

CHAPTER 6

User-centred latrine guidelines – integrating CLTS with sanitation marketing: a case study from Kenya to promote informed choice

Yolande Coombes¹

Abstract

There is increased attention on how to integrate Community-Led Total Sanitation (CLTS) and sanitation marketing to support households with informed choice for building more sustainable latrines from the outset. In Kenya, the development of simplified latrine guidelines has been a first step in integrating the two approaches, in an attempt to build more diversified latrine types which better suit the needs of individual households, and which optimize latrine cost-effectiveness according to different household's income levels. Simple latrine guidelines are being used as a support tool for health workers, private sector implementers, and community health workers. Households can review latrine options following CLTS triggering, allowing them, if they wish, to leverage the more improved supply chain products developed as part of sanitation marketing.

Keywords: Sanitation marketing, CLTS sustainability, Improved latrines, Latrine guidelines, Informed choice, Kenya

Introduction

In Kenya, as in many other countries, sanitation stakeholders are now asking at which point sanitation marketing (focusing on both supply and demand) should be introduced to follow on from Community-Led Total Sanitation (CLTS) so as to optimize both self-help and sustainability (Cavill et al., 2015). Should they be introduced together or used selectively or sequentially depending on the issues and coverage within a county (see Munkhondia et al., 2016, this book)? Kenya has recently devolved sanitation services to local government with the creation of 47 counties. Devolution was introduced to allow for more tailored responses and service delivery to the different local contexts at county level. Sanitation is no different, for example a county like Nyeri has 99.3 per cent latrine coverage (of which 60 per cent are shared or unimproved) and therefore CLTS as an approach would not be cost-effective. Conversely a county such as Kwale with 52 per cent open defecation (OD)

might be better with a CLTS approach sequentially followed by sanitation marketing. A county such as Migori, which has 33 per cent OD and 40 per cent unimproved sanitation, probably needs a parallel CLTS and sanitation marketing approach (Ministry of Health/WSP, 2014).

It is likely that we do not have sufficient evidence to know what the optimum combination and sequence of CLTS and sanitation marketing is, but as Munkhondia et al. (2016, this book) point out, the approach of first conducting CLTS and introducing sanitation marketing at a later stage may not always be an effective one since it can lead to households getting stuck or being satisfied with basic latrines which cannot last long and tend to limit health benefits. We do know, however, that building a strong enabling environment for both CLTS and sanitation marketing interventions is crucial (Perez et al., 2012). Typically, sanitation marketing interventions are more resource intensive than CLTS, if both adequate at-scale demand creation and supply chain strengthening activities involving private and public sector are to be developed. They also take considerable time to roll out in a comprehensive manner, given the specific enabling environment development needed for the private sector to engage in rural sanitation product development and business models for the poor. Within the sector, there has often been a division between CLTS and sanitation marketing approaches, but more recently implementers are not viewing them as either/or approaches, but are looking to see how to integrate CLTS and sanitation marketing from the outset, in order to support households in building more sustainable latrines in a comparatively more cost-effective way the first time they build. Could this integration pave the way for CLTS and sanitation marketing activities that build on the strengths of each other and address the challenges levied by the proponents of each of these approaches against the other? In Kenya, the development of simplified latrine guidelines has been a first step in integrating the two approaches, in an attempt to build more diversified latrine types which better suit the needs of individual households, and which maximize the resources available to them so that they can, where possible, jump up the sanitation ladder, missing a few rungs on the way.

In Kenya, the Ministry of Health (MoH) advocates for both CLTS and sanitation marketing. The idea of latrine guidelines is not to replace sanitation marketing activities, nor to undermine CLTS. Furthermore, the idea is not to roll out CLTS, latrine guidelines, and sanitation marketing as a linear process. The hypothesis is that all these approaches are complementary and are different ways of 'cracking the same nut'.

As CLTS programmes have scaled across Kenya (and globally), there has been increasing emphasis on how to sustain CLTS results. The concern is with how communities and households achieve and maintain their open defecation free (ODF) status, both in terms of the new behaviours they have adopted, but also in terms of the conditions of the new facilities that they are using, without slipping back to OD behaviours. Sanitation practitioners have noted an implicit expectation that households will continue to climb

the 'sanitation ladder' by investing in higher levels of technology which will give them increased health benefits as well as other functional (comfort, convenience) and emotional (status, dignity) benefits. In Kenya, formative research (Ipsos Synovate, 2013) noted that few communities have continued to move up the sanitation ladder following the initial triggering and building of first, basic latrines as part of CLTS activities. Additionally there is a high degree of satisfaction with unimproved latrines, with households citing no intention to improve. In order to increase the behaviour of continuous upgrading people need to be dissatisfied with their current latrine. As a result, the MoH has introduced a national improved sanitation campaign² as part of broader sanitation marketing activities in the country, designed to generate demand for improved sanitation latrines of a higher quality (compared with those usually built as a result of CLTS). This campaign is designed to be integrated with existing CLTS activities.

The MoH in Kenya developed a roadmap to make Kenya ODF by 2013. By the end of 2013, only two sub-counties had been declared ODF, and none of the 47 counties had achieved that status, although Busia County is close but has yet to be verified (see Wamera, 2016, this book). By 2014, 3,886 villages (7 per cent) had been declared ODF, 2,518 had been verified, and 1,960 certified.³ Increased focus on becoming ODF and a revision to the roadmap has seen renewed efforts by counties to achieve ODF status. In addition, in 2014, with support from UNICEF, counties completed a micro-planning exercise to map out and cost what it would take to become ODF. UNICEF estimate that KES1.5 bn (US\$16.6 m) will be required to achieve 100 per cent ODF status in the country, with an average of US\$35,000 per county. The cost of training, follow-up, and administration is about KES5,584,900 (US\$62,000) per county but more than 70 per cent of counties have completed the CLTS training in full, although many will need to do refresher training which has not been budgeted for (Singh and Balfour, 2015).

In comparison, the demand creation campaign for improved sanitation that is being rolled out by government as part of the sanitation marketing activities is expensive. Depending on the channels used it is approximately US\$30,000–60,000 to execute the campaign for three months in a given county, but this does not guarantee exposure to all communities/households. The more expensive roll-out of the campaign includes inter-personal communication in a sub-set of sub-county locations. The primary aim of the improved sanitation campaign is to move people to more sustainable latrines (thus saving households money in the long-term because they will not be re-building their latrine so frequently, leading to a reduction in lifecycle cost compared with annual costs). In addition, economic studies of sanitation have demonstrated increased cost-benefits with more durable latrines (Hutton, 2012). There is a second objective of targeting resistant or hard-to-reach communities who may have been unsuccessfully triggered as part of CLTS activities. Many counties have not budgeted for the campaign, so it is unlikely to be rolled out in every county in the near future. Counties are very dependent on international non-governmental organizations

(INGO), donors, and civil society budgets for campaign activities. Few budget for such activities within the County Integrated Development Plan. Kenya has recently devolved, and counties are still in their infancy in terms of planning and budgeting comprehensively. The focus still tends to be project based. Work by the Kenya Water and Sanitation Network (KEWASNET), the SNV Netherlands Development Organization, the Water and Sanitation Program of the World Bank (WSP), Red Cross, and UNICEF through the guidance of the National MoH is now focused on helping counties to better budget for a more comprehensive approach to sanitation. In the meantime, the campaign is being rolled out by partners through local government, and counties are reporting increases in improved latrines, which can be verified by the sale of latrine slabs which have increased substantially in these counties.⁴

Challenges with ‘CLTS-designed’ latrines

During the course of formative research⁵ to inform a large-scale, market-based approach in Kenya, a number of key observations were made:

Homogeneity in latrine designs

In their research, Pedi and Sara (2013) found a high number of communities across the country where the same latrine design is used throughout (both improved and unimproved latrines). It seems there is little variation or innovation in latrine designs within individual communities. Respondents indicated that this was because, following CLTS, latrine designs were copied from those households with an existing latrine or were based on the advice of natural leaders and/or community health workers/volunteers (CHW/CHVs). These leaders and workers often have limited experience of different latrine types and so their advice and guidance is based on what they know or have seen. Although this may not be a problem for some, and might be a useful way to scale access to latrines (by having a simple design that all can follow), it may also mean that households are not building latrines that address their specific needs or requirements, or that meet their aspirations. They may also be investing in a less sustainable latrine design which they will be forced to re-build, or repair more frequently, or which they may not continue to use, because it does not meet their needs in terms of privacy, odour, or ease of use.

Inadequate technical specifications

The research found some common technical problems, in particular, inappropriate pit depth. The average depth, as indicated from the quantitative sample, was 30 ft (9 m). In qualitative data collection, respondents cited pit depths of 50 ft (15 m) and even 80 ft (24.5 m). Contrary to CLTS guidance (that no significant cost should be involved in building a latrine), most respondents

had paid someone to dig their pits paying an average of KSH250 per foot (US\$3) in areas of good soil, and up to KSH1,000 per foot in rocky areas (US\$12), thus paying as much as US\$360 for the pit to be dug (almost 70 per cent of annual income for households in the bottom 40 per cent of earners in Kenya). Since pit depths are typically too deep, many households are using too large a proportion of their available resources when they invest in a latrine. This leaves less investment for the slab and superstructure. The slab is where they are most likely to come into contact with faeces, where people have failed to position themselves over the squat hole correctly, which was a common problem raised in the formative research report, especially among children.

Other findings with regard to technical specifications were that most households with latrines have pits which are typically 3 feet (1 m) by 4 feet (1.2 m) in width/length and rectangular in shape. Respondents wrongly thought that round pits are more likely to collapse than square ones. As expected, superstructure materials tended to be consistent with materials used for the house, or of a lesser quality. It was rare to find a more substantial superstructure, except in areas where latrines had been subsidized.

Lack of understanding of what constitutes an improved latrine and why it is important

Few households were aware of the importance of a lid on the latrine, or what the attributes of an improved latrine are, in both CLTS and non-CLTS communities. In the quantitative survey only 10 per cent of households had a lid on their latrine slab. This, apart from in ventilated pit latrines (VIPs), is considered one of the most important aspects of an improved latrine, because it prevents flies from entering and exiting the latrine, and thus stops flies contaminating food and fingers with excrement (Chavasse et al., 1999).

Poor quality design and construction

Recent qualitative research (Ipsos Synovate, 2013) in some of the areas which first adopted CLTS approaches in Kenya, as well as data gathered from the quantitative formative research for the market-based approach, show that there is a high number of latrines which are not being used due to collapse of pits or disrepair of slab or superstructure. In some cases this is because households have failed to maintain them (superstructure disrepair), in others it is because of poor design and construction methods (slab and pit collapse).

In Kenya, most of the focus of CLTS has been on building a latrine and not on providing guidance on the minimum standards in order to provide health benefits or advice about the attributes of a latrine that means it can be considered 'improved'. So, for example, having a slab that can be cleaned is important for health benefits when faeces have not been fully

contained in the pit and are left on the slab. Permanent foot rests designed on many slabs encourage users to position their feet on the foot rests, but because of differences in leg length, the user may not be directly over the squat hole which means excreta ends up on the slab. In fact, being able to wash the slab was cited in the research as something that respondents most wanted when asked to describe their ideal latrine. Yet this issue appeared not to have been discussed during CLTS implementation.

Existing 'first-generation' latrine guidelines

There are a number of latrine guideline manuals that have been promoted by various agencies and NGOs over the years. Most counties have some type of latrine options catalogue, though most are quite long and few are under 20 pages.⁶ These manuals have been developed for a variety of reasons:

- To provide choice for consumers.
- To provide technical specifications for masons or builders.
- As a technical resource for local government officers as a follow-up to the training they have received.

The guidelines often cover a variety of soil types and situations, for example, rocky soils, sandy soils, and high water tables. The existing guidelines for Kenya were developed by sanitary and civil engineers more than 20 years ago, and the cost of most latrine options presented in the manual are beyond the reach of most rural poor households (Government of Kenya, 1987). In addition, they do not take into account ease of emptying (see Myers, 2016, this book). Generally, latrine guidelines are not used with communities that have been triggered using the CLTS methodology, as this is seen to go against the self-help principles of the CLTS approach, and also because the designs are beyond the budget of most households.

In Kenya, some public health officers (PHO) and technicians note that the training they received on latrine standards during their diploma focused on high end technologies such as VIP latrines and water-borne systems, with insufficient information on low-cost latrines and appropriate technologies for difficult soil conditions. The current curriculum for PHO diploma training does contain modules on both low-cost and more advanced sanitation technologies, but it is difficult to see from the curriculum description the detail of what is covered by each module (Hickling, 2013). In addition, prior to 2015, all PHOs and technicians were not being routinely trained on CLTS as part of their diploma. This has been recognized as an oversight and rectified by the Association of Public Health Officers, who are in the process of strengthening the curricula to take into account both CLTS and sanitation marketing approaches.

A further challenge with the existing latrine guidelines is that they are long. The Kenya guidelines extend to more than 50 pages of close-typed text with

few drawings and illustrations. The manual in Kenya is not unique. Across the board, countries' long latrine manuals lead to potential problems:

- The cost of producing the manuals is high.
- They are often general and not customized to particular country situations, nor written in the appropriate language.
- They are large and heavy to carry for use in the field.
- Most are printed on normal paper, which reduces their shelf life when used in the field as the paper tears, or cannot withstand getting wet.
- They are often too complex for front-line staff such as CHWs and Natural Leaders who are the ones interacting with households and providing advice on latrine construction, especially following CLTS.

In order to address some of these barriers, it was decided to develop and test a simpler set of latrine guidelines. Testing and revisions took approximately four months. In addition, given that work had already been carried out on developing the supply side for the work on market-based approaches, it was felt that simplified latrine guidelines might be a way to expand the demand for these products provided by the private sector because they would reach a larger group of households than the commercial marketing and demand campaigns.

Simplified latrine guidance

Given the problems relating to the lengthy guidelines in Kenya, coupled with the evidence of homogeneity in latrine designs and inadequate technical specifications, particularly on pit depth, the MoH in Kenya, working with partners FHI 360, Population Services Kenya, and WSP, embarked on a project to develop some simple job-aids to provide uniform information for front-line staff, in order to assist them in providing guidance to newly triggered households and communities.

The first step was to achieve some consensus about pit depth. We could find no academic studies or references with hard evidence to support specific maximum pit depths (though they do exist for minimum depths). We carried out consultations with sanitary engineers, academics, and sanitation specialists around the globe, to see if we could build consensus on pit depth guidelines. The consensus we arrived at was a maximum pit depth of 1.5 metres above the wet season's water table, as a cut-off, which is of course location specific (in the case of difficult soil or rock conditions).

Following the discussion on pit depth guidelines, it became apparent that Kenya needed to develop a definition for an improved latrine. This process was led by the MoH's policy and research technical working group (TWG) for sanitation whose members are drawn from the ministry, donors, partner agencies, NGOs, and research institutions. A definition of improved sanitation was arrived at which builds on the Joint Monitoring Programme of the World Health Organization and UNICEF (JMP) definition (see Box 6.1).

Box 6.1 Kenya Ministry of Health definition of improved sanitation

An improved facility hygienically separates human excreta from human contact which includes:

- a. Flush/pour to:
 - Piped sewer system
 - Septic tank
 - Pit latrine
- b. Ventilated improved pit (VIP) latrine
- c. Composting toilet

In addition, an improved facility MUST HAVE the following features:

- Latrine floor/slab should be raised, smooth and impervious, for it to be easily cleaned;
- It should have no cracks;
- It should slope towards the squat hole to facilitate draining;
- It should have a well-fitting lid that does not allow flies into the pit;
- The superstructure should offer maximum privacy, with a roof to prevent rain entering;
- It should be at least 40 m from water sources and with a pit depth at a minimum of 1.5 m above the highest ground water levels.

In urban/peri-urban areas, the facility should be embedded in a functioning sanitation system, where the excreta from the toilet is properly stored, transported, treated, disposed, or re-used in a manner which is not hazardous to human health and not detrimental to the environment.

Using this definition developed by the TWG and the MoH, several iterations of the latrine guidelines were tested. Starting off as a two-sided (one page) laminated card (Ministry of Health, 2015), the tool was pre-tested with a number of different community health staff, including CHWs, public health technicians (PHT), PHOs, Community Health Extension Workers (CHEW), and Natural Leaders from communities carrying out CLTS.

The materials were pre-tested to:

1. Learn whether the guidance referred to as 'job aids' by local government were likely to significantly contribute to the ODF rural Kenya roadmap campaign objective of making the country ODF.
2. Assess whether the messages used were clear, understandable, informative, and practical for front-line CLTS implementers.
3. Learn whether the format/design of the materials is convenient, visually appealing, and appropriate for use by CLTS implementers.

A series of focus group discussions and key informant interviews were carried out in areas where CLTS had been carried out and in areas where it has yet to be implemented in Migori, Nakuru, and Baringo counties in Kenya.

In all the sites, the government officers and volunteers had a similar understanding and interpretation of the tool. However, there were differences about how the tool could be used. In non-CLTS sites, the only avenues

that government officers have for using the job aid are during community dialogue meetings, home visits, schools and health facility visits. They would have to organize these specifically. However, those in CLTS sites immediately identified that the tool could be used for post-triggering follow-up, and some felt they could use it with communities which had failed to ignite properly following triggering, as the job aids provided a different entry point for further discussion and conversations with communities. Volunteers indicated that they could use the material during their regular community dialogue/action days.

In earlier versions of the tool, it was not obvious that the job aid was to help households make informed choices/assess options while choosing a latrine rather than to provide step-by-step guidance on how to build. However, government officers found that the materials were very useful in their day-to-day work in advising households on latrine construction. They felt it made their work easier, because the job aid provided a focal point with which to have a conversation, and also prompted them to cover all aspects of latrine design. In the counties where the tools were pre-tested, the staff have continued to use them prior to national roll-out. In the field testing areas, although a household survey was not done, the PHOs reported an increased variety of latrine designs. Based on the pre-test and results, national staff from the MoH decided to roll out the guidelines nationally.

The pre-test found that volunteers, unlike the government officers, wanted a different (slightly less technical) version of the tool. It has been developed in two formats, in both English and Kiswahili. Each version is either a short booklet or poster which covers key information on pit depth and lining, slab choice and superstructure. And both outline the pros and cons of all options and link them to the improved sanitation campaign (see Figure 6.1 for an example of the Volunteers English tool). The tools are now being printed and distributed to every county in Kenya by the MoH and have been shared at the Interagency Coordination Committee by the MoH to ensure partners who are implementing either CLTS or sanitation marketing activities use these guidelines. A recent addition is that the tools are being used by sales agents for private sector sanitation solutions.

Conclusions

Carrying out this exercise, we learned that:

- Without guidance, some people build a less sustainable latrine than they can afford, or put the majority of their investment into aspects of the latrine which are unnecessary.
- Latrine choice is not just a factor of how much money a household has, it also depends on their experience of different latrines, the availability of local materials, and knowledge/ideas on how to construct a latrine to maximize health benefit, and to meet aspirations and needs.

How to Build Longer-lasting Latrines
Questions for households preferring a longer-lasting latrine

1 Do you have a high water table in this area?

Consider:
 Pit
 Dig up to 7ft but refer to MOH technical guidelines if water is found at 11ft during the wet season.
 Slab
 • Plastic | Wood
 • Mud
 Go to 2

NO → Do you have collapsing pits in your area?

2 Do you have collapsing pits in your area?

Consider:
 Pit
 A 7ft deep pit will last about 4 years
 Slab
 • Plastic | Wood
 • Mud

YES → Refer to MOH Technical Guidelines

NO → **Consider:**
 Pit
 A 19ft pit will last about 15 years.
 Lining
 Refer to MOH Technical Guidelines for lining depth in different soil conditions
 Slab
 • Cement
 • Pre-cast concrete
 • Plastic (large slab)

HEALTH BENEFIT
 ■ Maximum health benefit
 ■ Other

How to Build Cheaper Latrines
Questions for households preferring cheaper latrines

1 Do you have a high water table in this area?

Consider:
 Pit
 Dig up to 7ft but refer to MOH technical guidelines if water is found at 11ft during the wet season.
 Slab
 • Plastic | Wood
 • Timber | Wood
 • Mud
 Go to 2

NO → Do you have collapsing pits in your area?

2 Do you have collapsing pits in your area?

Consider:
 Pit
 Even a 3ft pit will last more than a year
 Lining
 Oil drum/basket
 Slab
 • Plastic
 • Timber | Wood
 • Mud

NO → Circular pits are stronger (Bicycle wheels, concrete rings)

3 All ordinary pits need a lid

4 If you are using plastic slabs, remember to pre-treat against termites.

5 Do you have rocky soil? Refer to MOH Technical Guidelines for construction options.

Lining
 Cement
 Basket
 Oil Drum

Slab
 Cement slab
 Precast concrete
 Mud/cow dung Slab
 Timber/wood
 Plastic slab

Figure 6.1 Guidelines to help households choose a latrine

Source: Ministry of Health, Kenya

- However, price is important. Given the fluctuation in prices of products, components (cement, iron sheets), and labour over time and in different geographic locations, we did not provide prices on the guidance but indicated which were cheaper and which more expensive. PHOs and PHTs are able to give better price indications to communities at the time of construction.
- Providing simple guidance in field testing led to some households building a longer-lasting sustainable latrine or purchasing latrine components immediately after CLTS triggering.
- The guidance is also used as part of sanitation marketing activities focused on the behaviour of upgrading a latrine.
- It was also established that if volunteers and government officers are going to be involved in CLTS follow-up, they appreciate having tools and job aids to facilitate their discussions and support the guidance they are providing.
- Traditional latrine manuals are too detailed and complex for this cadre of staff and for the majority of households. What is important is that the guidance should be short, portable, made from card or laminated to last, and should not be overly didactic about latrine choice, in order to fit with both CLTS and market-based approaches.
- It is important that the guidelines cover latrine options that are made from locally available materials (as advocated by CLTS) as well as options for purchase or construction by masons, which require a more developed supply chain (sanitation marketing).

Next steps

As mentioned above, the simple latrine guidelines are being rolled out at scale in Kenya. The next step is to evaluate whether areas which are using these tools during CLTS and for follow-up end up building more sustainable latrines, and are less likely to slip back to OD following the disrepair or collapse of their latrines. The MoH plans to follow this as part of the data collection being done with the MIS system for sanitation which is being developed. In addition, with the advent of the Sustainable Development Goals and the need to look at the whole chain for sanitation, as pointed out by Myers (2016, this book), the guidelines will need to be extended to cover safe removal of excreta from filled latrines, and incorporate the costs of emptying into the calculations in terms of life time cost.

Despite the benefits of simple guidelines, there is still a need for more detailed guidance for some difficult terrains, for example, places with loose soils, high water tables, and rocky soils. But during our testing we found that these households could be referred to the government officers or other technical specialists such as builders by volunteers. This advice about seeking technical advice has been added to the final version of the tools.

The reason this initiative is working in Kenya is because CLTS has been rolled out to more counties (almost all 47) than sanitation marketing (less than 10). The products for the supply chain for sanitation marketing are easily available, so the latrine guidelines provide an opportunity for households to view other options if they want to build a more sustainable latrine following triggering, allowing them to leverage the more developed supply chain and products, which have been developed for market-based approaches. Thus they are a supplement to both CLTS and sanitation marketing approaches, and they are not a substitute for either of them. Their aim is to provide consistency and to aid integration.⁷

About the author

Dr Yolande Coombes, World Bank. Yolande worked on a programme to support the Government of Kenya to scale up access to sanitation while working with the Water and Sanitation Program of the World Bank until 2015.

Endnotes

1. With thanks to the Ministry of Health (MoH), USAID's WASHplus, FHI 360 and Population Services Kenya, who worked on this initiative.
2. See <http://www.pskkenya.org/index.php?id=209> or <http://www.wash-cltskenya.or.ke/>
3. There are 57,841 villages in total.
4. For more information see <http://www.wash-cltskenya.or.ke/>
5. This includes a national representative quantitative questionnaire, focus group discussions, household observations, and interviews.
6. For example, Afghanistan (USAID, 2010) and Bhutan (Royal Government of Bhutan, 2012; Shaw, 2014).
7. See also Munkhondia et al., 2016, this book, and <http://www.wash-cltskenya.or.ke/>

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CHAPTER 7

Sanitation infrastructure sustainability challenges case study: Ethiopia

Hunachew Beyene

Abstract

This chapter is based on the findings of a cross-sectional study which investigated the high rate of reversion to open defecation (OD) in Sidama, southern Ethiopia. Collapsing toilets, and the lack of availability of durable and affordable toilet options and materials for construction on the market were identified as key reasons for this reversion. The study identified the importance of formative research to identify community needs, financial capabilities, and availability of sanitation technologies, and encouraging successful local innovations as key lessons for sustainability of open defecation free (ODF) status.

Keywords: Latrine sustainability, Sanitation technology, Open defecation, Pit latrine, Pit collapse, Ethiopia

Methodology

A cross-sectional study carried out in June to July 2013 in Sidama, southern Ethiopia assessed the sanitation infrastructure sustainability challenges in eight kebeles (the smallest administrative unit in the country), four from ODF (open defecation free) and four from non-ODF kebeles. The ODF kebeles had been declared ODF between five months to two years previously. A total of 1,677 households, 49.7 per cent from ODF and 50.3 per cent from non-ODF kebeles were selected. Household data was collected through questionnaires and observations. In addition, eight focus group discussions (FGDs) were held in each kebele, with 8–12 participants in each group.

Findings

Quantitative data

In ODF villages, nearly 80 per cent of households had a toilet, in non-ODF villages the figure was only 59 per cent. The number of functional toilets was approximately 75 per cent in ODF and 55 per cent in non-ODF communities meaning 25 per cent in ODF communities were still practising OD. Thirty per cent of toilets in ODF and 22 per cent in non-ODF villages did not have

a proper soil slab. Fifty-eight per cent of toilets in ODF and 55 per cent of toilets in non-ODF kebeles had superstructures. In addition, 20 per cent of the toilets were flood-prone, and more than 39 per cent of the toilets were not considered hygienic.

Qualitative data

Various challenges to use were revealed. One of the main challenges was durability, with collapse of pit latrines shortly after construction. One respondent said:

Temporarily, people construct their toilet by using any available material, mainly using eucalyptus tree logs ‘Terb’. This does not last long as it decomposes easily ... the soil applied on the logs facilitates the decomposition. Therefore, within a year, it falls down. Mainly in the rainy season rain just falls on it as there is no rain protection [superstructure].

Durability affected confidence in using the toilets, ‘because of fear of collapse, people defecate near the toilets...’ Availability and affordability were also key challenges. There was agreement among participants that due to population increases and a reduction in forest cover, strong wood is either not available, or it is prohibited to cut the trees down. Consequently, they had to buy a stronger locally available wood (‘kench’) to make a toilet slab or a proper superstructure. However, ‘kench’ is not affordable for many of the families. One respondent said:

... for my own household, I can construct the toilet in a good way so that I can use it as long as possible. But, that will be done when I have money and able to buy the good quality woods. We don’t afford to buy them as one kench costs 20 birr (US\$1).

Another respondent said, ‘Grass is not available in the environment that can be used to cover the roof... We apply leaves, and when the leaves, dry and fall on the ground it becomes open’.

Communal toilets are even more problematic. In addition to the lack of strong wood, there is also the fact that there is no one responsible for them. One respondent mentioned, ‘Once when I was using a communal toilet, my leg entered the hole because ... the superstructure collapsed’.

To combat the issue of durability some households have used locally carved stone slabs, which are resistant to decomposition and more durable. These local innovations should be supported and encouraged.

Even when families had financial resources to construct good quality toilets, more durable materials were not easily available in the market or the surrounding area. The current Community-Led Total Sanitation approach encourages households to construct using locally available materials with no infrastructure options given, and no consideration of financial capabilities. Most

toilet owners (94 per cent) were interested in improved toilet options and some said they would need partial or full government support. However, 64 per cent mentioned they would be able to afford to buy new sanitation technologies.

Key lessons learnt

- A lack of appropriate locally available and affordable options means some facilities do not fulfil the requirements needed to climb onto the first rung of the sanitation ladder.
- Formative research should be used to identify community needs, financial capabilities, and availability of sanitation technologies.
- Government and NGOs should promote appropriate simple, affordable, and sustainable options that can be applicable to different geographic locations and are resilient to the environment and suitable to local soil conditions.
- Different options for different socio-economic conditions should also be promoted.
- Post-triggering, professionals should support communities choosing an appropriate location and assist in the construction of good pit latrines with locally available materials.
- Local innovations that have proven to be successful, such as the locally carved stones, should also be encouraged and supported.
- If the cutting of trees goes against the law, the government or other stakeholders need to provide other options.

About the author

Hunachew Beyene is an employee of Hawassa University and is currently working on his PhD. He has been teaching Environmental Health courses such as on-site sanitation, and conducted research focusing on the effect of sanitation interventions on diarrhoeal disease, intestinal parasites, and trachoma in southern Ethiopia.