



# Urban sanitation lessons

## Piloting innovative Sanitation Master Plans in small towns

### Fast Facts

#### Piloting in four regions

Sanitation master plans have recently been developed for small towns in Ethiopia in different degrees of detail.

#### Urban Sanitation Strategy

New policy calls for Sanitation Action Plans including costed models for each category of towns. This can be guided by Sanitation Master Plans.

#### Scale and density

are crucial decision-making parameters. In dense settlements, increased waste streams require sanitation service machinery beyond trying to influence user behaviour and contain faecal waste in latrines.

## Bridging the gap

**This learning note examines the innovation of sanitation master planning within the ONEWASH Plus programme. The note explores definitions, processes, contents, approaches and lessons learned from the piloting of sanitation master planning to date. Lessons from South Africa are also included to provide an international perspective.**

Despite its poor and largely rural population coupled with a historical legacy of low investment in infrastructure, Ethiopia has been making gradual progress in increasing sanitation coverage through promotion of behaviour change and low-cost technology solutions, particularly in rural areas. According to the WHO/ UNICEF Joint Monitoring Programme (JMP) (2014) the estimated coverage of urban sanitation indicated as improved, shared and other unimproved facilities have reached 28%, 40% and 26% respectively in 2015 compared with 20%, 30% and 12% in 1990. Open Defecation in urban areas is reported as having reduced from 28% in 1990 to 6% in 2015.

With further progress targeted, the government has made improved urban sanitation a priority in its second Growth and Transformation Plan (2016-20). This echoes the international priorities as set out in the new Sustainable Development Goals.



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# What is a Sanitation Master Plan?

There are lots of different kinds of WaSH plans. Readers may have heard about ‘WaSH development plans’, ‘local WaSH plans’, ‘city-wide strategic masterplans’, ‘municipal sanitation plans’, ‘water safety plans’, ‘sanitation safety plans’, ‘strategic action plans’, and so on.

A Sanitation Master Plan is a plan for integrated sanitation services in a specific area. Within the ONEWASH Plus programme, Sanitation Master Planning has been applied as a methodology to develop sanitation services in ONEWASH Plus towns. It is one of the innovations being piloted in these small towns.

Sanitation Master Plans set out the strategies, operational actions and resources needed to achieve the vision and goals of sanitation development in a particular area, taking into account social, economic, financial and environmental realities.

There are invariably differences in approach, and Sanitation Master Planning varies between different planning initiatives and implementers.

## Why Sanitation Master-Planning is needed

The lack of an overarching urban sanitation strategy has been a major bottleneck and recognizing this, an Integrated Urban Sanitation and Hygiene Strategy and Sanitation Action Plan are under development (also with support from the ONEWASH Plus Programme). Sanitation Master Plans at town level are expected to support implementation of the action plan. Such master plans can be used:

- To operationalise the WaSH sector vision, targets and standards. Sanitation and hygiene targets are set out in national (federal) legislation and policy documents. Plans are developed by the relevant local authorities (such as municipalities) to achieve these targets in their areas of jurisdiction, e.g. in cities, districts or towns. Woreda, town or city-wide plans

may be further detailed into local WaSH plans at settlement (kebele) level.

- To enable equitable and sustainable sanitation services across a whole area.
- To support WaSH services decision-making that is complex with its different sectors and components to be considered. This includes socioeconomic, financial, environmental and institutional aspects.
- To provide an area-based or spatial approach enabling planners and stakeholders to understand how different services intersect. For example, high levels of water service bring more grey water onto site and increase the demand on drainage systems.

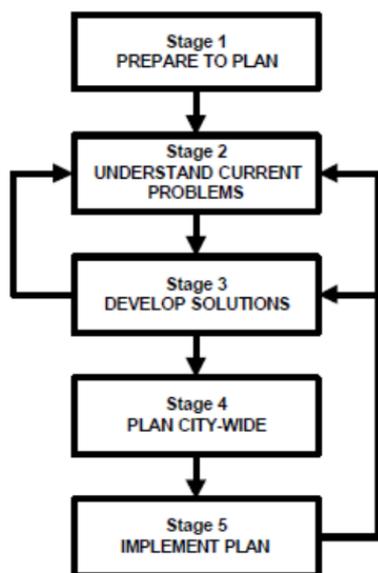
## Process of developing a Sanitation Master Plan

The ONEWASH Plus programme has built upon existing practice and guidance. In their guide to Municipal Sanitation Planning, GHK and WEDC set out the suggested stages as shown in Figure 1<sup>1</sup>. The feedback loops illustrate that such planning is iterative, and that actions and experience influence the planners’ understanding of the problems and options for solving them.

The emphasis in ONEWASH Plus has been on a holistic approach where all primary and secondary stakeholders and key actors are involved in problem analysis and developing solutions. The process begins with thorough situation analysis, identifying constraints and gaps and developing a comprehensive plan with targets, actions and technical solutions.

<sup>1</sup> Taylor, K., Colin, J., Parkinson, J. (2000): Strategic Planning for Municipal Sanitation – A Guide. GHK Research and Training in association with Water, Engineering and Development Centre (WEDC) Loughborough University UK and Water and Sanitation Program for South Asia (WSP-SA).

**Figure 1 Stages in municipal sanitation planning**



Situation assessment covers:

- National policy, strategy, standards and goal review
- Preparation of checklists and questionnaires
- Discussion with relevant stakeholders at town level
  - Town administration
  - Municipality
  - Town health office
  - Utilities
  - Schools
  - Health facilities
- Household survey
- Observation

Analysis is typically desk work on:

- Capturing the existing situation
- Gap analysis
- Developing goals, objectives and strategies
- Developing action plans
- Technical solutions

Consultation involves:

- Presentation of findings
- Consultations with key stakeholders

Approval of the master plan document is by the town officials and regions.

Implementation involves:

- Tendering
- Selection of contractor
- Building of facilities

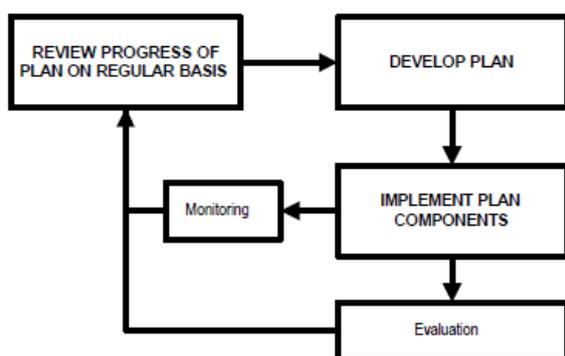
## Key actors

The main actors in the development of sanitation master plans in the ONEWASH Plus program include consultants (who support towns in technical matters), town administration officials (Mayor, Municipality, Health Office, Education Office, Micro and Small Enterprise Agencies, Environment Office), Schools, Health facilities, Utilities and the population represented through community leaders. Regional authorities were also involved in managing the overall process and approving technical issues.

At the different stage of the master plan development the planners need a mix of information:

- During situation assessment information on demographic, settlement, infrastructure, socio-economic, current sanitation practice, awareness levels, institutional issues are required
- During analysis, information on national policies, standards, financial resources, capacities, and topography are required
- During consultation and approval phases less information is required, however needs include financial information, information on compatibility with town master plan, national and regional targets, and cross-sectoral issues like gender, HIV and disability are investigated.
- During implementation the focus is on information related to contracting options and potential bidders' capacity.

As Tayler et al. (2000) note, implementation is part of the planning process (see Figure 2).

**Figure 2 Planning, implementing, monitoring**

Note the importance given to monitoring the outcomes of the plan, and the use of monitoring information to periodically review progress with implementation.

## What makes Sanitation Master Planning effective and strategic?

Effective Sanitation Master Planning for any size spatial area (e.g. village, town, city, woreda, zone or region) requires:

- An integrated approach across sectors (such as water resources, water supply, urban or rural planning etc.)
- Application of a wide definition of sanitation to include solid, faecal and liquid waste management, as well as drainage.
- A focus on services across the whole delivery chain, from containment to reuse and disposal. The chain applies to both liquid and solid waste management.

**Figure 3 The sanitation value chain (Source: adapted from Gates Foundation, 2010)**

Sanitation planning processes are strategic when they<sup>2</sup>:

- Develop strategies that close the gap between existing and future scenarios.
- Focus on the service area (e.g. city or town) as a whole.
- Are grounded in a good understanding of the existing situation, for example address problems with the management of existing facilities.
- Create or strengthen enabling institutional and regulatory frameworks to deliver sanitation services.
- Inform and then respond to user demand.
- Take an iterative and step-wise approach in keeping with lessons learnt and with available resources.
- Apply technologies that are commensurate with available financial, human and institutional resources so that different sanitation technologies are likely to be

appropriate in different locations in the same town.

- Involve all stakeholder groups, strengthen synergies between various actors, and strengthen the responsible authority (e.g. municipality) to provide sanitation services to everyone in the area.
- Are equitable, addressing the needs of poor and marginalized groups.
- Are institutionally and environmentally sustainable.
- Create opportunities and incentives for small scale private sector initiatives in the development and operation of sanitation services.

## Learning lessons from ONEWASH Plus experience to date

With ONEWASH Plus Programme support, Sanitation Master Plans have now been developed for selected towns in Oromia,

<sup>2</sup>Adapted from WSP 2010 and Tayler et al 2000

Somali, Amhara and Tigray Regions of Ethiopia and implementation started. The following key elements have provided the basis for development of the plans:

- Urban Sanitation is a complex challenge: The major lesson in Ethiopia is that urban sanitation is a very complex social and technical issue that needs to be addressed with caution and in an incremental way. The previous approaches looked at “bits of solutions”, like building public toilets, without considering the entirety of the urban sanitation challenge in towns. This means developing different solutions for the different challenges like school sanitation, health facilities sanitation, industrial waste and household level waste management issues. The achievements made in urban sanitation have been hampered by the lack of an appropriate enabling environment and the complexity of addressing sanitation solutions in urban areas.
- Rural solutions do not work in urban areas: the approaches adopted in rural parts of the country and that have brought significant success (CLTSH) do not work in towns unless supplemented with other interventions. In rural areas, the hygiene promotion-based awareness creation has led to sanitation improvement. However, in towns the awareness promotion is only a starting point and needs follow-up with appropriate service delivery models and capacity building. The challenge is moving from efforts focused on behavior change of individuals to establishing an effective service delivery model for sanitation in the urban context.
- Allowing flexibility for town planners and setting realistic targets: An important lesson was to move away from “rigid technical solutions” to flexible and comprehensive solutions that would allow town planners to make adjustments considering priorities, financing and capacities. The plans are service delivery oriented and are open to different and locally conceived development options rather than standardized and flat infrastructure-oriented designs.
- “Minimum Packages” developed as intermediate targets in the towns with long-term goals to be met gradually and

incrementally: The minimum packages core objective is to develop and establish self-reliant systems for improved solid and liquid waste management. The key component of these packages, tailored to the needs of the different towns, are: i) infrastructure component, including construction of communal/public gender-sensitive latrine blocks with shower, institutional latrines (with Menstrual Hygiene Management facilities in schools) drying beds for sludge treatment, transfer stations with composting facilities and expansion of existing landfills for solid waste disposal; ii) supply of vital equipment such as vacuum trucks for emptying of septic tanks and latrines, garbage and dust bins, push carts and trucks for solid waste transportation, safety tools for operators and, in selected towns, machines for grinding and recycling plastic bottles; iii) software and awareness components oriented to promote correct hygiene behaviors at household and community level (through the Urban Health Extension Programme and CLTSH campaigns to attain Open Defecation Free Status) and at institutional level (schools, Health centers and prisons), as well as enhancing Public-Private-Partnerships for Sanitation Marketing related to solid and liquid waste management, based on the 3Rs approach.

- Participatory process & business oriented models: Preparation of plans should not be viewed as a simple technical exercise directed by technical experts but a process driven by the stakeholders in the towns in collaboration with relevant actors at regional and national level. The mayor of the town, for instance, was involved in prioritizing and site selection in Wukro. The engagement of such key officials is critical to get political support. The master plan development, as a tool to improve social accountability around service delivery, has shown that urban sanitation solutions can bring better services to the population and can also stimulate business particularly for small and micro enterprises. One of the strategies is to involve locally-based entrepreneurs for composting and recycling businesses. In the case of Jijiga, for example, the programme is focusing on the

minimization of waste to be eventually disposed in the landfill. This involves the creation of two transfer stations for composting and grinding and recycling plastic bottles for secondary uses. This represents an important opportunity for women's groups to enter into sustainable businesses.

- Overcoming bias towards water supply: While there is a consensus on the need to address the sanitation challenge, the priority and bias given to towards water supply requires constant advocacy to avoid neglect of sanitation.
- Setting a 10 year planning period: The period of a Sanitation Master Plan can vary from 3 to 20 years. So setting the planning period was an issue that needed to be agreed at the start of the exercise. In the ONEWASH Plus towns it was set at 10 years (from 2015 to 2025). The rationale was to allow adequate time for strategic interventions and to provide flexibility for a variety of technical solutions.

## Learning lessons from South African experience

Given that Sanitation Master Planning is still in its infancy in Ethiopia, experiences from South Africa may be instructive. In the South African context, sanitation development is largely supply and contractor-driven. The following key lessons can be highlighted:

**Avoid infrastructure/ technical bias:** there are very few examples of strategic sanitation planning. Master planning tends to be technical and focused on large scale infrastructure development rather than on what is most important, i.e. understanding what is needed to improve sanitation services in a particular area.

**Focus on the enabling environment:** Improving sanitation services invariably involves a strong institutional component, i.e. building a shared understanding of what sanitation improvement entails (policy and strategy); ensuring clarity and agreement on who the different role-players are and how they're organised and incentivised to collaborate and co-ordinate, what regulations are needed, how to enable public and private service providers, how to

build on the different inputs and perspectives of different categories of users, and so on.

**Government leadership:** While consulting support may be needed in the planning process, the ultimate ownership of the plan is with the responsible public authority. Governments need to engage actively, understand fully, and be centrally involved in key strategic decisions made. Their capacity should be developed through the planning process so that they can provide the necessary leadership and oversight to an incremental and iterative implementation of the Sanitation Master Plan.

**Rural versus urban:** Scale and density are crucial decision-making parameters with respect to sanitation service delivery options and approaches. In dense settlements, greater waste streams require sanitation service machinery and approaches beyond trying to influence user behaviour and the containment part of managing faecal waste (i.e. latrine-building or safe disposal of faeces).

What happens when the pits and tanks are full? Institutional arrangements for O&M need to be planned in the master planning process. O&M costs and post-construction support needs to be addressed upfront. A working knowledge of life cycle costing is critical for sanitation planning.

What sanitation master planning should not be<sup>3</sup> is Consultant or donor driven, a big money spending exercise, simply an information collection process, or result in thick documents that no one reads or understands, nor take place in isolation from other sectoral planning processes and collect information that has already been collected.

## Implementing Sanitation Master Plans

The first step in implementing a Sanitation Master Plan is to include the proposed actions of the master plan into town development plans. In parallel, the priority actions need to

<sup>3</sup>WSP (2010) *Marching Together with a Citywide Sanitation Strategy*, Published by Technical Team for Sanitation Development (Tim Teknis Pembangunan Sanitasi - TTPS) & the Indonesia Sanitation Sector Development Program (ISSDP).

be earmarked with a budget from the town, and external finance identified for the actual implementation phase. Other activities may be included in the annual plan and budgets.

In these ONEWASH Plus towns funding from DFID is available so some of the proposed interventions are being quickly followed up as priorities. For those activities, the three main actors i.e. Regions, Towns and UNICEF have organised contracts and made all necessary preparations. The regional administrations are the main actors in implementing more complex projects while smaller interventions are undertaken by the towns.

Once construction works are completed the towns will have to make sure that all facilities are managed and operated sustainably in an environmentally acceptable manner. In these towns, managing primary and secondary waste collection will be the responsibility of the private sector. Projects partners will work closely with business development agencies to organize small and micro enterprises and sign management agreements with the enterprises. Some facilities still need to be managed either by the municipality or in a public private partnership like landfills and waste treatment plants.

An important aspect of the Master Plan is also building capacities of key actors at town level, in both public and private sectors. This capacity building is expected to enable key actors in the town like the municipality and utility to enhance their capacities and sustain services.

The Master Plan is a flexible plan that should be seen as a working document to be adjusted from time to time. New developments in terms of settlement, or changes in policy or changes in some technical assumptions will require adjustments. The very nature of the Master Plan document is to provide the planners in the town a road map for urban sanitation interventions that will address the challenge, incrementally capture changes and developments in the town and revise the actions as necessary.

## Final thoughts

An interviewee noted that the term Master Planning “suggests a kind of linear omniscience where you just have to work through a checklist and et voilà!” Clearly this approach has not been adopted in ONEWASH Plus, as developing Master Plans doesn’t exclusively focus on pipes in the ground within an engineering paradigm.

This is not a traditional master planning approach, but rather an approach that is close to strategic action planning. The latter speaks to what works, to pragmatism, to lessons learned, and to the innovation required to address service delivery challenges that go beyond technical solutions. The Sanitation Master Plans developed under ONEWASH Plus are found to be more innovative than the name might suggest.

## Notes

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## About...

ONEWASH Plus learning notes promote the sharing of experiences from innovations within the ONEWASH Plus Programme.

This learning note focuses on sanitation master planning. It explores definitions, processes, contents, approaches and lessons learned from the piloting of sanitation master planning to date in small towns in Ethiopia. It also draws upon South Africa experiences to provide an international perspective on developments in strategic sanitation planning. It was prepared by Alana Potter, Eyob Defere, and Michele Paba and edited by John Butterworth.