



Improving sanitation in small towns in Latin America and the Caribbean

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Small towns are often too big for community-managed WSS, but too small for a conventional urban utility. Here a nine-step method for drawing up a sanitation plan for small towns is described – a method that places the responsibility for improving sanitation services firmly in the hands of local authorities rather than a central agency or external donor.

In the past five years or so, the international water supply and sanitation community has begun to pay closer attention to sanitation. The *Global 2000 Water Supply and Sanitation Assessment* by WHO and UNICEF points out that 2.4 billion people still lack access to improved sanitation. The *Regional Report on the Evaluation 2000 in the Region of the Americas* by the Pan American Health Organization indicates that in the Latin America and Caribbean region 80 per cent of the population has access to some form of sanitation facilities (although urban areas have much higher coverage than rural areas). This includes 49 per cent connected to conventional sewerage and 31 per cent served by on-site sanitation systems. Of those connected to sewerage systems, only 13 per cent of the collected wastewater is treated and even this treatment is questionable since most of the treatment plants are not functioning properly, nor do they meet water quality discharge standards. There are no available data disaggregated for small towns, but it is reasonable to assume that the situation is closer to that of the rural areas – 49 per cent coverage in the Latin America and Caribbean region.

In recent years, there has been a significant and growing interest in improving water supply and sanitation services in small towns. Small towns are defined as settlements that are sufficiently large and densely populated to benefit potentially from the economies of scale offered by piped systems, but are too small and dispersed to be efficiently managed by a conventional

urban utility and too big for the traditional community management model used in rural areas to work effectively. They require formal management arrangements, a legal basis for ownership and the ability to expand to meet growing demand. In Latin America small towns tend to have populations of 5000 to 25 000.

One of the principal reasons for the increased interest in small towns in Latin America is the sheer number of municipalities that fall within this category. For example, according to the last census in El Salvador only 13 out of 252 municipalities in the country have populations over 20 000. In Paraguay, there are 93 municipalities with populations

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between 10 000 and 40 000 and only 15 with populations over 40 000.

While the importance of sanitation to improve health is generally acknowledged, it has not received the same attention or investment as water supply in small towns. This can be attributed to multiple factors, including a lack of access to capital financing, little direct demand for sanitation, an inadequate policy framework for sanitation and limited institutional capacity to manage sanitation systems effectively. Most of the attention has been on technical solutions, especially in developing lower-cost technologies for wastewater collection and treatment, but without

adequate attention to the sustainability of those investments or to maximizing health benefits.

To address this issue, the USAID-funded Environmental Health Project (EHP) elaborated a methodology for developing plans for sustainable sanitation services in small towns. This is a specific plan that can serve as the basis for an application for funding or, if the funding is already secured, as the basis for an implementation plan. The sanitation plan that results from this process is intended to be equitable, environmentally sound, financially sustainable



Sewage flowing from a household septic tank into an open canal in Panama

Nine steps to a sanitation plan

The methodology consists of nine sequential steps.

1. Determination of local officials' interest

The methodology is primarily intended for a decentralized system in which the municipality has decision-making authority. Therefore, the starting point is determining the interest of local officials in improving sanitation services in their towns. Since the strategy seeks to improve services on a town-wide basis in a financially sustainable manner, the municipality must be a willing partner. Ensuring that the mayor, local council and other appropriate parties are fully supportive is a critical first step. They must have a realistic picture of the time it will take and understand that there are no easy solutions. They must also be committed to addressing the financial issues and accepting the health and environmental goals of improving sanitation services.

2. Introductory public meetings

At these meetings the basic principles underlying the activity should be explained with a special focus on the importance of financial sustainability and the willingness of residents to pay for services. It should be made clear to the public that this meeting is the first one and that they will be consulted at other critical points along the way. The strategy should target both a representative group of consumers and institutional stakeholders such as schools, commercial enterprises, hospitals and government officers. The techniques for this step include public meetings and information campaigns.

3. Preliminary data collection

Many sanitation projects fail because the project designers take short cuts and apply standard approaches and technologies without first taking into consideration the specific conditions of a given small town and household preferences. It is not uncommon for project designers to decide what kind of technology is to be used in a project even before visiting the site. Information should be collected on the town's existing water supply system, sanitation practices and systems, and a preliminary determination made of the demand for sanitation services as well as technical, financial, health, social and environmental conditions. This step should include a focused

effort to consult a representative sample of households about the current technologies in use, preferences and practices.

4. Identification and costing of the range of feasible technical options

A range of sanitation technologies that may be feasible should be identified and presented to stakeholders. The range of options is directly based on the data from Step 3. Each option should include a description of the benefits and drawbacks, an estimate of the capital and recurrent costs as well as the possible sources of financing and how this translates into tariffs. Conditions can vary greatly. In some towns, for example, on-site sanitation may not be feasible because of the density of population. If household connections for water supply are provided, then the collection and disposal of wastewater must be addressed. The range of options should include household centred-approaches, more conventional wastewater collection and treatment and, if feasible, reuse of the treated wastewater. Options to be presented to stakeholders should be confined to those that are likely to be cost effective in reaching the maximum number of households in the town, provide the type and level of benefits that households expressed interest in and are financially sustainable.

5. Discussion of feasible technical options with municipal stakeholders and households

The full range of feasible technical options should be presented to the municipality and stakeholders so an informed decision can be made before proceeding with the development of detailed plans. This presentation should include the technical options, level of service, benefits, cost implications, location of facilities and health and environmental issues. The result of this step should be the selection of one or two options that would then be developed in much greater detail by the consultant team. The selection should be based not only on the most appropriate technology, but also on broad equity terms in reaching the highest number of households, financial capacity, willingness to pay and health and environmental concerns.

6. Detailed analysis of selected technical options

In this step the consultant team, in conjunction with the municipality,

develops in detail one or two options selected by the community and households. This analysis should include, in addition to the more detailed technical and financial analysis that began in Step 4, a specific proposal for a way to manage the services, a specific plan for incorporating hygiene behaviour change, identification of any policy issues that must be addressed to move forward and a preliminary assessment of the environmental impacts of the proposed plan.

7. Public consultation to discuss detailed options

After the options have been thoroughly developed, they should be presented to the municipality in general and institutional stakeholders for their reactions. The specific strategy for holding these discussions will vary depending on the size and complexity of the stakeholder groups. The purpose of the meeting is to elicit stakeholders' reactions and to use that information to make a final decision.

8. Decision by municipality on which option to select

The final decision is the municipality's, using its normal decision-making mechanism. In many countries, the mayor and local council, in some combination, decide. One of the benefits of placing the decision in the hands of locally elected officials is that it reinforces the role of local government in general. Local governments must take into account the expressed wishes of the community when making decisions and the current methodology allows for this. Ultimately, however, those who have been locally elected, with some assistance from the consultant team, should make the decision. This step also includes communicating the decision to the public.

9. Write the sustainable sanitation plan

Once the local government has made the decision, the plan should be written. The consultant team may decide to write a draft of the plan prior to the decision-making process. If that is the case, it may have to be modified after the decision is made. Since the plan may serve as a document to obtain funding, the consultant team may want to take into account the requirements for accessing a given funding mechanism.



Household wastewater discharges directly into a stream that feeds into the Macara River, Ecuador



A typical latrine in Jamaica



These plastic bags contain human faeces

and focused on health. Sanitation is defined as the hygienic principles and practices related to the safe collection, removal or disposal of human excreta and wastewater. The definition includes both on-site and off-site systems.

The methodology is intended to be used by a team of three skilled local consultants, working full-time for approximately two months, with experience in engineering, institutional development, finance, community involvement and public health. Generally speaking, one of the team members should be an engineer, one should be skilled in community involvement and the third in either finance or institutional development.

The methodology was developed after an extensive literature review and consultation with experts. The methodology builds on many of the principles and approaches of past EHP work and that of EHP partners including UNICEF, the Water and Sanitation Program, Water and Environmental Health at London and Loughborough (WELL), Water Supply and Sanitation Collaborative Council, WHO and IRC's International Water and Sanitation Centre. EHP's contribution was to apply these principles to the small town context.

While EHP is confident that the methodology will work, the true test will be in three pilot tests, of which one has been recently completed in Macara,

Ecuador. The other field tests are in La Cabima, Panama and White Horses, Jamaica. Preliminary results of the completed field test indicate that the consultant team needs a fairly high level of skill to develop the sanitation plan, the team must have a very strong community participation member who can guide the process, and success is closely linked to the ability of the municipality to be an effective partner. After the field tests, EHP will revise the methodology and organize two dissemination workshops in Latin America, one in Central America and the other in the Andean region.

Core principles

The following principles underpin the nine-step methodology.

Equitable town-wide solutions that expand coverage to as many residents as possible.

Financially sustainable services with recurrent costs paid by user fees.

Sanitation service provision is a local function.

Community consultation is an integral part of the process to ensure that communities support the plan.

Households should demonstrate willingness to pay for the recurrent costs involved in operating and maintaining a sanitation system.

Health and environment concerns should be addressed explicitly in order to maximize the benefits of sanitation systems.

Conclusion

This approach for improving sanitation in small towns is intended to place the responsibility for improving sanitation services firmly in the hands of local authorities rather than a central agency or external donor. The implication of this decentralized approach is that the financing of improved services is more closely tied to municipal finance. The strategy clearly is placing emphasis on the sustainability – both institutional and financial – of the system. Simply looking for low-cost technologies for wastewater collection and treatment, even when these systems are not financially sustainable, is not a sound strategy. Having sustainability as a priority will inevitably lead to greater consideration of both on-site solutions and off-site wastewater collection and treatment solutions. Finally, the strategy relies on full consultation with the municipality so that a system is not developed for which there is no demand.

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