

# Lessons in Urban Community Led Total Sanitation from Nakuru, Kenya

The experiences of the project - Realising the Right to Total Sanitation Project in Nakuru Low Incomes Settlements - implemented by Practical Action and Umande Trust in collaboration with County Government of Nakuru, health services department



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## Executive Summary

Community Led Total Sanitation (CLTS) is an innovative methodology for mobilising communities to completely eliminate open defecation (OD). It has been applied in many rural areas in countries across the developing world. However, experience in urban settings has been limited. Practical Action and Umande Trust have implemented a project Realising Rights to Total Sanitation in two low income settlements in the city of Nakuru, Kenya, adapting the CLTS methodology to meet the challenges of the urban context. This has involved devising a triggering exercise with landlords as well as tenants and using theatre to attract and sustain interest during community triggering. Working in an urban area has required considerable attention to designing, through a participatory process, low cost toilets that meet urban public health and building regulations.

The project has taken steps to address wider issues of faecal sludge management, solid waste management, access to clean water, and waste water management. It has worked with lending institutions to assist landlords in accessing the necessary finance to upgrade their facilities. It has also trained and supported government staff to ensure that the processes carried out in this project can be replicated and taken to scale within the county of Nakuru. The project has achieved much of its success through effective coordination and collaboration not only with the County Government Health Department, but with a range of other stakeholders at the local, county and national level.

Whilst the project has largely been successful in facilitating significant reduction of open defecation and other unsanitary practices that left the population exposed to faecal contamination, the villages concerned have not yet been declared open defecation free due to the challenge of achieving universal hand washing facilities next to latrines (a criteria for verification in Kenya). The existence of individual subsidy programmes in the area presents a further challenge to be overcome. Lessons from this project will be valuable for the scaling up of Community Led Total Sanitation in Kenya and beyond to ensure that urban sanitation is addressed alongside rural.

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## Abbreviations

CHV	Community Health Volunteer
CLTS	Community Led Total Sanitation
DGIS	Directorate General for International Cooperation, Netherlands
EU	European Union
FGD	Focus Group Discussion
GIS	Geographic Information Systems
Ksh	Kenya Shillings
MOH	Ministry of Health
MoPHS	Ministry of Public Health and Sanitation
NAWASSCO	Nakuru Water and Sanitation Services Company
NEMA	National Environment Management Authority
NGO	Non-governmental organisation
OD	Open Defecation
ODF	Open Defecation Free
PHO	Public Health Officer
PTD	Participatory Technology Development
RRTS	Realising the Right to Total Sanitation
RWH	Rain Water Harvesting
SANDEF	Sanitation Development Fund
SNV	Netherlands Development Organisation
UNICEF	United Nations Children's Fund
VIP	Ventilated Improved Pit
WASH	Water, Sanitation and Hygiene
WSUP	Water and Sanitation for the Urban Poor
WSP	Water and Sanitation Programme of the World Bank

## 1. Introduction

This report documents the experiences and lessons learned to date from the project Realising the Right to Total Sanitation (RRTS), implemented by Practical Action and Umande Trust and funded by Comic Relief. The study is based on information gained during a visit by the authors in November 2014, involving interviews with key staff, visits to the field sites, and interviews and focus group discussions with wider stakeholders and beneficiaries. This study took place four months before the end of the project and did not aim in any way to evaluate the outcomes or success of the project: this will be a separate exercise. The aim has been to document actions, innovations, challenges and lessons relating to the application of Community Led Total Sanitation in an urban area.

Community Led Total Sanitation (CLTS) is an innovative methodology for mobilising communities to completely eliminate open defecation (OD). Communities are facilitated to conduct their own appraisal and analysis of OD and take action to become Open Defecation Free (ODF). CLTS has typically been applied in rural areas, with limited experience in urban settings. The RRTS project applied a CLTS approach in an urban area and adapted the tools to suit the distinct challenges of the urban context, such as non-ownership of land by many residents, poor condition of sanitation facilities, lack of space for adequate sanitation facilities, lack of sewerage systems, and strict regulations governing urban construction.

The project has sought ways to address these challenges, by collectively mobilising and empowering both the tenants as well as the plot owners and by working in partnership with the Nakuru County Government Ministry of Health and a range of other key stakeholders to create an enabling environment necessary to facilitate the CLTS process as well as address barriers to the achievement of an ODF environment. The project has been largely successful in significant reduction of open defecation and related unsanitary practices that led to exposure of faecal matter. It has also promoted wider actions such as hand-washing, solid waste management, waste water management, and other health related issues. However, none of the villages within the project area has been officially declared ODF using Kenya Ministry of Health criteria, due to difficulties in achieving their additional criteria of universal hand-washing outside the toilet facilities.

The challenges faced and the solutions found in this particular urban context are not necessarily universal to all urban situations. There are very different issues to address in places where people are squatting on land, where populations are more transient, where a town or city is built on rock, or where disposal of faecal waste is more problematic. Conversely, the situation may be far easier where the population is less dense or the planning and public health regulations are more relaxed. This particular case certainly offers considerable guidance to other agencies aiming to address urban sanitation using CLTS, though they should not be seen as universally applicable solutions.

## 2. Background to the Project and Context

The project titled 'Realising the Right to Total Sanitation' (RRTS) is a three-year project being jointly implemented by Practical Action and Umande Trust in collaboration with Nakuru County Ministry of Health, and funded by Comic Relief between January 2012 and March 2015. It is implemented in two low-income settlements, Rhonda and Kaptembwo, in Nakuru West sub-county of Nakuru County, Kenya. The objective of the project is to achieve total sanitation coverage in the two settlements. The project objectives and activities are outlined in Table 1 below. Alongside the elimination of open defecation, the project aims at broader sanitation goals including access to clean toilets, hygiene behaviour change, water supply, domestic solid waste and waste water management.

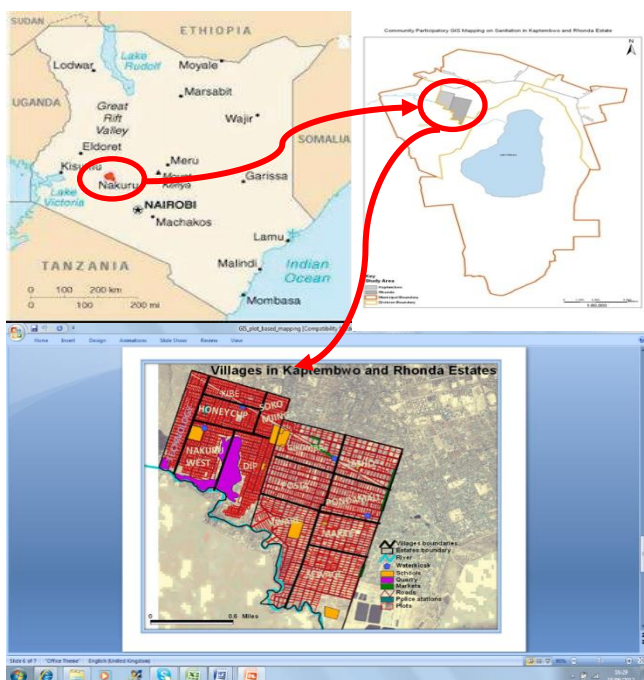


**Table 1: RRTS Project Objectives and Activities**

	Objective	Key activities
1.	Eradication of open Defecation	<ul style="list-style-type: none"> <li>• Awareness creation on CLTS approach</li> <li>• Recruitment and training of community mobilizers on CLTS</li> <li>• Community engagement on CLTS process</li> </ul>
2.	Promote access to adequate on-plot sanitation	<ul style="list-style-type: none"> <li>• Construction /rehabilitation of improved sanitation facilities</li> <li>• Installation of at point hand washing facilities.</li> </ul>
3.	Hygiene Promotion	<ul style="list-style-type: none"> <li>• Hygiene campaigns in schools and plots level</li> </ul>
4.	Empowerment informal sector workers	<ul style="list-style-type: none"> <li>• Training of informal sector workers on innovative sanitation technologies and business opportunities</li> <li>• Training on business planning and marketing</li> <li>• Capacity building</li> </ul>
5.	Enhanced strategic partnerships	<ul style="list-style-type: none"> <li>• Training of Devolved County Ministry of Health and Nakuru Water and Sanitation Services Company (NAWASSCO) staff on the CLTS approach.</li> <li>• Engagement of Devolved County Ministry of Health, NAWASSCO and other NGOs in project implementation.</li> <li>• Publication of CLTS approach and best practices.</li> </ul>
6	Sustainable Financing	<ul style="list-style-type: none"> <li>• Working with private sector (commercial banks and sanitation companies) to enhance their participation in sanitation improvement (sustainable financing, sanitation products).</li> <li>• Supporting communities to initiate a saving culture to pool own resources for sanitation improvement using Sanitation Development Fund (SANDEF) model of Umade Trust.</li> </ul>

Source: Practical Action and Umade Trust project outline (updated)

Sanitation is a constitutional right in Kenya. The RRTS project is designed within a rights framework to transform the country’s constitutional guarantees of total sanitation into a reality for the people of the two informal settlements in Rhonda and Kaptembwo. The project aims to achieve this by empowering the target communities to eradicate open defecation through the processes of Community-led Total Sanitation (CLTS). Other objectives relate to enhancing strategic partnerships and facilitating financial mechanisms to create an enabling environment for achieving total sanitation.



The RRTS project is implemented in a total of thirteen villages, seven in Rhonda and six in Kaptembwo that comprises a population of around 190,000. The two settlements are located within the Nakuru West Sub-county, one of the eleven sub-counties in the Nakuru County. Both these informal settlements are categorised as urban areas within the sub-county.

Photo: RRTS Project Location (Source: Practical Action, Project Baseline Report)

## 2.1 Community led total sanitation (CLTS) in Kenya

Community Led Total Sanitation is an innovative approach for empowering communities to completely eliminate open defecation. It focuses on collective hygiene behaviour change stimulated by facilitators from within or outside the community. CLTS involves no hardware subsidy and does not prescribe latrine models. The approach was first pioneered by Dr Kamal Kar in Bangladesh in the 1990s but has since been applied in over 60 countries around the world and 15 countries in Africa have adopted CLTS as a government strategy or policy, including Kenya, Zambia, Ghana, Ethiopia and Nigeria.

CLTS was introduced in Kenya in May 2007, following the training of Plan Kenya WASH staff in two regional training workshops in Tanzania and Ethiopia in February 2007. Since then, hundreds of facilitators have been trained in Kenya to facilitate quality scaling up. Since the first ODF village was declared in November 2007 (Jaribuni in Kilifi District), CLTS has continued to be implemented at scale in the country. The first Urban CLTS, which was dubbed Citizen Led Total Sanitation was initiated in June 2010 with the Mathare 10 pilot in Nairobi (Quayle, 2012).

Towards the end of 2009, the then Ministry of Public Health and Sanitation (MoPHS) formally approved and recommended the CLTS approach for improving sanitation coverage in the country by including it in its national strategy. The national policy includes a strategy for CLTS implementation in both rural and urban areas, however to date CLTS has largely been implemented in rural areas. This was reflected in the national government's commitment to achieve an ODF rural Kenya in 2013 and thereafter to expand ODF coverage into urban areas by 2015. However achievement of this goal has been slow with only 15% villages (9126) having been triggered and 7% (3956) having claimed ODF to date (UNICEF report, 2014).

Rural sanitation was under the portfolio of the Ministry of Public Health and Sanitation (MoPHS) before devolution of the government was implemented in 2013, and urban sanitation was then the responsibility of the local government authorities (municipal, town and county councils). However, after 2013, the responsibility for sanitation was devolved to the county government level. Presently, the line ministry responsible for sanitation is the devolved Ministry of Health at the County level in both rural and urban areas. The Public Health Officers (PHOs) of the Ministry of Health are responsible for implementing CLTS at the community unit level and are assisted by Community Health Volunteers (CHVs) from the community. Each PHO is given clear targets and work plans, which makes CLTS an integral part of their job.

Nakuru County is the fourth largest of the 47 counties formed under the new Constitution in 2013, and Nakuru municipality is the fourth largest after Nairobi, Mombasa and Kisumu. The county has a population of 1.6 million with an almost equal proportion living in urban as well as rural areas. Out of a total of 1,949 villages in Nakuru County, about 39% have claimed ODF (UNICEF, 2014) though only 16 villages (in the peri-urban and rural areas) have been ODF verified. Use of hand-washing facilities is estimated at only 7% in the county. With the county committing to become ODF in April 2015 (First National Sanitation Conference Report, Kenya), it has a huge task at hand (WSP 2014, JMP 2014). The achievement of ODF in the project area which comprises around 12% of the population of Nakuru will thus contribute significantly towards the county's ODF goals.

There are several factors driving the use of CLTS as the strategy for achieving total sanitation in these two settlements targeted under the RRTS project. Practical Action staff realised that many NGO interventions are piece-meal and fail to achieve sufficient coverage in any given geographical area to have much impact on public health. They asked themselves what it would take to create a real transformation in a given area of an urban low-income / informal settlement. The focus in the CLTS approach on facilitating behaviour change and achieving ODF status, rather than on numbers of toilets constructed, seemed to offer a similar vision. The project also aimed to work within the policy framework of the country, coordinating with all relevant institutions. The Ministry of Health promotes CLTS as its principal methodology, therefore adopting the same approach aids efficiency and ensures that any lessons from the project can be taken to scale by the Ministry. Finally, CLTS is a community driven and low cost approach, thus ensuring that change is fully

embedded within the community and can be sustained from local resources. Thus, mechanisms for sustainability and scaling up form an important part of the project strategy and are built into its design to ensure continuity even after the project comes to a close in 2015.

### 3. Challenges of achieving CLTS in an urban context

The vast majority of experience with Community Led Total Sanitation (CLTS) has been in rural areas. Before addressing the processes and strategies applied by the RRTS project, it is important to understand the distinct challenges of working in an urban context, as opposed to the rural experience, which the project has had to overcome.

#### 3.1 Defining open defecation in urban areas

In rural areas, open defecation is typically associated with defecation in open spaces such as waste land, farm land or gardens. Often this is a long held habit, practised since childhood, and usually few households have a toilet of any kind. Open defecation in urban areas is not necessarily directly related to a lack of toilets nor to actual defecation in open spaces. Latrine coverage in Nakuru County is reported as being almost 97% (WSP, 2014) and the project baseline (Practical Action Kenya, 2012) reports access to some form of sanitation facility (toilet and bathroom) at 95% in the project area (63% being pit latrines, 31% VIP latrines, 3% pour flush to pit, or septic tank, and 3% pour flush to sewer).

*“It was psychological torture to go there. You had to prepare yourself. You could not eat when you came out.” (Tenant, FGD, Rhonda)*



**Photos: an unsanitary pit latrine and a child steps in exposed shit on leaving a latrine in Rhonda Settlement. From a Photo-report of a visit to Rhonda by Andres Hueso, July 2013.**

However, despite the existence of latrines, at the start of the project these were highly unsanitary and woefully inadequate in number for the population they serve. Excreta could frequently be found around the slab. Pits were often unlined, and in these areas of fragile, sandy soil, they were prone to collapse, making them unsafe (people had fallen in and died as a result, (Landlord FGD, Rhonda)). Due to the lack of safety, most children used potties, which were then left exposed outside the rented room. Baby diapers were also not properly disposed of, leaving another form of exposed excreta. The belief often is that a baby's excreta is harmless. Once pits filled up, they were often not emptied, and might be overflowing. Thus, in an urban area OD can be better defined as inadequate containment of excreta.

*“Two years ago, one could see faeces on either side of the road everywhere you went, even though there were toilet facilities within the plots” (CHV, FGD, Kaptembwo)*

In addition, there is still some OD in the traditional sense on open ground or road verges because,



due to the unpleasant nature of the existing sanitation facilities, some people choose not to use them. Another way of dealing with the issue was the practice of using “flying toilets”, i.e. using a plastic bag as a toilet then throwing it away, perhaps by the roadside or a derelict plot.

### 3.2 Lack of space

A key issue in these low income settlements is the necessity to share sanitation facilities as the high population density in these areas makes it impossible to have individual facilities at the household level. This throws up various challenges with respect to adequately managing these shared facilities. Whilst it is recommended that just 20 people share a toilet (based on Sphere Standards minimum standards for disaster response, UN-Habitat 2008), the baseline survey found that in almost 50% of households a latrine was being shared by 10 or more households, which might mean 40 or more individuals (Practical Action Kenya, 2012). This puts enormous pressure on those sanitation facilities, further contributing to the problems outlined above.

Furthermore, once a pit is filled up, another one needs to be dug, and with the density of population, this happens quickly. Plots tend to be heavily built on with rental accommodation (basic rooms) leaving little spare space for latrine facilities. It was found that the landlords tended to use the majority of the plot area to build rooms leaving little and therefore insufficient space for sanitation facilities. Building additional rooms is viewed as a priority as they bring in income. Furthermore, many plots are being subdivided, creating further space constraints.

The weak soil structure makes it very difficult to empty simple pits as they would easily collapse, therefore these simple pits were covered over with soil and a new one was dug to replace it. Landlords spoke of having dug several pits in different places within the plot as each one got filled up, but they were running out of space.

### 3.3 Urban regulations

In the urban context there are tight and enforceable regulations relating to construction and waste disposal that don't apply in rural areas. Not only is a simple pit not permitted, but even lined pits and VIP latrines do not comply with the official Nakuru County Public Health regulations: a septic tank is required. Furthermore, there are building regulations relating to the height and width of cubicles, and materials to be used, for example, regulations underline the need for a permanent superstructure which necessitates the use of blocks. In terms of waste disposal, sludge should be emptied by a regulated mechanical collector and taken to a designated collection site, which in the case of Nakuru is the waste treatment plant managed by the water utility company NAWASSCO. Nakuru County Government By-laws also state that there should be one toilet and bathroom facility for every four households, or 20 people.

Such regulations present a challenge, as landlords struggle to meet the required standards drawing on their relatively low incomes. In a typical rural CLTS triggering people are able to immediately start building a very basic latrine using low cost, local materials, thus starting on the lowest rung of the sanitation ladder. In these low-income urban settlements, the additional challenge is to motivate and encourage landlords to not only make immediate investments but also to leap one or two rungs up the sanitation ladder to produce latrines that meet the required standards.

An advantage of the regulations is that the threat of enforcement leads to faster action by landlords: Public Health Officers can take legal action against landlords if they do not comply, though under this project, it has been used as a last resort.

### 3.4 Landlords and tenants

This project is working in low income settlements where landlords have built rooms on plots of land and rent the rooms to households. Landlords typically have security of tenure and in most cases hold the title deeds for their land. Plots should legally be 50ft by 100ft or larger, though sometimes, particularly in Kaptembwo, they are sub-divided. The number of rooms and tenants within a plot

varies considerably, and may reach up to 50 households. The majority of households (60%) live in a single room. The average household size in both settlements is 4-5 persons.

As the tenants do not own the land, it is the landlords who are responsible for sanitation provision. Therefore, targeting the general population alone for triggering will not lead to upgrading of facilities. The landlords need specific attention in order to convince them to invest in sanitation. Practical Action has sought to address this challenge by facilitating Landlord Forums (see Section 4.1.2). This is done alongside triggering of the tenants to create demand for collective behaviour change: although the tenants cannot build toilets, it is essential that they use and maintain the facilities that are available to reduce faecal-oral transmission.

Some landlords (around 60%) are resident within their plots (Baseline Survey Report, 2012). Others are absent but have given full management responsibility to a caretaker. However, absentee landlords who act only through a rent collection agent have proven to be the most challenging to reach and convince to invest in improved facilities.

### 3.5 Faecal sludge management

The geographical location of the two settlements has an impact on the total sanitation coverage and its sustainability. Only around 3% of plots in Kaptembwo and Rhonda are connected to the sewerage system. There is little prospect of increasing connections to the network as the sloping topography of the settlements means that the water and sewerage company NAWASSCO is unable to connect them to the existing treatment plant without a pumping system. To connect these plots would require a new treatment plant to be built, for which the company currently does not have funds.

Therefore non-sewerage, faecal sludge management is the only option, and this should take the form of on-site septic tanks which should be emptied by a mechanical exhaustor. The emptying service is expensive and the mechanical exhaustors cannot reach many of the plots due to the nature of the roads. For those who only have pit latrines, these cannot be emptied as they have a tendency to collapse, and they are often full of rubbish which blocks the extractor. Informal sector manual pit-emptiers have tended to fill this gap.

### 3.6 Solid waste, black water

Dealing with solid waste and black water are further challenges in an urban area. Solid waste has to be collected and this service has to be paid for. In some cases landlords make agreements with waste collectors and it is paid for from rental income. But other landlords do nothing and due to the collective nature of the plots it is hard for tenants to make such arrangements. Therefore they find other ways of disposing of waste such as dumping it in areas outside the plot, or putting rubbish down the latrine pit. In fact, project staff told us that on one occasion an entire mosquito net was pulled out of a pit latrine.

Diapers and sanitary waste are a particular problem, as even where waste is collected, the waste collectors do not want to take these, as they later sort the rubbish for recycling. Again these are usually thrown down the latrine pit. The solid waste causes the pits to fill up too quickly and also make them difficult to empty as they clog up the sludge extractors. The national environmental body NEMA is proposing separate sanitary bins in the plots and licensed collectors should empty them, but this is not yet put into practice.

Waste water is a further problem as the vast majority of residents in low income settlements are not connected to the water sewerage system. The tendency is for waste water to be thrown out either within or outside the plot, resulting in stagnant water which is a breeding ground for mosquitoes. Ineffective soak pits clog up with soap scum and overflows into open storm-water drains.

### 3.7 Hand-washing

An important challenge that is faced in the urban areas under this particular project is around hand-washing, in particular the universal achievement of a hand-washing facility near the latrine with soap or ash and water. There are two key issues. Firstly, it has been found that any kind of water container (bowl, bottle, tin, etc.) to be used as a hand-washing facility, as well as any soap (bar or liquid), is promptly stolen, as there is a high demand for recyclables, and soap is also a valuable commodity. Ash is not also readily available in urban areas. Furthermore, the population is high and levels of social cohesion are often low and so theft is hard to notice or address. Secondly, water itself has a cost, and in the case of shared facilities, where water is not freely available within the plot, there is a reluctance for individuals to supply water for all to consume for hand washing.

The issue of the location of the hand-washing facility outside the latrine is important for health reasons to reduce the chances of faecal-oral transmission. In addition, the Kenya guidelines for verification clearly set out the requirement for hand-washing near the latrine as a criterion for verification of ODF status (see below for more on verification).

## 4. Experiences and innovations using CLTS in an urban context

As noted earlier, Community Led Total Sanitation (CLTS) has principally been applied in rural contexts. The typical stages in CLTS are:

1. Pre-triggering: preparation and mobilisation of communities;
2. Triggering: use of a series of participatory tools to highlight to a community the costs to health and finances of open defecation, to provoke a sense of disgust and shame around the practice of OD, and to prompt immediate action to address the situation. Typical tools include community mapping of OD sites; calculation of shit produced in a year; calculation of medical expenses; a transect walk through OD locations; and demonstration of faecal-oral transmission through locating food next to shit. This is followed by the production of an action plan and identification of natural leaders to take it forward.
3. Post triggering follow up: ongoing motivation to fully eliminate open defecation until the community can be verified and declared as Open Defecation Free (ODF). This involved working closely with natural leaders and also developing them to become community consultants who go on to trigger neighbouring communities.
4. Post ODF activities: building on the success of achieving ODF status to address other hygiene related or broader livelihood issues within the community.<sup>1</sup>

The RRTS project has attempted to apply these same steps in an urban context, but has found that some of the challenges outlined above have necessitated some innovations and adaptations to the existing approach. These innovations, as well as other notable experiences, are outlined in this section.

Table 2: Stages of the Urban CLTS Process applied in the RRTS project

	Stage in CLTS	Key activities
1.	Pre-Triggering	<ul style="list-style-type: none"> <li>• GIS mapping of baseline toilet coverage by CHVs</li> <li>• Informing the community, landlords, local leaders and institutions</li> <li>• Landlord forum</li> <li>• Participatory Technology Design Process</li> </ul>
2.	Triggering	<ul style="list-style-type: none"> <li>• Mobilisation of the community for triggering</li> <li>• Triggering tools and process               <ul style="list-style-type: none"> <li>◦ Community mapping</li> <li>◦ Shit calculation</li> <li>◦ Calculation of medical expenses</li> <li>◦ Faecal-oral contamination – bread and soda</li> </ul> </li> </ul>

1 Please refer to the Handbook on Community-Led Total Sanitation by Kamal Kar with Robert Chambers (2008) published by IDS and Plan for further details.

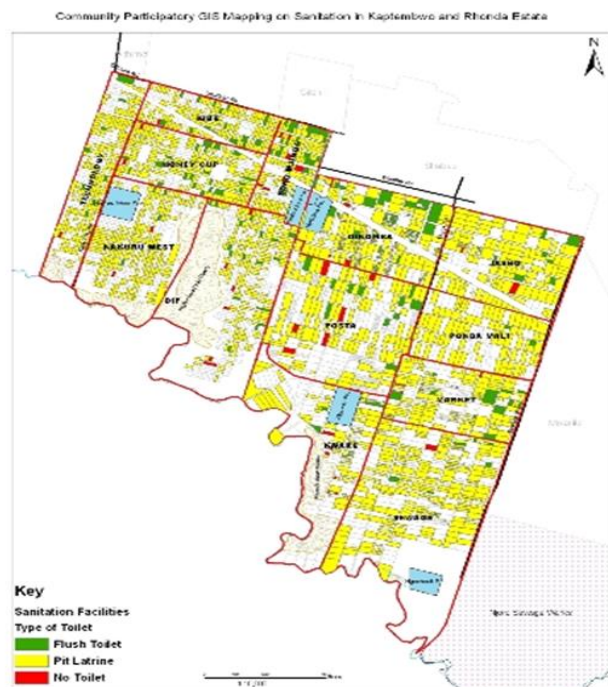
		<ul style="list-style-type: none"> <li>◦ Action plan</li> </ul>
3	Post-triggering follow up	<ul style="list-style-type: none"> <li>• Follow up by multiple local institutions (CHVs, PHOs, village elders, members of village committee, etc.)</li> <li>• School sanitation campaigns</li> <li>• Monitoring</li> <li>• Verification</li> </ul>
4	Post-ODF activities	<ul style="list-style-type: none"> <li>• Achieving a total sanitation environment</li> </ul>

## 4.1 Pre-triggering

### 4.1.1 GIS mapping of baseline toilet coverage

The use of GIS mapping is not unique in urban CLTS, it has been used for monitoring and for empowerment of stakeholders in other projects (including in Kibera and Mathare 10, Nairobi). However, in the case of this project it was found to be useful tool in the pre-triggering stage by making landlords aware of the dire sanitation situation in their communities.

During the pre-triggering phase, Community Health Volunteers visited all plots across all the villages to map latrine coverage and incidence of open defecation. This data was used to produce GIS maps which were then used during the landlord triggering process. Without pinpointing exactly whose plots had particularly poor sanitation, the maps showed the overall dominance of poor quality pit latrines, the inadequacy of coverage for the population and areas with particularly high levels of OD. This proved to be an effective mobilising tool as landlords could not deny the evidence, and at the same time were not singled out or made to feel stigmatised during the triggering process. This helped in securing their trust and cooperation in working jointly with them towards sustainable solutions.



A follow up survey may be carried out to produce post-triggering maps to show the changes. However, monitoring data now being collected using smartphones based on software provided by a company called SeeSaw ([www.greenseesaw.com](http://www.greenseesaw.com)) which may be more effective than another round of GIS mapping (see Section 4.3.2 for more detail).

### 4.1.2 Landlord Forums

A key innovation of an urban approach to CLTS has been the Landlord Forums which aim to address the unique challenge posed by the lack of land ownership by the majority of residents, and thus their inability to invest personally in improving their sanitation facilities. As land is owned by landlords it is their responsibility to ensure adequate provision.

Landlord Forums are essentially a form of landlord triggering. The Landlord Forum involves bringing together all landlords within a certain area of the settlement, irrespective of the standard or quality of their sanitation facilities. There would typically be around 50 landlords or more in such a meeting and it might last as long as 3 or 4 hours. Where a landlord is not available, a caretaker will



attend in their place. Some caretakers are empowered to act on the landlord's behalf, and others will pass the information to the landlord.

The Landlord Forum involves the following aspects:

- Landlords are shown maps of the sanitation status in the area which includes information such as the number of plots that do not have adequate sanitation facilities, the number of pits filled up, areas where waste water is found, areas of open defecation, etc.. This is done without pinpointing whose plot is what status.
- The triggering strategy includes discussions about the health implications of poor sanitation for the people living on their plots, for example, how sickness (from diarrhoea or other water borne diseases) reduces available income and makes rent payment more of a challenge.
- Landlords are given an explanation of the legal requirements for sanitation provision and the consequences of inadequate provision (legal action ).
- There is discussion around tenants' rights and the fact that landlords can be sued by tenants for inadequate provision of facilities.
- The landlords are guided by the facilitators regarding details of appropriate sanitation facilities and other issues pertaining to it such as those of technology, sludge management, drainage etc.
- Landlords raise their own challenges and the facilitators suggest how to overcome these themselves and advise them on the right authorities to approach to get approvals from and other things done, e.g. how to get water connections, deal with faecal sludge, improve waste water disposal, manage solid waste, etc.
- Options for accessing finance are shared, including details of the favourable loan facility that has been arranged with K-REP Bank (see Section 5.1).
- Development of an action plan is encouraged at this stage, so that there is collective commitment to change. This is built upon in follow up meetings.
- The role of PHOs in checking adherence to public health regulatory aspects are also explained to encourage the landlords to comply voluntarily. PHOs normally take lead role in the landlords forums with backstop support of other stakeholders



**Triggering of landlords/landladies conducted by the teams (Source: Practical Action photo bank)**

The Landlord Forum is mainly based on discussions. Traditional CLTS tools to trigger disgust and shame do not work in this context as many of the landlords do not actually live on the plot. The role of the facilitator is key in managing the discussion so as not to create resistance. The landlords often blame the tenants for poor sanitation, and are keen for them to be better informed by the project intervention. However, there is heavy emphasis on the landlords' responsibility for maintaining and upgrading the facilities so that tenants can keep them clean.

Several follow up meetings are then held with landlords to help them to implement the actions they committed to take. The project team facilitates meetings with other stakeholders for the landlords at these follow-up sessions, e.g. officials from NEMA (National Environment Management



Authority) raise awareness about environment rules and regulations and the reiterate the need for proper disposal of waste water. Sometimes representatives of the financial institution K-REP attend the meetings to further explain the process for accessing loans. Information is provided about Nakuru county government approved designs for toilets which were developed through a participatory design process. They are informed that these designs can be accessed at a low cost fee (Ksh. 1,250.00) from the planning department.

Since the start of the project, nine Landlord Forums have been held in Rhonda and six in Kaptembwo. In one meeting in Rhonda, the landlords decided to set up a registered organisation to deal with sanitation and other issues. This Landlords' Association is still in existence and is addressed in a later section.

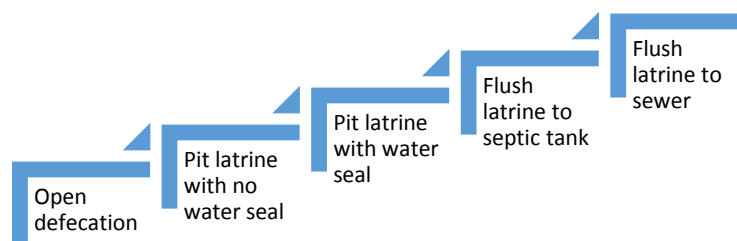
It should be noted here that there was concern amongst the project and donor staff that upgrading of sanitation facilities by landlords might lead to rent increases which could disadvantage tenants and cause some to be forced out of their residences. A study was carried out early in the project to assess the likelihood of this occurring. The study, involving interviews with landlords and tenants, found that landlords were likely to increase rents following upgrading, but in the majority of cases this would only be for new tenants, not for existing tenants. Furthermore, the study showed that most existing tenants were willing to pay reasonable increases, e.g. of Ksh 200-300 per month, as they were benefiting significantly from the improved facilities.

### 4.1.3 Participatory Technology Development

Practical Action has considerable experience with the process of Participatory Technology Development (PTD), i.e. involving stakeholders, particularly users, in assessing technology options and gradually upgrading technologies such that they remain appropriate to the context of the people who will be using them. PTD is particularly important for the development of appropriate, low cost sanitation facilities in urban areas as stepping onto the sanitation ladder from the lowest rung with a simple pit latrine is not appropriate given the socio-environmental, and the regulatory context. In rural areas householders can dig the most basic of pit latrines, and use a very rudimentary style of super-structure, and as long as it is fly proof, this is adequate for declaring ODF status. In urban areas, where there are tight regulations around public health and construction standards, the officially required standard of toilet design is far beyond the financial means of a low income plot holder.

Practical Action and Umande Trust worked collaboratively with tenants, landlords, their own qualified engineering staff, representatives of public health, and representatives of the planning department to develop toilet designs that achieved the following:

- met the needs of users (tenants)
- were affordable to landlords
- were technically sound
- met minimum public health standards
- would be acceptable to the planning department

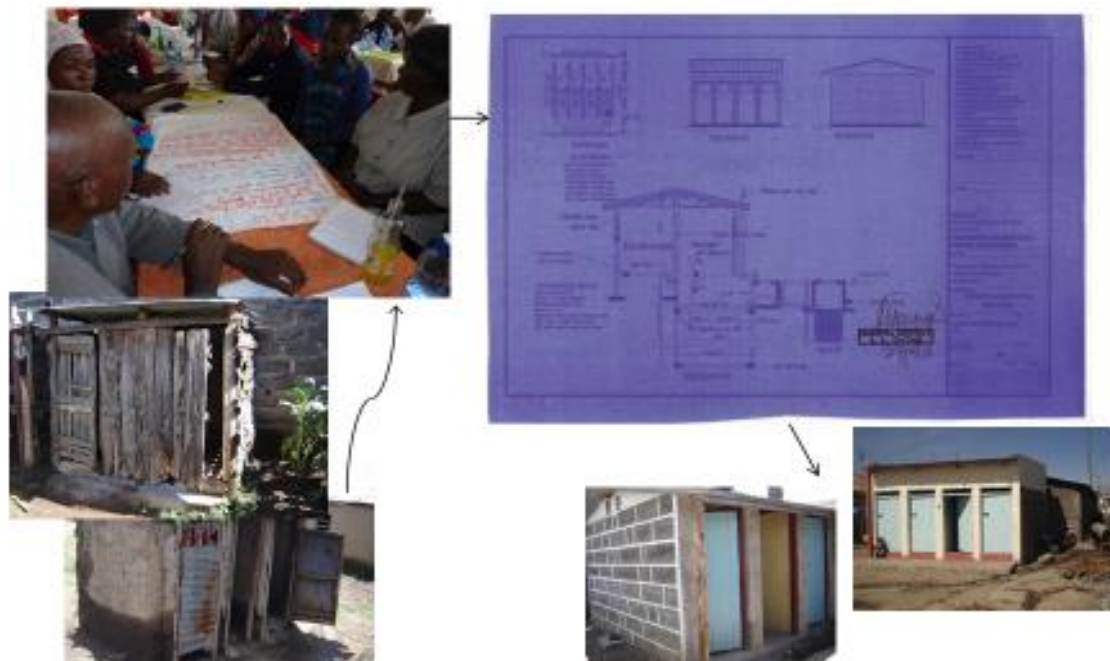


**The Sanitation Ladder**

This process required a lengthy process of negotiation with public health officials and planning department officials in order for them to understand that it was unrealistic to expect low income landlords to increase both the number of facilities and to greatly increase the standard of those facilities within a short space of time. It would be better to get them onto the sanitation ladder at a mid-point (e.g. at the very least lined pits, or VIPs) and hope that they move up to improved facilities (with a septic tank and pour flush) at a later date. The achievement of this compromise, through considerable discussion with regulators on the issue of permitting less costly technologies,

has been critical to addressing a systemic problem which might otherwise have thwarted the project goal.

In parallel, tenants put forward factors that were important to them in toilet design, such as the ideal size of hole (too large and children find it hard to use) and reduction in smell. Landlords proposed options that they would like and compared these with the prices for construction (a septic tank was desirable but not always affordable). Drawing from the various discussions and suggestions proposed, local engineers drew up designs and shared them back with landlords and tenants for further comments and feedback. Finally, once there was consensus between all parties, technical drawings were produced by professional engineers from the planning department for a range of approved options. Practical Action paid a single fee for their approval with the planning department. Now any landlord can access these drawings for a minimal transaction fee, greatly reducing the previous cost and time required for their planning application.



**The process of Participatory Technology Development as carried out within the project.(Source : Practical Action photo bank )**

## 4.2 Triggering

The triggering tools used under this project are not hugely different from those used in rural areas, but there are a few key differences which address some unique challenges of the urban context. A key difference between the rural and urban context is that the vast majority of urban residents do have existing sanitation facilities within the plot, but those facilities are usually inadequate and unsanitary. Open defecation in urban areas is not a matter of habit or preference as it often is in rural areas, but more likely it is a result of desperation, as facilities are unbearable to use.

Therefore, the purpose of the triggering is to encourage tenants take collective responsibility for their sanitation situation and to work together to improve it as far as they can, alongside the actions being taken by the landlord, and to permanently maintain cleanliness and usability. The triggering tools bring about the same feelings of disgust and shame as in a rural context, and these trigger the same drive to eliminate exposure to faecal matter. However, whereas the principal solution in rural areas is building and using household latrines, in urban areas the immediate actions for tenants are several, including ensuring that the pan and slab are always clean, making the pit fly-proof and refraining from leaving exposed baby poo in potties and nappies. Tenants usually know who within their plot is not behaving appropriately and the triggering process legitimises regulation of non-compliance.

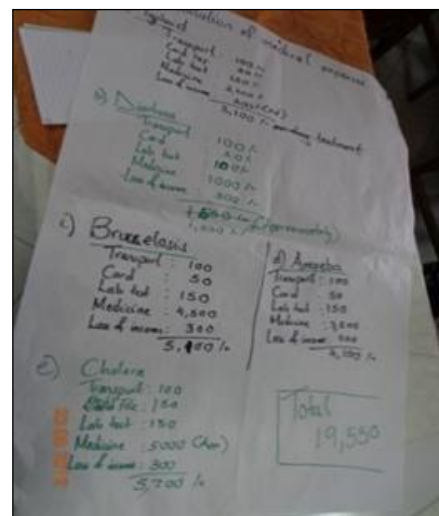
### 4.2.1 Mobilisation for triggering

The tenants' triggering is usually held within a week of the Landlords Forum. Therefore, the dates for both these exercises are set in advance so that community members can be informed and necessary resources can be mobilised. Ensuring high levels of community participation is a challenge in rural as well as urban areas. In low income urban settlements for householders to be engaged in various different forms of informal labour, often some distance from the home, and with fixed hours. Therefore, it is particularly challenging to identify a time a large proportion when most people will be available. Furthermore, lower levels of social cohesion and lack of a clearly visible central gathering space within urban settlements which might attract others to join any meeting, present further challenges.

The facilitating team found it most effective when triggering is done during the daytime, between 10am and 1pm, when many women are available in between finishing their morning tasks and the children coming from school for lunch. This only leaves a short window of opportunity, so the triggering process has to be fast and high impact, otherwise people simply leave. Some men are usually available during that time and this improves the impact. A further important and innovative strategy used to mobilise people on the day of a triggering is the use of theatre groups who are employed to perform entertaining "skits" which can quickly draw a crowd. The actors depict stories in a comical manner about people who fall sick through poor sanitation, or families who will not allow their children to marry into a household without a sanitary toilet.

### 4.2.2 Triggering tools and process

The team of facilitators for the triggering include mainly the public health officer(s), an RRTS project staff member and CHVs from the area, accompanied by local leaders such as village elders, neighbourhood or village committee members. Triggering tools tend to be interspersed between further skits in order to maintain participation in the process. The tools used, such as community mapping of OD sites, shit calculation and calculation of medical expenses, are principally the same as those used in rural CLTS referred to above. However, facilitators found that transect walk is not effective as provoking shame whilst the crowd is fairly dispersed tends to result in people leaving to go back home. Therefore, shit is brought from a nearby OD site by one of the facilitators, accompanied by a few community members, and this is used for the "soda and bread" exercise where people are offered clean soda or bread, and then offered again once it has been in contact with the shit. Once people are triggered, a brief action plan is made and a team is formed to ensure it is carried out.



**A triggering session conducted in the community and an action plan prepared by the community thereafter (Source: Practical Action photo bank)**

The triggering is carried block by block, i.e. within sub divisions of the village. The triggering need not take long, at least an hour as people quickly lose interest. Therefore several triggering sessions can be facilitated in a morning across neighbouring blocks. Around 200 people might attend a



triggering in a single day, representing around a quarter of the population in the blocks covered.

### 4.3 Post-triggering follow up

People usually disappear quickly after the triggering event, but the CHVs follow up regularly over the following days and weeks, both with tenants and landlords, to ensure action is being taken. As noted above, the desired outcome of triggering in urban areas is less about breaking a long held habit or preference for open defecation, but rather it is about motivating collective action to clean up and maintain existing facilities, alongside actions taken by the landlord (e.g. to empty overflowing pits, or construct new toilets). People who did not attend the triggering event tend to be easily convinced to participate, either as a result of discussions with fellow tenants, or because they are compelled to do so by the landlord. Tenants know that a failure to comply might result in an end to their tenancy.

The follow-up by CHVs includes plot by plot visits and during which they monitor and encourage process. Where progress is inadequate they call in the Public Health Officer, or other local community leaders, to intervene as they have more authority. During subsequent visits the CHV move on to discuss improvements in waste water and solid waste management, they demonstrate proper hand washing techniques and reiterate the importance of locating the hand washing stations outside the sanitation facility.

#### 4.3.1 Working through multiple local institutions for achieving ODF

One of the more challenging aspects of CLTS in both rural and urban contexts is ensuring post triggering follow up to ensure that commitments to behaviour change are carried through into action. A wide range of community institutions have been engaged to ensure continual follow up. Key to this process are the large team of Community Health Volunteers (CHVs) working under the Public Health Officer (PHO) in each sub-location. Practical Action and Umande Trust have worked collaboratively with the Public Health Department since the start of the project. PHOs have a support team in the form of CHVs who are selected by the community and sanctioned by the chief in a 'baraza' or community meeting. There are around 80 CHVs in the Rhonda sub location and 60 in Kaptwembo each taking responsibility for the allocated number of households (ranging from 100 to 400+) close to their home.



**Plot-level hygiene promotion conducted by CHVs (Source: Practical Action photo bank)**

Many CHVs were working in the area before the CLTS work started and are familiar with all the households under their care. They were involved in mapping the sanitation situation during the pre-triggering phase, and they also assist the PHO at triggering events in their area. Some CHVs became highly enthused by the CLTS process and took on a role of Natural Leader (see box below). Other Natural Leaders emerged from the community and work alongside the CHVs in post triggering follow up. Many of these CHV Natural Leaders have been given a full five day CLTS training (50 in Rhonda and 20 in Kaptwembo), whilst most other CHVs received shorter one-day familiarisation training on CLTS. This is alongside much other training they receive on different aspects of public health that they promote, i.e. hand washing, disease prevention, healthy living, nutrition, etc.

CHVs are key to post-triggering follow up as they are the “eyes on the ground”. Immediately following the triggering exercises both the PHO and the CHVs would visit that location to follow up

and make weekly visits for the first four weeks. From then on CHVs visit at least once per month to assess progress and they report back to the PHO. The CHVs maintain a household registration book and a daily activity book as part of a monitoring mechanism to record details of their visits and follow up on issues as well as to report back to the PHO on their activities. They observe both the behaviour change of tenants (are latrines and the whole plot being kept clean and tidy) as well as landlords (are they living up to their commitments for upgrading). In case of any reluctance to change, those householders or landlords are reported to the PHO for further action. In some cases they are also reported to the Village Committee, the Area Neighbourhood Committee or the Village Elders.



**CHVs, PHOs from Kaptembwo Sub Location**

All these three institutions take responsibility for sensitising householders and landlords about sanitation. They attend triggering events near to their homes and they continue to pass these messages through different events or through visiting different plots. Religious institutions (e.g. churches and mosques) have also joined in communicating the sanitation message. As a result there is a united movement towards increased cleanliness.

The project also strategically engages youth groups in the targeted areas to mobilise people from the community and schoolchildren for the triggering activity and carry out door to door sensitization and awareness campaigns at regular intervals. An ongoing initiative with a youth group in Rhonda involves the management of a bio-centre (public toilet, see section 5.5) which has been built with the support of Umande Trust and Practical Action.

It is interesting to note that Community Consultants (see box) have not tended to emerge in this particular urban CLTS experience, i.e. people who spontaneously took it upon themselves to spread CLTS beyond the two settlements covered by this project. The key factor is that CHVs already exist in the community playing the role of both Natural Leader and Community Consultant. Anyone who emerged from the triggering as a Natural Leader worked alongside existing CHVs or actually became a CHV receiving the relevant training and support from Public Health Officers.

#### **Natural Leaders and Community Consultants**

Natural Leaders and Community Consultants are key actors in a typical CLTS approach. Natural leaders tend to emerge during the triggering process as people who play a lead role in ensuring that their community becomes ODF. Some of these leaders go on to trigger CLTS in other communities, thus being termed Community Consultants. This is sometimes spontaneous and sometimes requires encouragement and support from project or government staff.

### **4.3.2 School Sanitation Campaigns**

It is widely accepted that CLTS should work through schools in both rural and urban contexts, and under this project the interventions in schools have been successful in both Kaptembwo and Rhonda. School children are 'triggered' using a combination of skits, explanations and demonstrations, illustrating the importance of improved hygiene. Project staff, PHOs and CHVs have visited all the government and private primary, secondary and nursery schools in the project areas on several occasions to convey messages, not only on sanitation within the school, but also good behaviour in the household, e.g. keeping the grass short to stop mosquitoes, boiling water, pouring waste water into the drain and disposing of garbage. Children are encouraged to share



these messages with their families and also amongst one another at school for continued reinforcement. During discussions with tenants and CHVs it was frequently mentioned that children reinforce sanitation messages, particularly about hand washing, within the household. The

*“We were shown how to wash our hands with running water and soap. We learned that we should wash our hands after using the toilet, after changing a nappy, before eating, before cooking and after eating. There were skits: one was about a mother who didn't wash her hands after changing the baby's nappy and then she ate food, and she got diarrhoea. We have improved toilets in our schools now and now there are no flies. We also learn about keeping the grass short to stop mosquitoes, boiling water, pouring waste water into the drain and disposing of garbage.”*  
*Latifa Mohammed, Kaptembwo Primary School, School children FGD, 22/11/14*

project has reached 20 schools, 9,629 school children and 147 teachers with sanitation campaigns.



**School-level campaigns for hygiene promotion and behaviour change (Source: Practical Action photo bank)**

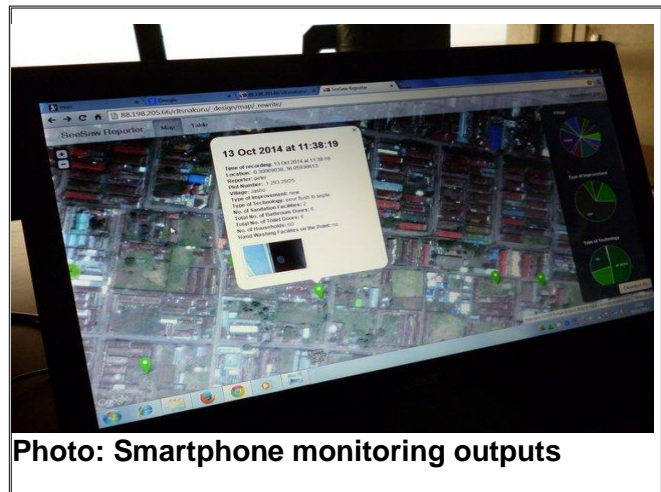
In terms of facilities, before the RRTS project all the school toilets in the two sub-locations were simple, unlined pits, which were both unsanitary and inadequate in number for the school population. Using the Constituency Development Fund all these toilets have been upgraded to lined pits with septic tanks, though the toilet to child ratio has still not been adequately reached. One school in Kaptembwo has benefited from funding under the Nakuru County Sanitation Programme, an EU partnership project (with Football for Water and NAWASSCO) and has a comprehensive toilet block and hand-washing facilities with piped running water. The NCSP aims to cover ten more schools by the end of 2015 and the RRTS project is advocating for three schools from the project areas to be included under this programme.

The RRTS project has further supported three government schools with the installation of rainwater harvesting systems, as a demonstration. Although schools have a water supply, it is often not operational due to past failure to pay bills. RWH from school roofs into 5m<sup>3</sup> storage containers can go some way towards alleviating this problem. The remaining challenge for government schools is that they have no funds of their own for sanitation. Even with the provision of toilet facilities, there is no finance for cleaning, maintenance, emptying of septic tanks, payment of water bills or even purchase of soap for hand-washing.

#### 4.3.3 Smart phone monitoring

The project is piloting a smart phone monitoring system, using an open source software from the specialised consultancy, SeeSaw, which staff of Practical Action and Umande Trust learned about at the 36<sup>th</sup> WEDC Conference in Kenya in 2013. The software is loaded onto phones which can

then be used to capture sanitation information, via both photos and data entry. Data collected includes number of residents in a plot, number of toilets, number of bathrooms, type of sanitation, provision of hand-washing, and a photo illustrating the type of sanitation. When the photo is taken the GPS location is logged. Once a number of entries have been collected, they can be submitted to the online records which automatically locate the plots on an aerial map. The data goes into a database and can be interpreted in a number of ways such as tables, distributional maps, and graphs or charts.



**Photo: Smartphone monitoring outputs**

Seven phones had been distributed at the time of writing so they are shared amongst the CHVs who capture data and return the phones to the office on a quarterly basis. The data is therefore being regularly updated and can show the speed of adoption of new technologies. The project is planning to print billboards of some of the monitoring results which would be posted in a public place as a mechanism to feed back to the community on a quarterly basis. This would also hopefully encourage community-led monitoring and motivate further action. This has not yet been done. Currently the CHVs pass verbal feedback to the community.

The project is working with the county government to assess whether the SeeSaw monitoring approach is sustainable for long term use by the Ministry of Health at the county level. Although it is proving to be useful, the cost of the software and phones is high. The Public Health Officers have their own monitoring system whereby CHVs report regularly to their PHO on all health and sanitation related issues, including clean toilet in use and hand-washing facilities, alongside issues such as garbage collection, water boiling, vaccinations, etc.

The PHOs also use smart phones to encourage behaviour change by taking photos of persistently poor facilities. This recording of unacceptable or unclean facilities usually provokes some action, particularly as PHOs can issue notices on poor sanitation and the landlord might then be taken to court. Whilst the issue very rarely goes that far, merely the threat is enough to stimulate some action by the landlord.

#### 4.3.4 Verification

Verification and certification of ODF status are important stages in the CLTS process, as recognising the efforts of communities towards improving their sanitation status can assist in maintaining the behaviour change, as well as motivating further community led action to improve livelihoods. The Ministry of Health, with UNICEF and other local agencies, has produced a certification guidance tool proposing a non-aggressive process of independent checks and surprise visits on villages that have claimed to be ODF for at least 3 months. It requires assessment against the five non-negotiable indicators which constitute the first stage of achieving total sanitation as defined by the Ministry of Health, Government of Kenya (see table 3 below) .

The assessment is carried out in a 3-step process. After an ODF claim has been made by the community, the Nakuru sub-county Health office will nominate a team comprising of officials from the Ministry of Health and other related ministries along with agencies working in the sanitation sector, who have received appropriate training, to verify the claim. The last step involves independent verification and certification by external specialists followed by an ODF celebration. Out of a total of 1,949 villages in Nakuru County, about 39% have claimed ODF (UNICEF, 2014) though only 16 villages (in the peri-urban and rural areas) have been ODF verified and celebrated. No urban villages in the county have been certified as ODF.

Although project staff state that there is no longer any open defecation in the project communities,

due to the challenge of achieving the criterion of a hand washing facility near the latrine (noted in Section 3.7), none of the 13 villages in the project location have yet been declared ODF. The project staff have as yet been unable to innovate any widespread and sustainable solution to this challenge. The best possibility to achieving universal hand washing would be promotion of dedicated hand washing stations within the household residence which may be several meters from the latrine. The Ministry of Health is considering drawing up guidelines specifically for urban areas which offers more relaxed options for compliance since the rural protocol cannot be applied in the urban context. Otherwise, there is no likelihood of achieving certification for these villages in the near future which may diminish their motivation to achieve other post-ODF health or hygiene objectives.

**Table 3: Definition of CLTS by Government of Kenya**

Stages in CLTS		Key indicators
1.	<b>Complying for verification</b>	<p><b>(Non-negotiable)</b></p> <ul style="list-style-type: none"> <li>• No exposed human excreta within the community/households (this means a complete absence of exposed faecal matter that can be accessed by house flies, whether in toilet facilities, chamber pots, surrounding bushes/shrubs or refuse dumps etc).</li> <li>• All households have access to a toilet (individual or shared) which should not facilitate faecal-oral transmission: <ul style="list-style-type: none"> <li>- The squat hole should be covered</li> <li>- The floor should be free of faeces and urine</li> </ul> </li> <li>• Super structure that provides privacy</li> <li>• All households have a hand washing facility near the latrine with soap/ash and water</li> <li>• Continued use of toilet by household owner</li> </ul>
2.	<b>Post ODF</b>	<ul style="list-style-type: none"> <li>• Schools/Health centres/ Public places with functionality/use of WASH facilities (drinking water, hand washing, toilet for girls)</li> <li>• A system of maintenance of WASH facilities in schools in place with involvement of CEC, teachers and children.</li> <li>• Safe storage/handling of drinking water and point of use water treatment (as needed) – (covered vessel with hand not dipped while taking out water)</li> </ul>
3	<b>A Total Sanitation environment</b>	<ul style="list-style-type: none"> <li>• A system developed at community level by community to stop OD in / around village (Formation of sanitation and hygiene committee to oversee community systems to stop OD are followed).</li> <li>• Village being visibly clean (no garbage stagnant water, debris)</li> <li>• Safe storage/handling of food (free from flies)</li> <li>• Personal hygiene</li> </ul>

Source: Ministry of Health, Government of Kenya, Jan 2014

#### 4.4 Post-ODF activities: a total sanitation environment

Following the lead of the National Ministry of Health's definition of CLTS (see Table 3 above), the RRTS project has taken a holistic approach to achieving total sanitation. This differs from the interpretation of total sanitation typically adopted under the CLTS approach which refers to the total elimination of open defecation. In the Government of Kenya definition, there are two further stages to achieve a total sanitation environment, covering CLTS in public places, and a wider set of environmental benchmarks. This project has aimed to address elements of the post ODF indicators (e.g. school hygiene, clean village, personal hygiene) in parallel, rather than waiting until a village has been declared ODF.

The project therefore not only looks at ensuring access to and systematic use of sanitary toilets and hand-washing facilities, but it also includes a focus on improving water supply, ensuring adequate solid waste management service delivery to households, and dealing with waste water management and proper drainage of surface runoff. The project was designed in this way in response to the urban context outlined above where OD / adequate containment of excreta is



entwined with a whole range of other issues. This has been achieved through a multi stakeholders approach by influencing other institutions around provision (see Section 6), alongside the CLTS triggering process. As the CLTS approach is delivered through Public Health Officers (PHOs) and Community Health Volunteers (CHVs) there is also ongoing follow up on the other issues that they have responsibility for, such as polio vaccination, safe food handling, water treatment, nutrition, healthy living, and disease prevention, amongst others.

## 5. Further experiences and innovations to support urban CLTS

The above section has detailed experiences and innovations relating more specifically to the implementation of the CLTS methodology (pre-triggering, triggering and post-triggering follow up) including those aiming to address the challenges of an urban context. This section details further actions and innovations within the project in order to support the CLTS process and movement towards achievement of a total sanitation environment, some which are relevant in both rural and urban areas and some which are more pertinent to the urban context.

### 5.1 Sanitation financing for upgrading

Access to finance for sanitation is not a uniquely urban challenge. However, as noted above, in rural areas households can build initial latrines and superstructures using cheap and locally available materials such as wood, clay, gunny sacks, palm leaves, etc., thus keeping cash investment low. Due to the minimum standards set by planners in the Nakuru urban area, the cost to landlords of extending and/or upgrading sanitation facilities for their tenants can present a serious challenge for these relatively low income business men and women. Many landlords struggle to find a lump sum for investment when there are other daily competing needs that take precedence over their sanitation requirements. Some landlords are able to self-finance the work (e.g. from rental income), or they borrow money from family members. However, in order to make upgrading accessible to all landlords, Practical Action and Umande Trust have worked to find a sustainable loan facility that can be accessed both during the project and ongoing into the future.

Project staff did a mapping of existing several commercial banks operating in the area before choosing K-REP, because they were already working with the community and offering other loan facilities aimed at the urban poor (e.g. for house building). Working together, the project staff and K-REP have come up with a loan facility specifically tailored for sanitation improvement with a favourable interest rate of 15% interest rate on reducing balance which is equivalent to 7.5% flat rate (rates are typically around 20%). The loans have been guaranteed during the project period by Practical Action but they are not subsidising it in any way, so the interest rate should not go up after the project has finished. Clients still have to comply with all the typical requirements of the bank for a loan given to individuals or through group system, which include:

- Opening a bank account with K-REP and showing an ability to save on a monthly basis for 3 months
- Having a deposit of Ksh20,000
- Presenting the title deeds to their land or working as a group (of minimum 5 members) to co-guarantee one another.
- Showing how the income from their room rental business will be able to pay back the loan within the required 2 year period.

Two categories of borrowing were available to clients: individual loans and group loans, the characteristics of each are detailed below.

Individual loan borrowing	Group loan borrowing
Borrowing as an individual requires the client to meet the following requirements:	Borrowing through a group requires each group member to meet the following requirements:

- Provision of security to the loan, this could be a vehicle with less than 8 years of usage, a title deed or a share certificate.
- Assessment of the ability of the client to pay back the loan, through analysis of previous account statements from another bank or M-pesa account, preferably a one year statement.

- Make a 20% deposit of the amount one wants to borrow
- The group must demonstrate a saving culture where they are required to make saving for two months. The savings can be done at on weekly basis with a minimum of Ksh 500 saved.
- Provide a previous bank statement if one wishes to borrow more than Ksh 100,000
- Each group member co-guarantees each other for loan access.

*“We used to take loans only for building houses. We could see that this would bring in money, but we couldn't see how investing in a toilet would bring in money. But now we realise that toilets are also a priority for loans. I have been educated and this has made a big difference to my understanding. I have invested savings and taken a loan of 120,000 Kenya Shillings to build 2 toilets and 2 bathrooms. It took around 5 months to arrange and it was quite easy. It is not hard to make the loan repayments even though I have not increased the rent. I feel very good now that we have the new facilities. Now I also want to improve the house.”*

Joseph Gitau, Landlord, Rhonda Sub-location. 20/11/14



Photo: Landlord Joseph Gitau outside his toilet.

To date 17 landlords have successfully taken loans with K-REP, 14 in Rhonda and 3 in Kaptembwo. The lower uptake in Kaptembwo is due to issues relating to title deeds in Kaptembwo. As a result of sub-division of plots, many landlords do not own the title deeds, and these are required for application for a loan. Only through grouping together with other landlords under the same title deed and applying together can they access a loan. Furthermore, a sense of mistrust was reported amongst the population in Kaptembwo, such that they do not want to show their title deeds for fear of losing their rights. The amount sanctioned by K-REP bank represents 4.82 million Kenya Shillings. This has been invested in 54 improved toilet units. This compares to 464 improved units constructed with landlords' own resources.





**A K-Rep representative is seen addressing the landlords and discussing details at community meetings. (Source: Practical Action Photo Bank)**

Uptake of the loan has not been as high as anticipated and some applicants have been frustrated and unable to get loans approved. A further 186 landlords have applied for a loan and are still awaiting approval: they have not been refused, but rather the bank is not yet satisfied that the necessary requirements have been met. Some of the landlords spoken to during this study felt that the minimum requirements were too high for them to fulfil, thereby making this facility inaccessible to them. One factor is that many of them are not in the habit of banking their money. Many others are not able to provide the necessary collateral to the bank. Challenges also include the fact that bank attendants are not always aware of this particular loan facility and therefore turn applicants away; and the lack of confidence of some applicants means they are easily put off in such cases. At the time of this study, the project team were about to make a visit to K-REP head office in Nairobi to try to iron out some of these difficulties.

This strategy of working with a commercial lender to develop and offer a sustainable long term loan product is commendable. In the past, favourable interest rates offered under project financing have disappeared at the end of the project. This loan facility is available to anyone in Nakuru so that PHOs working in other urban areas can also promote it to landlords or home owners. Only time will tell whether the challenges can be resolved and it proves to be successful, or not.

The project is also introducing another loans scheme, successfully piloted by Umande Trust in Nairobi, called SANDEF (Sanitation Development Fund). This is a revolving fund using money collected from the bio-centres and money from donors who want to contribute. In Nairobi there are several bio-centres and they have pooled their reserves to make a single fund to which borrowers can apply, if they meet certain conditions. In Nakuru, the SANDEF will be started once the bio-centre (see below) is operational. Ten percent of income will be put into the revolving fund and people will be able to borrow at 1% interest.

## 5.2 Dealing with on-site faecal waste

The challenge of dealing with faecal waste is unique to urban areas. In rural areas, once a latrine is full other one can be dug and if it is a simple superstructure that can be easily moved to another location. In the densely populated settlements of Rhonda and Kaptembwo space is not available for continually building latrines new latrines as the old ones fill up. Connection to sewerage system is not an option for over 95% of properties in these settlements, as they are too far from the sewer line and the topography would necessitate pumping of waste to reach the sewer.

The existing solutions for dealing with on-site sewerage when pit latrines become filled is to have them emptied by either formal sector mechanical exhausters or informal sector manual pit-emptiers. Formally recognised mechanical exhausters can be paid a fee to exhaust a latrine or septic tank. These are 5000 litre tankers, and they charge around KSh4000 - 5000 to empty a septic tank. These private companies have a permit and they pay a fee to NAWASSCO to empty

the contents at the sewerage treatment plant. However, these mechanical exhausters can only empty easily accessible septic tanks or lined pits. They will not empty unlined pits due to the possibility of them collapsing and blocking the pipes with soil, and they cannot easily negotiate bad areas of road, or latrines that are not near to the road.

Therefore a large proportion of the two settlements rely on informal sector, manual pit-emptiers. This role was highly unsanitary and risky, as little protective clothing was worn, and a very simple suction extractor was being used. As solid waste from households was also frequently thrown into the pit latrines, the extractors would easily become clogged. The faecal waste was put into barrels and taken away for disposal. As the role of pit-emptiers was not formally recognised, there was nowhere for them to legitimately empty the sewerage. Therefore, they often emptied it in open places, into uncovered pits, or into open man-holes, thus perpetuating the problem of exposed faecal matter.

It has required a long process and much effort for Practical Action and Umande Trust to find a solution to this problem. As the work of the pit-emptiers was illegal, initially it was not possible to work with them without also flouting the law. Therefore, there had to be an initial process of working with the relevant decision makers in the Ministry of Health, NEMA (environmental protection agency) and NAWASSCO in order for them to see that an appropriate technology solution would need to be found, and that this would require collaboration rather than litigation.

Once initial agreement was reached with the authorities, project staff began to seek a technology solution that could help the pit-emptiers to work in a more sanitary way. This involved a team from Practical Action, Umande Trust and the Ministry of Health visiting Kampala, Uganda, to learn about a simple, low-cost manual suction pump technology called the 'Gulper' which allows the faecal sludge to be extracted through a pipe with a protection cage that prevents it becoming blocked (though awareness raising by CHVs and PHOs has also reduced the disposal of solid waste in latrines). This technology was being tested and piloted at the time of visiting. The improved gulper transfers the content of the latrine pits into seal-able plastic barrels to be transported to a NAWASSCO facility. The new technology is cheap, costing around Ksh 30,000 and the project has a budget for two of these.



The project team also worked closely with the informal sector pit-emptiers to sensitise them about the dangers both to themselves, and to others, of disease resulting from the exposure to and manual handling of faecal matter, as well as the legal implications of unsafe dumping of faecal waste. Alongside health and safety awareness training, pit-emptiers have been given protective work clothing. The project team has helped them to form an association, currently with 37 in the group, and the gulpers will be managed collectively and operated by teams of four. Once the gulpers have been approved by MoH and NAWASSCO, the authorised pit

emptiers will be given official licences to operate and will be given access to sealed manholes so that they can safely empty the faecal waste into the sewer.

This process is also working in collaboration with other projects, including the 5 year Nakuru County Sanitation Programme addressing sanitation issues in low-income areas (funded by EU

with SNV, WSUP, VITENS Evides International and NAWASSCO) of which Umande Trust is also a partner; and a WASTE Netherlands project, funded by DGIS. The idea is to institutionalise this technology with other urban projects being implemented in the project area. If the technology is a success, the plan is to also bring artisans from Water for People in Kampala to train people in Kenya in the production and maintenance of these gulpers for further scaling up and sustainability.

Further advocacy efforts have influenced the inclusion of the gulper technology among other acceptable a low-cost sanitation and sludge management technological options within the newly developed Nakuru County Public Health Bill 2014. The Bill is now awaiting approval so that it can be tabled in the County Assembly for discussions and approval by Members of County Assembly.

### 5.3 Addressing solid waste and black water (liquid waste)

The project has taken action to address problems of solid waste and black water management through awareness raising by the CHVs and PHOs after the initial triggering exercise. To address issues of solid waste management, landlords have been encouraged to ensure that waste is collected from their properties. This requires payment which comes from their rental income, and is a collective benefit for all residents. It is also of benefit for the landlord as otherwise waste tends to be disposed of in the latrine thus causing blockage problems. Tenants are informed of weekly waste collection days and waste is gathered and put out for collection.

Black water management has been improved through the promotion of low cost “soak-aways” within plots. This consists of a deep hole filled with loose rock and stone. This means that water can drain away gradually through the rocks without standing exposed in a pool where mosquitoes can breed and other disease may be spread. This technology has been adopted by landlords as it is effective in eradicating stagnant water.

### 5.4 Support to artisans

Practical Action and Umande Trust have also extended support to local “fundis” or building artisans. Around 25 artisans were trained in how to build the new toilet designs that had emerged from the participatory technology development process. The artisans had previously mainly been building houses as the demand for toilets was not great. But since the CLTS facilitation process the demand for their skilled labour to build septic tanks, lined pits, soak pits and quality superstructures increased significantly (see case study below). In addition, the artisans learned about large scale composting toilets of which one has been installed at a Maternity Unit in Rhonda.

Some of the first artisans to be trained also had the opportunity to learn from visitors from India and participate in a learning visit to Busia. Practical Action and Umande Trust has also supported the formation of an artisans association for the ongoing recruitment and training of these specialised artisans.



**James Okoyo and Peter Mwangi, Artisans**



*“We work together as a team. We were mainly building houses before. We also built toilets, but the these were either just a pit with a slab, or the only other option was much higher standard with a very large septic tank. Now we offer several different styles and sizes of septic tank that can suit what the landlord can afford.*

*Now so many people have adapted to this new style, everybody wants to do it, because it is working well. Some people still have unlined pits but we advise them to line the pit, otherwise you have to dig another pit and you will soon run out of space. We are good at spreading the message – its our business – and it also benefits other people.*

*Before there was not so much work: we worked around 50% of the time. Now there are many jobs and we have work at least 75% of the time. We used to get harassed when the landlord didn't have the correct planning permission: if the owner was not around when someone came to inspect then you could get arrested. Now its easy for the landlord to get the correct plans so its not a problem any more.*

*We have just started that process to come together as an association – it must be about 7 months old. We meet twice a month. We help one another and share ideas. We try to mobilise new artisans to bring them on board.”*

James Okoyo and Peter Mwangi,Artisans, Interview 21/11/14

## 5.5 Bio centre

A bio-centre is a public toilet which generates bio-gas from the faecal waste captured. It is located in the central market place in Rhonda as a strategy to address the practice of open defecation in public places by stall holders, shoppers and street children who are forced to do so due to lack of facilities. This is essential as it contributes towards the achievement of an ODF environment and total sanitation in the project area. Providing toilets, and showers not only ensures hygienic behaviour common to both public and private spaces, but it also offers a demonstration of a high quality facility which landlords can aim to replicate.

The concept of the bio-centre has been developed and promoted by Umande Trust over several years and they have constructed over 50 in Nairobi and around 15 in Kisumu. The bio-centres are managed by community groups who earn income from charging for access to the toilets and use the finances to pay wages and maintain the facility. The biogas is usually fed into a kitchen within the facility which can be hired out for cooking. Generally, 10% of takings are pooled into a fund which can be used for providing loans to members of the community.

The bio-centre built under the RRTS project has only recently been completed and was not yet officially opened at the time of this study. The centre will be managed by a youth organisation. Alongside the public toilets it also has a meeting room and a separate kitchen facility which can be hired out to groups or individuals for preparing food to sell or for family parties. The project has signed a MoU with the youth organisation, which will now take-over from the project the complete responsibility for running and managing the bio-centre.



## 5.6 Use of Twitter for mobilisation

A further innovation of using the social media tool “Twitter” was seen in a neighbouring sub-location called Lalwet. This was outside the project area, but an interesting point of learning for the project and beyond. The Chief of that sub-location uses twitter to inform and mobilise people around various issues, such as community meetings. As this was a useful way of staying informed on local

issues, many residents now follow the chief on Twitter: he has more than 5,000 followers. The local PHO took advantage of this tool to share public health messages, including those around sanitation. Whatever the PHO tweets, the chief re-tweets, thus reaching a large proportion of the population.

## 6. Successes in multi-stakeholder engagement for urban CLTS

The project engages with a range of key stakeholders to achieve its goals. This is necessary because in an urban area many more stakeholders have a responsibility for, and an influence on, different aspects of the lives of the inhabitants of informal settlements, including aspects relating to access to WASH services. Building good relationships with multiple actors and facilitating intra-institutional linkages for coordination and collaboration has been key to addressing some of the major challenges of the urban context in this project and ensuring an enabling environment for successful CLTS and wider sanitation impacts.

This section outlines the nature of institutional engagement with some of the key stakeholders. The diagram below illustrates the different categories of formal and informal actors and institutions that are relevant to this project. It shows primary stakeholders as the direct beneficiaries and target communities for the project intervention and those involved in directly implementing CLTS and providing related services; secondary stakeholders as those significant in creating an enabling environment for facilitating the CLTS process; and tertiary stakeholders as those that benefit indirectly from the project but who influence the project in important ways.

Some of these stakeholders have already been described in the earlier sections. The remaining institutions are addressed in this section. A stakeholder engagement analysis in Annex 1 further presents an overall picture of each stakeholders' contributions to the project and describes the engagement strategy employed by the project in order to achieve the same. It is notable that the key institutions were receptive to the ideas proposed in the project and that has made it possible to make good progress. Working in a less supportive institutional environment might have resulted in very different outcomes.

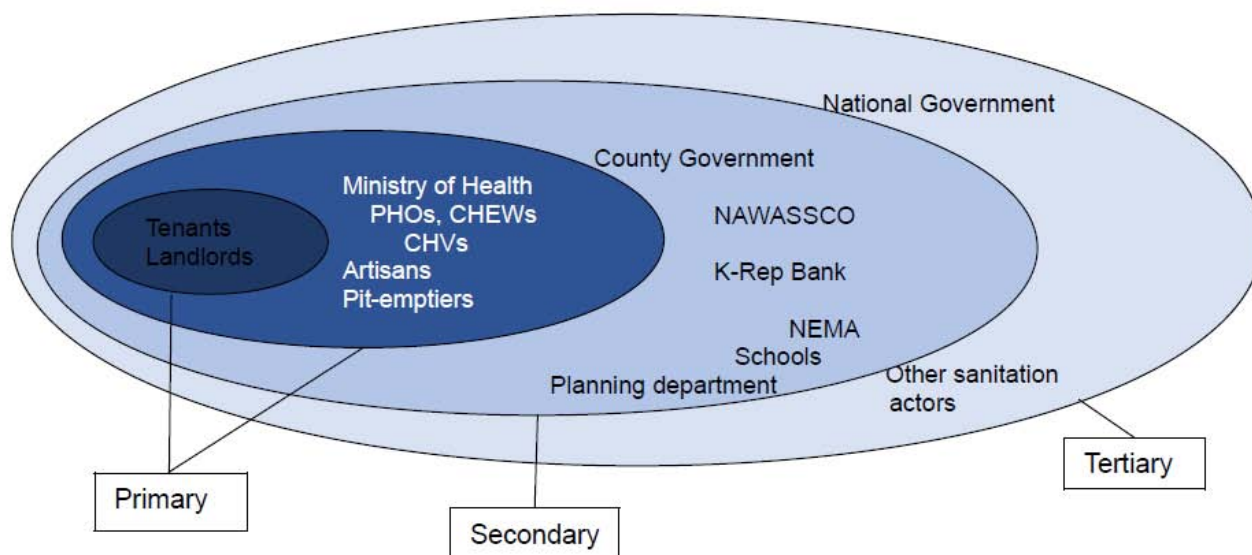


Figure 1. Primary, secondary and tertiary project stakeholders

### 6.1 Ministry of Health

Initially, in the project proposal, the key institutional partner for this project was to be the Municipal Council of Nakuru (MCN). During the first year of the project (2012) efforts were made to build links



with MCN, but they were not particularly receptive. In 2013, the new devolved government structure came into force, resulting in the abolishment of the MCN, and the devolution of central ministries to the County level. National budgets were also devolved to the County Executive Council and priorities for investment were distributed at that level.

As a result, Practical Action and Umande Trust are now partnering with the devolved Ministry of Health, and specifically with the Department of Public Health and Sanitation. This has led to a much more fruitful partnership. At the national level there is strong support for CLTS and there has been considerable investment in training of staff and setting of sanitation targets. This commitment to CLTS is also felt at the county level, where there is a dedicated CLTS focal point Officer Margaret Kuibita, and a highly supportive County Public Health Officer, Samwel W. Kingori. The political goodwill shown by the Ministry has been a major contributory factor in the success of this project.

The partnership has involved collaborative working on most of the areas covered by the project, including:

- Training staff in CLTS
- Facilitating CLTS triggering together with PHOs and CHVs
- Negotiating acceptable standards for toilets
- Working on the manual gulper technology and recognition of pit-emptiers
- Monitoring of upgrading of sanitation facilities in the two settlements with PHOs and CHVs

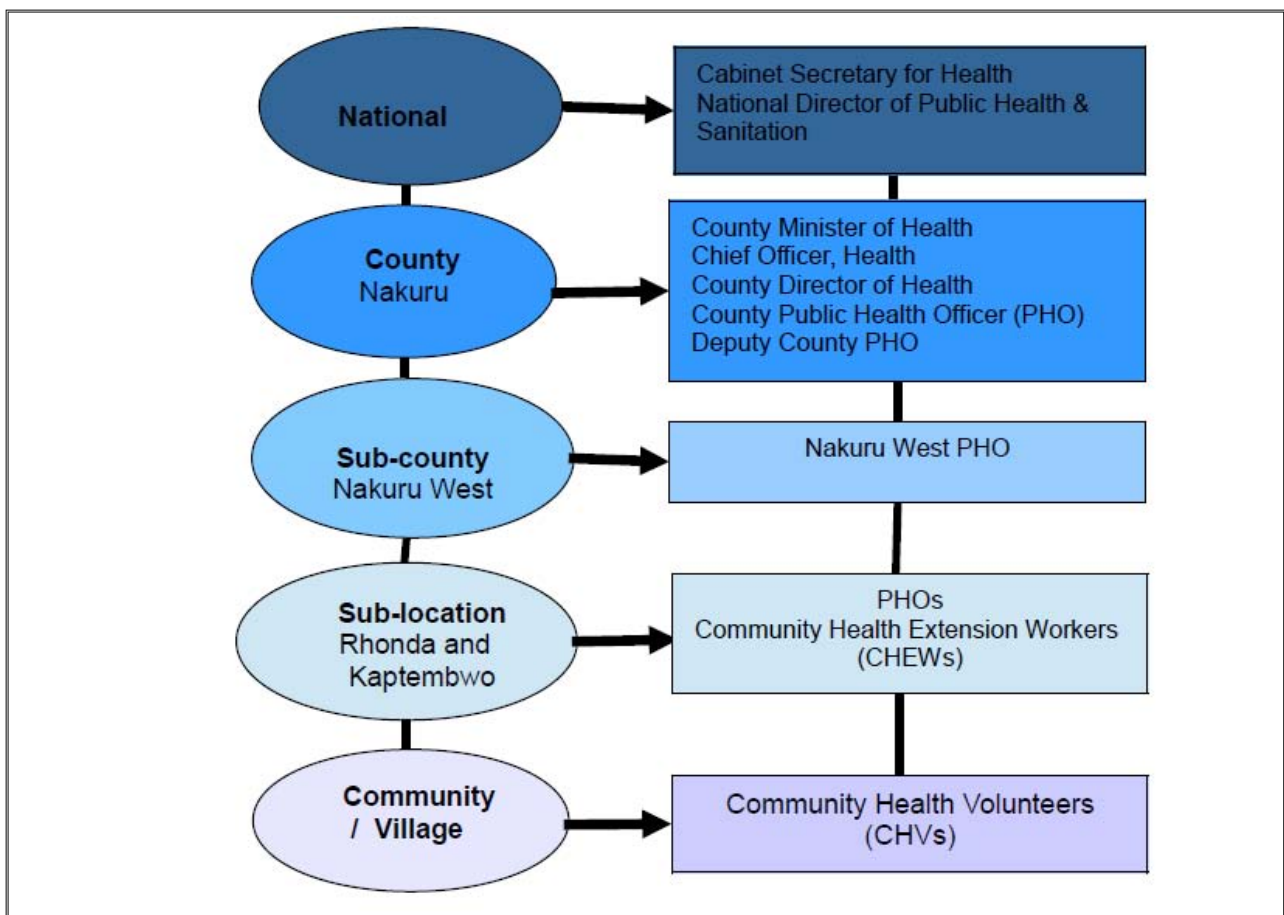


Figure 2: Devolved administrative and governance structure of the Ministry of Health since 2013

In terms of training, the RRTS project organised the first CLTS training in Nakuru County in May 2012, training project staff, Public Health Officers working in the project locations, and some staff from the Municipal Council, NEMA and NAWASSCO. This training was facilitated by staff from Plan

Kenya. In June 2013, the project organised a further training for 15 PHOs working within the sub-counties of Nakuru West and Nakuru East, comprising the whole urban area, not just the sub-locations where the project is active. Since then a further 165 Public Health Officers from across the county have been trained in CLTS with funding from the World Bank, another 55 have been trained by FHI360 and the County government has supported the training of the remaining 42 officers. PHOs involved in the project confirmed that the CLTS approach had aided their ability to address poor sanitation in the communities where they are working. Furthermore, a PHO from a non-project sub location, but trained under the project, also spoke favourably of the CLTS approach and was making good progress towards achieving ODF status.

*“Before CLTS we had to rely on enforcement to get people to build sanitary latrines. Although we used dialogue, landlords would prioritise building rooms leaving no space for latrines. CLTS made life much easier. People change willingly, rather than being forced. The CLTS approach that we use not only triggers behaviour change, but also informs people about their rights and responsibilities. Now they come to us to follow up, say when the pit is getting full, rather than us going to them. They have our phone contact or they come and find us. With enforcement, if they don't comply you end up in court and that can waste a lot of time (around 2 months), but now people always comply before it has to go to court.”*

Interview: Winnie Mouko (PHO Rhonda) and Solomon Ndungu (PHO Kaptembwo), 20/11/14

Practical Action also contributes to health and sanitation policy discussions through contributions at the National and County level. The NGO is represented on the National Inter-agency Coordination Committee (ICC) and is convener of the Urban Sanitation TWG. At the county level, Practical Action participates in various Thematic Working Groups (TWGs) of the County ICC and is the convener of the Sanitation Marketing and Promotion TWG and actively participates in the School WASH TWG. Though the County ICC was established in 2012, some of these groups are not yet fully active, but are currently developing their Terms of Reference.

#### **The National and County Inter-agency Coordinating Committee Technical Working Groups**

1. Sanitation and Hygiene promotion technical working group (CLTS is located within this)
2. Sanitation marketing and promotion technical working group
3. House Hold water treatment and safe storage technical working group
4. School water, sanitation and Hygiene technical working group
5. Health care waste and general waste management technical working group
6. Policy research and resource mobilization technical working group
7. Urban sanitation technical working group

## **6.2 NAWASSCO**

NAWASSCO is the Nakuru Water and Sanitation Supply Company. It is a corporate entity, fully owned by the Nakuru Country Government. They face many challenges in supplying water and sanitation to low income settlements, as demand for water is far higher than supply and the infrastructure for both water and sanitation is inadequate.

Practical Action have been working closely with NAWASSCO to seek solutions to the water and sanitation challenges in the project sub-locations. In terms of water, 40% of residents have access to a shared stand pipe within their plot, 43% buy water at kiosks, at boreholes or from street vendors, and just 4% have water piped to their house. It is notable that 13% use rainwater harvesting during the rainy season. For those with a water connection within their plot, the cost of water is included in their rent. However, for those purchasing outside the plot, the cost of water can vary from 2 shillings (42%) up to 6 shillings or more for a 20 litre jerry can. Supply to the plots in project areas is rationed and is available between one and three days per week for a limited number of hours in the day (again variable).

The role of the project has been to lobby to increase the frequency and duration of access so that people do not spend as much time and money on accessing this vital resource. They have also been informing landlords of the availability of pre-paid meters under a pilot project funded by USAID and delivered through NAWASSCO, to try to overcome problems of non-payment of bills by landlords. In the case of pre-paid meters, the landlord pays just 50% of initial installation, and tenants pay just KSh1.20 per 20 litres through pre-purchasing tokens. Water supply is continuous for these standpipes.

In terms of sewerage access, only around 3% of plots in the two sub-locations are connected to the sewerage system. Due to the sloping topography of the settlements, NAWASSCO is unable to connect them to the existing sewerage treatment plant without a pumping system and therefore will not connect the vast majority these plots until a new treatment plant is built. Some groups of plot owners living near to the main sewer pipe were assisted in trying to connect to that due to their proximity, but it was not possible as the costs were too high.

NAWASSCO is keen to improve sewerage provision to low income settlements but do not have the necessary funds to invest in such a major infrastructure project. Therefore, appropriate on site sludge management technology options have to be used to address these challenge. NAWASSCO have collaborated with the project team in finding solutions for pit and septic tank emptying and for acceptance of the sludge at their treatment plant (see above section on Pit Emptiers). Current advocacy efforts of the project team include a proposal to NAWASSCO to construct manholes at strategic locations that can be connected to the sewers, so that the collected sludge can be emptied into these manholes.

### 6.3 Other parts of the County Government, NEMA and other agencies

As noted throughout this document, Practical Action and Umande Trust have had to liaise and negotiate with other institutions to achieve progress towards the project goals. They have worked particularly with the Ministry of Planning around the relaxation of regulations for latrine design, and production of acceptable design drawings that can be used by landlords on application for planning permission. These discussions are ongoing, as although standards are easier to attain, project staff feel that regulations regarding the super-structure design are still quite high. Costs of construction could be reduced by permitting simpler above-ground structures without compromising health and safety.

The project staff liaised with the National Environment Agency, NEMA, particularly around acceptance of the role of pit-emptiers. Initially, NEMA staff were concerned with the disposal of waste by these informal sector workers. However, by involving these staff in educating the pit-emptiers they could better understand the challenges they faced, and became more open to finding a mutually agreeable solution to the problem.

Practical Action and Umande Trust liaise with other NGOs and international agencies working on sanitation in Nakuru around lesson learning, advocacy and influencing. Much of this interaction takes place through the ICC sub groups. Notably, for World Toilet Day on Nov 28<sup>th</sup> 2014, Practical Action and Umande Trust joined forces with other local agencies to organise an event to influence the Nakuru County Governor, Mr. Kinuthia Mbugua, inviting him to open two new school sanitation facilities, and crowning him “Sanitation Champion” at a public event. The Governor has oversight of budget allocations to health, including water and sanitation, and this event impressed on the governor the financial losses to the county as a result of poor sanitation (access time, premature death, health care costs and productivity), which have been calculated by WSP at 978 million Kenya Shillings per year (WSP 2014).

### 6.4 Partnership with Umande Trust

The RRTS project is delivered through a partnership between Practical Action Eastern Africa and the Kenyan NGO Umande Trust. Both the organisations bring to the project their individual as well as common strengths and expertise in the areas of community organisation and management, access to water and sanitation and technology development. The project builds on a long history of

Practical Action's work in Nakuru dating back for around 20 years. Earlier interventions of the organisation in Nakuru have involved engagement with landlords to invest in sanitation for their tenants, and work with local financial institutions to design loan packages to help achieve this. Practical Action has also had a long relationship with the Municipality Council of Nakuru town (which was earlier responsible for urban sanitation before the devolution took place in 2012) and have played a leading role in the inter-agency coordinating committee at the national level (and now continue to do so even within the TWGs at the County level), coordinating and building partnerships with key stakeholders on issues of local urban environment, as well as offering technical expertise on low-cost sanitation designs. Practical Action brings this vast experience of project implementation into the RRTS project.

Umande Trust, on the other hand, have been operating in Kenya since 2006, starting out in Kibera Slum, Nairobi, Whilst Umande Trust had not worked in Nakuru, they bring with them their extensive experience from their work on issues of urban planning, community mobilisation and capacity building and affordable access to water and sanitation in the Kibera slums in Nairobi and in Kisumu (see box below). The project has benefited from the organisation's pioneering work in bio-centre technology, provision of community-based sanitation development funds and use of low-cost sludge management technology.

This project was designed to ensure strong partnership working and hand-over of skills and responsibility to a local NGO for long term sustainability. Umande Trust and Practical Action have viewed themselves as equal partners in the project, exchanging technical expertise as well as networks and contacts. Umande Trust brought considerable experience of community facilitation, the bio-centre concept, revolving funds, and the gulper technology. Practical Action had good contacts and knowledge of the communities in Nakuru and experience of Participatory Technology Development. As a larger and longer established partner, Practical Action also helped Umande Trust to improve their financial systems, monitoring and evaluation, and documentation and reporting.

Initially Umande Trust were hosted at the Practical Action office until early 2013 when they found their own premises. Umande Trust have more recently partnered with other organisations in Nakuru to deliver projects and are therefore likely to be a long term resource to the town. Furthermore, they have strengthened links between the national offices of both organisations through this project.

#### **Umande Trust Organisational Focus**

Umande Trust works in Nairobi, Kisumu, and Nakuru. Their focus covers four key areas:

- a) bio-sanitation and water – demonstrating public sanitation with biogas production (bio-centres) that can reduce the demand for charcoal; and community managed water kiosks including solar powered kiosks.
- b) business development - helping communities to maximise profits from bio-centres through SANDEF (Sanitation Development Fund), revolving funds.
- c) urban planning – building on the above to promote integrated neighbourhood environmental planning, addressing issues of energy, security lighting, garbage collection, drainage, access roads, hygiene promotion, water, fundraising to the Constituency Development Fund.
- d) advocacy - helping communities to understand institutional, policy and regulatory frameworks by building their capacities and knowledge so that they participate in different forums and resolve their own grievances.

## **7. Remaining Challenges and Lessons going forward**

Whilst the RRTS project has demonstrated considerable success in achieving its outcomes, challenges still remain which offer lessons for future practice. This section reflects on some of these challenges and proposes ideas for addressing them.



## 7.1 Going to scale

A key challenge moving forward for the urban town of Nakuru, the county of Nakuru and the country as a whole, is taking urban CLTS to scale. The RRTS project has greatly assisted in demonstrating how CLTS can work in urban low income settlements, and Rhonda and Kaptebwo are effectively ODF, even though not declared and certified as such. There are seven further urban and peri-urban sub-locations in Nakuru town. Considerable progress has already been made in Lalwet peri-urban sub-location. Practical Action is working on a project (solid waste management) in another urban sub-location, Mwariki, and there is steady progress there.

At the county level, all PHOs have been trained in CLTS and have targets for triggering and achieving ODF status in the communities they are responsible for, whether urban or rural. Chief County Public Health Officer, Samwel W. Kingori, shared his vision of working more collaboratively with NGOs and other international agencies, working towards a common goal with a shared strategy, including sharing office premises, vehicles and the like, in order to address resource challenges that they are facing in public health.

*“You see the disease burden and you have to find a way to do something – with your own resources and pooling available resources from other partners”* Samuel Kingori, County Public Health Officer, 25/11/14

At the national level there is also considerable support for scaling up of CLTS. However, the challenge is that much of that support still focuses on the rural context. Guidance, training and resources tailored to supporting CLTS in urban areas are lacking. Furthermore, urban contexts can vary greatly, the sprawling slums of Nairobi, where populations are more transient and there is no legal ownership of land, offer very different challenges. In order to progress with scaling up of CLTS in urban areas at a national level it will be important to draw on the lessons and experiences from RRTS, as well as other examples of urban CLTS, to develop specific resources and trainings and thus provide a strong incentive for appropriate action.

## 7.2 Existence of subsidy programmes

A perennial challenge to CLTS, which has also been noted particularly in Kaptebwo sub-location, and may influence other urban and rural areas, is the existence of subsidy-based sanitation programmes in other parts of Nakuru town. Partial re-payments of costs invested and incentives in the form of hardware are being offered to individuals under two different programmes in Nakuru town: the Water Services Trust Fund and the Nakuru County Sanitation Programme. During discussions in Kaptebwo sub-location some landlords mentioned that they were not yet upgrading their facilities as they were waiting for a subsidy programme to reach them in order to save costs. There is no guarantee that either of these two programmes will be extended to cover Kaptebwo.

Any subsidy programme to individuals is detrimental to successful implementation of CLTS. Time and again, in both rural and urban areas, it has been observed that when a subsidy programme exists near to where CLTS is being used then people will not invest their own time and resources in dealing with the sanitation situation immediately, but will simply wait until help arrives from outside. This clearly delays the benefits of eliminating open defecation, and in cases where the subsidy programme does not reach that particular community, it eliminates the benefits altogether, as by the time they realise no help is forthcoming, the motivation resulting from the triggering has faded.

The CLTS approach relies on a collective process to bring about change, in which rich and poor work together for equal benefit (both have the same chances of getting ill, whether the OD is by a rich or a poor person). This process is effective in bringing communities together to work for a common issue. Better off people have been seen to build latrines for the poor, weak or elderly in order that they can all benefit from the clean environment. Many subsidy programmes offer help only to a section of the population (e.g. the poorest), and this erodes the benefits of community wide collective action.

Development agencies or government will never be able to provide sanitation hardware for an entire population, so offering it in certain areas, leading to delayed action in other areas, is not an effective approach. Furthermore, offering subsidy fosters an attitude of dependency which can have implications well beyond sanitation as communities then wait for further hand-outs, e.g. for rainwater harvesting, electric lighting and other provisions.

Subsidy programmes are more subtle than they were in the past, offering “incentives” or “motivations” in the form of partial payments or provision of materials for construction of toilets. However, whatever the format, such hand-outs to individuals are not sustainable. Provision of sanitation facilities to public places, such as schools, market places, hospitals, etc., can be effective. However, such provision should be based on the needs of the community or institution concerned, rather than the perceptions of the donor. Donors often provide pedestal toilets in schools rather than a squatting pan, although they are unfamiliar to students, more costly to keep clean and therefore less sanitary, and more challenging to maintain.

Public Health Ministries, both at County and National levels, need to decide whether they will take a tough line on this issue and discourage, or even ban, the use of individual subsidy in project implemented by outside agencies. Chief Public Health Officer, Samuel Kingori, noted that this was not possible for programmes that were currently in progress, but should be considered for future programmes. Donor funds can legitimately be invested into public facilities, e.g. in schools, hospitals and market places which will greatly assist in achieving the end goal of an ODF Kenya.

### 7.3 Criteria for verification in urban area

As noted above, criteria for verification of ODF status require among other factors that, hand washing facility to be in place right outside the sanitation facility. Various factors such as theft of water containers and soap, as well as the cost of collective water provision are a barrier to achieving this. As a result of the CLTS triggering, most residents are aware of the need to wash hands and claim that they are washing them using a bowl within their personal rooms (which are usually just a few meters away from the toilets). However, this is not ideal, as there can be faecal transmission and sources of contamination between the toilet and the home, and there is a higher likelihood of forgetting.



**Handwashing facility designed by Practical Action**

PHOs and project staff are struggling to find a suitable solution to this challenge, e.g. design of a fixed (e.g. concrete) hand-washing station with rainwater harvesting outside the toilets, or a relaxation of the verification criteria to permit clear evidence of designated hand-washing facilities in all homes. A simple technology for school and household hand-washing is being promoted by the project (see photo) but with limited uptake as yet.

## 8. Conclusion and recommendations

The RRTS project provides an important example of successful implementation of CLTS in an urban area. Whilst there are huge differences between low-income settlements like Rhonda and Kaptembwo and large urban slums like Kibera in Nairobi, some important lessons and experiences clearly emerge from this work which can be transferred to other similar urban settings. In particular, the project has devised a CLTS facilitation methodology that works where there are tenants and landlords; it has tackled the issue of financing for sanitation facilities; it has sought an acceptable solution to informal sector pit emptying; it has worked collaboratively to develop acceptable lower cost toilet designs, making these easily available for landlords and training artisans in construction; and it has experimented with different technologies (GIS, smart phones, twitter) to assist with communication and monitoring.

The RRTS project has worked closely with and acted as a link between government ministries, third sector institutions, private actors and the community. It built capacities through training, sensitization and knowledge strengthening of stakeholders as required, particularly in the areas of community engagement and mobilisation; sanitation and hygiene promotion; legal rules and regulations; technological development and access to finance/credit. It also played the role of a catalyst in building and strengthening community structures and networks; and opening up channels of communication and linkages with different actors to facilitate the community's access to materials and services. It sought to remove barriers to achievement of total sanitation in the project areas by strategically engaging key actors and institutions for policy advocacy, intra-institutional collaborations and multi-stakeholder partnerships, thus creating an enabling environment conducive for CLTS process implementation and scaling up. The collaborative attitude of the Ministry of Health and the genuine partnership approach fostered throughout the project has meant that the impacts are sustainable and there are good prospects for the project to be scaled up by either the Ministry of Health, or other relevant ministries or agencies.

Table 4 highlights the key areas of difference between rural and urban that have been tackled in this project, with relevant implications for future sanitation development practice. Although they are specific to the urban context encountered in this project, and are not necessarily universal characteristics of urban experience, any agency proposing to use CLTS in an urban area could draw important lessons from this comparison table.

**Table 4: Key differences between rural and urban CLTS in this project**

	Rural	Urban
1.	Low toilet coverage and strong preference for or habit of OD	High toilet coverage but they are highly unsanitary. OD is out of necessity rather than preference or habit.
2.	Majority of households own land on which they can build their toilets	Most households are tenants and have to rely on landlords to provide sanitary toilets. However, it is tenants' role to maintain them well.
3.	A single triggering aims to reach whole population	Two types of triggering exercises are needed: one for landlords and one for tenants. For tenant triggering, multiple triggering sessions at the same time in one village enhances impact. One triggering session is not enough due to big populations involved in urban areas.
4.	The triggering methodology is principally based on eliciting feelings of shame and disgust to motivate behaviour change.	The triggering methodology with landlords is based more around obligation and threat of legislation. Eliciting disgust is still a motivating factor in triggering with tenants.
5.	The key challenge is triggering behaviour change to break the long held habit of open defecation.	The key challenge is ensuring adequate provision and maintenance of facilities. Open defecation is no longer a habit but an outcome of poor facilities.
6	Once a toilet is full, there is usually space to build more within the household compound.	Space is limited and density of population is high resulting in the need to dispose of faecal sludge outside the plot once toilets fill up.
7	Households can build very basic low cost toilets, starting and the lowest rung of the sanitation ladder if they choose.	There are often regulations about the standard of toilets substructure and the superstructure. Negotiation with authorities can be an important aspect of intervention.

8	Households can usually finance low cost toilet building without external finance.	Landlords often require external finance in order to be able to adequately upgrade sanitation facilities. This may require negotiating a loan facility, whether through banks or a community fund.
9	There are few stakeholders external to the community who have an influence on sanitation provision.	There are several stakeholders involved, such as tenants, landlords, planning department, public health officials, water and sewerage companies.
10	As there are few stakeholders involved, the intervention process can be relatively fast.	Due to the regulatory environment and the number of stakeholders involved the intervention process, even before any triggering takes place, can take quite long.
11	Natural Leaders and Community Consultants are key players in driving and scaling up CLTS	Natural Leaders emerged from the existing group of Community Health Volunteers. The role of Community Consultant, spreading CLTS, was also played by CHVs.

Finally, the review of the RRTS project has raised a number of broader implications which need to be addressed if urban sanitation is to be taken to scale in Nakuru and across Kenya.

### 1. Further partnership working within Nakuru

In order to achieve the first ODF urban community within Nakuru town, continued partnership working is required to ensure that MoH and other relevant institutions are able to take the CLTS approach to scale across the remaining sub-locations. Although the methodology has been proven in three sub-locations, there may be further challenges in the contexts presented by the remaining sub-locations that make up Nakuru City.

### 2. Documentation and uptake of lessons from this and other urban experiences

In order to drive forward urban sanitation in Kenya as a whole, it is important that lessons from this and other urban projects are brought together and shared in order that they can be taken to scale. Specific training and guidance documents should be developed highlighting specific urban challenges and strategies for overcoming them.

### 3. Awareness raising around the problems created by subsidy

If the challenges associated with individual hardware subsidy are to be overcome, then agencies providing such subsidies need to be made aware of the problems they can pose. This might lead to the diversion of individual subsidy finance towards taking CLTS to scale and providing public services in schools and market places.

### 4. Re-visiting of ODF criteria for urban areas

If communities in urban areas are to become officially certified as ODF, the issue of hand washing has to be addressed. This should involve further investigation into a sustainable option for hand washing outside the toilet. However, consideration should be given to relaxing the criteria in urban areas to permit evidence of a designated hand washing station within the home that is systematically used.

### 5. Resourcing of CLTS in urban areas.

Finally, in order to achieve all of the above, the issue of resourcing of CLTS in urban areas must be addressed. Although government funds are available for sanitation, there are multiple demands on these. A collaborative strategy for effective resource use by government, NGOs and international agencies will help to address this issue.



## Annex 1. Stakeholder Engagement Analysis Matrix

	Stakeholder	Role	Functions	Contribution to the project	Project Engagement strategy
<b>PRIMARY</b>					
1.	Tenants	-Primary beneficiaries of the project as users of sanitation facilities	Sustaining changes in hygiene and ODF behaviour change	-Empowered tenants create/enhance demand on landlords for provision/upgradation of facilities - Participation in technology development processes	- Community mobilisation and empowerment for collective action through triggering and post-triggering follow-up activities - Post-ODF engagement through hygiene promotion campaigns
2.	Landlords	Target community for behaviour change	Provision of sanitation facilities to the residents	-Provision and upgradation of sanitation facilities to meet regulations -Sensitization of new tenants and formulation of behavioural norms for sustaining ODF in the community	- Landlord Forums for awareness-building and sensitization and introduction to technological options - Linking up with other key stakeholders for information, service delivery and access to credit
3.	Ministry of Health	-Lead line ministry for sanitation -ODF verification	- Responsible for all stages of CLTS implementation - Coordinating body for ODF verification	- Internalisation and commitment to CLTS strategy - Taking CLTS to scale in Nakuru county - Offers continuity and sustainability mechanism after the project ends	- Capacity building of MOH on CLTS, hygiene behaviour change, technology - Partnership with MoH for intra-institutional coordination and multi-stakeholder collaborations - Integration of CLTS into MoH work plans and targets to develop ownership
4.	Public Health Officers and Community Health Volunteers	Front-line staff for community engagement	-Conduct CLTS triggering, post-triggering follow-up, ODF Monitoring and verification - Community engagement for legal compliance of sanitation standards and technology improvement for sanitation upgradation.	- Increased area coverage for sanitation access and CLTS scaling up - Facilitated the community's movement along the sanitation ladder for improved sanitation and sustained behaviour change - Creation of an empowered community through awareness building, sensitization, capacity building, institutional collaborations, strengthening community structures etc.	-Capacity and knowledge building of PHOs on CLTS through trainings, exposure visits, access to resources - Working in close coordination and collaboration with the team through all stages beginning from community mapping to processes of triggering, post-triggering follow-up and monitoring activities
5.	Community Health	CLTS implementatio	-Triggering and post triggering follow-up	- Expanding the team strength and widening the	- Capacity building on CLTS and related

	Volunteers	n	activities - Hygiene and health promotion at household and school level - ODF monitoring	network for enhanced area coverage - CHVs are embedded in the community and act as the 'eyes' and 'ears' of the PHOs - Regular house visits and follow up made possible in the community	sanitation and health issues - Facilitating regular interaction of CHVs with the project team and the MoH for constant updates - Empowering CHVs through use of mobile technology as part of monitoring and feedback mechanisms
6.	Local Artisans	Local service providers embedded in the community	- Construction of sanitary facilities at plot-level and in schools	- Well acquainted with specific area context and challenges - Construction of latrines for the plot owners - Advice and guidance to landlords on technology adoption	- Awareness building, sensitization and skill-building through trainings on CLTS and new technologies - Facilitate engagement with the community through community meetings and trainings
7.	Pit-emptiers	Faecal sludge management operators	Assist in emptying the pits through low cost gulper technology( earlier used to empty the pits manually which has now been stopped with the project intervention)	Offer a viable solution of emptying existing pits which cannot be otherwise mechanically exhausted due to loose soil	- Advocacy and lobbying for mainstreaming these actors within government policy - Organisation of workers into a formal group for legal recognition - Use of technology for safe and hygienic working conditions
<b>SECONDARY</b>					
8.	Nakuru County Government	Provision of clear policy directives at county level for compliance with national policy framework and national sanitation goals	- Formulation of clear timeline and milestones for ODF in Nakuru county - Establishing efficient planning, monitoring and budget systems and mechanisms - Creating an enabling environment for achieving ODF - Synchronising the efforts of various government, non-government and private actors for greater area coverage and policy uniformity	- Alignment to national CLTS policy and framework, and commitment to CLTS has strengthened the initiative - Understanding of the unique urban challenges and the need to adapt national guidelines for urban contexts – Will introduce the gulper technology as one of low-cost technology options among others that may be innovated in the new County Public Health Bill. The bill has room for other low cost sanitation innovations.	- Working within the regulations set by the county - Working in partnership with other sanitation actors to organise exposure visits for technology adoption, convene national events such as the World Toilet Day 2014 - Contribution to policy discussions
9.	NAWASSCO	Nakuru water utility company	- Sole company for provision of water and sewerage system in the Nakuru East and West sub-counties in Nakuru county - Collaboration with the government and other agencies for	- Increased access to water has helped the community save on time/money and improve sanitation conditions - Working with partners in Nakuru County Sanitation Programme to address sludge management issues in low-income areas	- Negotiations for increasing frequency and duration of water access for the community - Advocacy and partnership for exploring sludge management options

			service delivery		
10.	K-Rep Bank	Sanitation financing option	-Offers sanitation financing community products -Facilitates access to credit for the community at interest rates lower than market rates	- Has enabled uptake of improved technology due to affordability of interest rates -	- Negotiations with bank to develop an exclusive and accessible community sanitation product - Linking the bank with the community. Increasing community's access to resources to increase sanitation improvement and usage
11.	NEMA	Environmental protection agency	Frames environment rules and regulations	- Empowerment of pit-emptiers by awareness-raising and sensitization sessions on rules and regulations - Flexibility and openness in understanding context has led to more viable solutions	- Compliance with environment laws -Facilitating discussions and engagement between the community and NEMA officials - Sensitization of the community as well as NEMA on issues and challenges
12.	Schools	Users of sanitation facility	- Facilitate behaviour change and hygiene knowledge promotion among children and	- Helped in sustaining ODF behaviour among children outside their homes - Campaigns empowers children as agents of change	- Facilitating hygiene promotion campaigns for hand-washing and rain water harvesting technology demonstrations - Liaisoning with other sanitation actors for sanitation coverage in project area schools
13.	Ministry of Planning	Provision of approvals and sanitation designs for latrine construction	- Production of designs that are in line with legal requirements - Granting of approvals for latrine construction	-Relaxation of regulations for latrine design has empowered the community with limited resources to at least start somewhere -Enables technology upgradation in the community thus sustaining ODF behaviour change	- Advocacy for flexibility in latrine compliance standards - Working jointly with the MoH to drastically reduce the cost of plan designs from Ksh 25000 to Ksh 2500
<b>TERTIARY</b>					
14.	National Government	Provision of national policy, roadmap and directive guidelines for implementation	-Formulation of national sanitation policy with clear articulation of CLTS strategy -Formulation of national CLTS protocol and ODF verification manual	-Vision for an urban ODF Kenya by 2015 has provided the impetus for CLTS implementation -The national ODF protocol and training manual serves as the guidance document though CLTS strategy for urban Kenya remains underdeveloped as of now.	-Advocacy on urban issues and challenges; and contribution to policy discussions through mechanism of ICC -Engagement with the national CLTS hub and Director of Public Health & Sanitation for CLTS training and guidelines
15.	Other sanitation actors (EU, SNV, WSUP, VEI, AMREF Health Africa, Water for	Supporting total sanitation goals of the county	Implementation, facilitation and collaboration for CLTS training, WASH in schools, access to water, technology development and addressing sludge	Facilitating partnerships with sanitation actors for policy advocacy and sanitation coverage has enabled scaling up of initiatives in the project area	-Liaisoning with urban projects for scaling up and sustainability - Joint project proposals, lobbying for inclusion of services in project area for further sanitation coverage and technology

	People, FHI360, USAID)		management issues		improvement
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