effective or not...) and highlight areas for improvement.

In 2016, WAE and UoL prepared SFDs in five towns: Axum, Bahir Dar, Bishoftu, Bure and Holleta. In 2017, together with Yorkshire Water they organised a follow-on training on SFDs, which was also the opportunity for training on other FSM aspects such as contract and project management, health and safety, and sanitation business plan development; it was also organised conjointly with a National Advocacy and Influencing Meeting on FSM, in order to reach national stakeholders.



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The towns have displayed high ambitions, such as the procurement of emptying trucks and better life-cycle costing of the sanitation service, but the lack of capital funding has reduced these ambitions so far. Among the project towns, The towns of Bishoftu and Adigrat have however been able to access long-term [funding from the World Bank](#) through the Ministry of Water, Irrigation and Energy, for work across the whole sanitation chain. One significant result of the project has been the elevation of FSM at national level, in contrast to the usual preference towards sewerage sanitation only.



4. Success factors

Approach to capacity building and choice of partnerships

Following its baseline assessment and its previous experience, WAE opted for a **comprehensive approach to capacity building**, which encompassed many techniques beyond usual training sessions. Crucial to this approach was taking the point of view of the town utility and understanding their main worries and blockages.

A key ingredient has been the **mentoring** by Yorkshire Water through a dedicated partnership. Crucially, what enabled the support to be effective has been the **right attitude** from both parties, with Yorkshire Water committed to learning first and making sure they would understand the varying contexts before designing training and support programmes. Within this attitude, town stakeholders were able to design their own action plans rather than apply pre-made recipes.

2016/17 Level of Performance of Project Towns in Traffic Light			
Oromiya (8)	Amhara (5)	SNNP (4)	Tigray (3)
Project Town	Project Town	Project Town	Project Town
Ambo	Finoteselam	Virgalem	Axum
Bishoftu	Debretabor	Halaba	Maychew
Adolla	Weldiya	Teppi	Adigrat
Holleta	Injibara	Virgachefie	
Fiche	Bati		
Bullehora			
Dembidolo			
Gerbeguracha			



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▲ Fig.4: Regular monitoring and mentoring, rating, ranking and rewarding best performing project towns

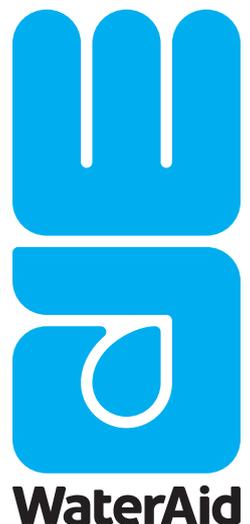
Having the support of another WASH service provider has meant that town utilities could identify actions that an NGO may not consider. For instance, to stop losing money, a key objective was to regain the trust of residents, and this included actions such as working with local plumbers and sorting the storeroom to enable quicker repairs, answering calls and complaints much more quickly, and making customer forums more inclusive.

WaterAid's role in this programme has often been that of a facilitator: finding the right partners (such as the University of Leeds to bring SFDs to the project), arranging the sharing of experiences between towns, and the regular monitoring, coaching, rating and ranking of participating towns to create emulation and competition. Beyond just facilitation, WaterAid's role was to put the onus on specific aspects, such as liquid sanitation and inclusive governance.



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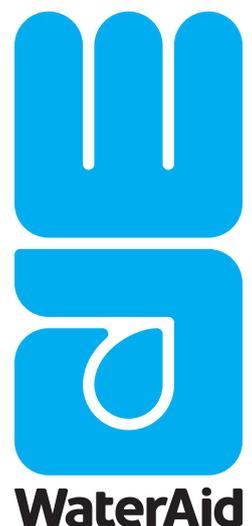
◀ Fig.5: Aregash Addis, storekeeper at Debre Tabor Water and Sewerage Utility

Focus on sanitation

Much of the 20 Towns project was not focused on sanitation, at least initially. However we should note that sanitation and especially on-site sanitation was added to the town water utilities' responsibilities as indicated in the Urban Wastewater Management Strategy developed by the Ministry of Water, Irrigation and Electricity in May 2017 and was often packaged with solid waste management.

WAE's approach has been to:

- Be patient and make sure the utilities were in a position to start considering sanitation, rather than jumping in too quickly – for instance if the utility was losing money, turning it around was the first consideration, usually by improving water services.
- Studying the situation, using waste characterisation studies for solid waste and SFDs for liquid waste. The SFDs have proven a useful way to gather actors, generate useful data, and start prioritisation, for a relatively low cost
- Unpack solid and liquid waste management, notably by identifying relatively “quick wins” for solid waste collections and disposal.
- Consider synergies between solid and liquid waste management: for instance in Finote Selam, there are now plans to install a co-composting plant which will integrate both waste streams.





◀ ▼ Fig.6: Finote Selam Faecal Sludge Treatment Plant and Co-Compost Plant Under Construction

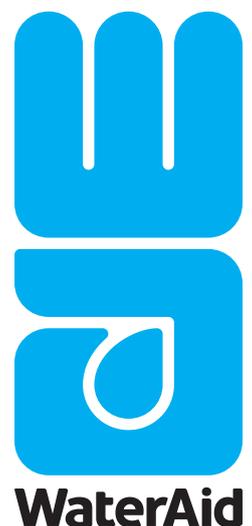


5. Future

Limitations and lessons

Some challenges have been seen across the project: high staff turnover in utilities limited the long-term impact of capacity building; the limited autonomy of utilities restricted the governance changes; many changes relied upon a few motivated individuals.

For sanitation specifically, one challenge was the difficulty of producing SFDs in the absence of any secondary data. But the main issue was and remains the availability of capital funding for planned improvements: a common request from towns has been the ability to buy or lease a sludge tanker, which adds significant recurring costs. As a result of the limited funding, the business plans have often focused on the early stages of the sanitation chain (collection and transport) which is seen as cheaper and/or quicker to implement.



An important lesson highlighted by project staff has been the need to think about capacity beyond technical topics (such as leakages, water quality or SFDs), and more on the “soft skills” that enable individuals to think differently. Such topics include:

- Contract management, to think about the way services will be delivered.
- Risk management, to evaluate what has to be done now and what can wait, especially with scarce budgets.
- Project management, especially for small teams having to juggle many tasks.



New phase and scalability

WAE has started a new phase two of the “small towns” project in 2019, taking into account the lessons and focusing on:

- A “clustering” approach, whereby one town in each region acts as cluster lead, to emulate other towns and facilitate learning.
- Institutionalising capacity building: WAE will try more management modalities for WASH services, and expand partnerships to new actors such as universities, so that good capacity building can be integrated in curricula.
- Expanding sanitation work to the full chain and to consider viable business models. For instance, WAE will install a pilot co-composting plant in Finote Selam, using experience from WaterAid Bangladesh, given the high cost of fertiliser and the political priority given to solid waste management.
- Expanding sanitation data collection to include solid waste management in SFDs.
- Leveraging finance from larger lenders (World Bank, Vitens, Italian cooperation...) and identifying barriers to obtaining such funding.

The cluster approach is intended to help cascade the effects of the project to other towns in the target regions; the institutionalisation of capacity building is intended to reach 44 cluster lead towns in two rounds found in three regions across Ethiopia, beyond the 47 towns targeted so far by WAE.



6. Conclusion



Through a project focusing on a handful of secondary cities and towns, and with a relatively limited budget, WAE and its partners have been able to have long-lasting consequences: 75% of project towns water utilities have moved from losing revenue and barely sustaining their water infrastructure, to collecting net revenue and finally being able to work on sanitation. Using SFDs has allowed a more comprehensive view of sanitation, and helped the towns to come up with business and investment plans.

The project has shown the importance of considering non-technical skills as part of capacity building, and to use a variety of capacity building methods.

Acknowledgements

Brief written by Rémi Kaupp (Programme Support Unit, WaterAid UK) with inputs from Haile Dinku (One WASH Program Advisor and Acting Head of Sector Strengthening, WAE), and Christine Mellor (Water Industry Partnerships Manager, WaterAid UK) and using documents below, especially those written by Will Tillett of Aguaconsult.

Acronyms

FSM	Faecal Sludge Management
ISWM	Integrated Solid Waste Management
SFD	Shit-Flow Diagram
UoL	University of Leeds
WAE	WaterAid Ethiopia
WASH	Water, sanitation and hygiene
WOP	WASH (or Water) Operator Partnership

Sources and further reading

- WaterAid Ethiopia & Aguaconsult (2017), [Big Gains from Small Funds: Experiences from WaterAid Ethiopia's 20-Town Capacity Development Programme](#), learning note
- Tillett – Aguaconsult (2017), WaterAid Ethiopia's Twenty Town Utility Strengthening Project Brief No. 5 of 11: Urban Environmental Sanitation.
- Peal et al. (2020), [Estimating Safely Managed Sanitation in Urban Areas; Lessons Learned From a Global Implementation of Excreta-Flow Diagrams](#), in *Frontiers in Environmental Science* vol. 8
- Anteneh Yigzaw (2017), FSM/SFD Tool Capacity Building Trainings and Advocacy Meeting, a report of proceedings, internal WaterAid report
- Veses et al. (2016), [SFD Promotion Initiative – Bishoftu, final report](#), available on the [SuSanA SFD portal](#).
- MoWIE (May 2017), [Urban Wastewater Management Strategy](#)



More information

You can find more information on WaterAid and sanitation at <https://washmatters.wateraid.org/small-town-sanitation>

This is part of a series of learning notes on small town sanitation with the link above.



▲ Fig.7: Muluken Wondirad, Debre Tabor Water Utility Manager, assessing the water pipe network map, Debre Tabor, South Gondar, Amhara, Ethiopia 2018.

