In Kenya the number of people with access to safe water is slowly improving. It is estimated that more than 60% of Kenyans have access to improved drinking water sources. On the other hand, sanitation coverage in Kenya remains low. The Ministry of Health indicates that over 45% of the rural population does not have access to basic sanitation. This is a major challenge as one third of Kenya’s disease burden is sanitation-related, heavily affecting Kenya’s socio-economic development. To address this challenge, we need to drastically change the way we approach WASH. Traditional solutions focused on building infrastructure, are not sustainable and cannot meet the needs of a growing population.

WASH Alliance Kenya
It is our mission as WASH Alliance Kenya to change mindsets and create systems for sustainable and affordable WASH services that can accelerate. This is the only way to adapt to fast population growth. A guiding principle in our work is therefore facilitating the development of a system in which all stakeholders, such as businesses, governments, citizens and NGOs work effectively together.

Our work in Kenya
Since 2011, WASH Alliance Kenya has been a key non-state actor that has been supporting the Kenyan government and especially the Kajiado and Nakuru County governments to achieve sustainable WASH sector goals. As a result of our work in Kenya between 2011 and 2015, 12,000 people use improved sanitation facilities and 16,608 use improved water resources. Focus areas in our work include community sensitization and CLTS, rural water service delivery, school WASH, urban WASH and WASH financing.

Sharing knowledge
We believe that sharing knowledge, expertise and lessons learned lies at the foundation of realising sustainable access to WASH services for everyone in Kenya. It is for this purpose that we have developed this WASH Alliance Kenya Best Practices publication. We hope it will inspire others to change their WASH approach and start building systems for sustainable and affordable WASH services that can accelerate.

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Looking forward to accelerate WASH with you,

Tobias Omufwoko,
Country Coordinator WASH Alliance Kenya
content

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The challenge
For years, the people of Maparasha (Kajiado Central Sub-County) were confronted with contaminated drinking water, using the same spring to fetch drinking water as animals. This source was contaminated with bacteria from monkey droppings, causing cholera and other diseases. The spring does not only supply the 816 residents of Maparasha, it also supplies piped water to Lele Primary School in the same village with over 350 school-going children.

Our approach
To address this health challenge and realise access to clean and safe drinking water, WASH Alliance partners Neighbours Initiative Alliance, Amref Kenya, Kenya Water for Health Organization and NETWAS supported the community in three ways:

1. Technological intervention: we protected ‘the eye of the spring’ by installing a so-called collection chamber that drains to various inspection chambers and through an outlet pipe feeds into a storage reservoir. This storage reservoir has piping extensions that leads to households and to a dam that is used to water livestock.
2. Capacity building: we provided training in water resource management through Integrated Water Resource Management (IWRM), WASH financing, WASH advocacy through a Human Rights Based Approach (HRBA). We also formed local institutions through WASH committees to manage the water source.
3. Behavioural change: we offered participatory training in sanitation and hygiene behaviour change through Community Led Total Sanitation (CLTS).

Sustainability
The WASH Alliance International wants to create results that are able to accelerate after our support has phased out. We identified five key areas of sustainability that need to be addressed in order to achieve this: financial, institutional, environmental, technological and social sustainability. We call this our FIETS sustainability approach. By taking into account these five areas of sustainability, we are able to increase the quality of WASH service delivery in the long term. We also applied this approach during our work in the community of Maparasha:

Financial sustainability: Every user of the spring pays 500 shilling per month for water, which is managed
by the WASH committee. The members of this committee report every month the amount that was collected and what has been done with this money. In case systems need to be repaired while not sufficient money has been saved, the financial contribution of the community members will be temporarily increased.

**Institutional sustainability:** A WASH Committee has been set up, composed of 3 women and 6 men, who are responsible for making sure community members get improved access to water. The WASH Committee is also trained in WASH management and rationing.

**Environmental sustainability:** The spring has several ‘eyes’ but we only protected one of the eyes, leaving the other two to ensure that wild animals and the surrounding environment have access to sufficient water.

**Technological sustainability:** We chose to use technologies that can be maintained and repaired by the communities themselves. The WASH committee was trained in water piping, maintenance and repair.

**Social sustainability:** Our integrated approach is designed in such a way that it promotes social inclusion. One of the most important results from the project is that it prevents women from having to walk long distances to get water. Having clean water available near their homes gives them extra time everyday for small farming activities for domestic use. And when there is excess produce, they can sell this to other community members, improving the financial situation of the entire community.

**Impact**
Overall the project led to increased use of and access to safe, clean drinking water. On the long term, this project will lead to:

1. A healthier and more productive community
2. Increased enrolment of children in school
3. Increased income generation through farming
4. Food security

ONE OF THE MOST IMPORTANT RESULTS FROM THE PROJECT IS THAT IT PREVENTS WOMEN FROM HAVING TO WALK LONG DISTANCES TO GET WATER.
The challenge
The people of the Dalaleikut community faced many water supply challenges. The water was not clean, and people, especially women and children, had to travel far to get enough safe water. Six men were needed to get the water from an unprotected hand-dug well to a trough for the livestock to drink. The people often got sick due to water borne diseases. On top of this, when they used to fetch water from the unprotected well, the livestock was given the first priority to drink the water, so they could go grazing. Consequently, the women that came to fetch water for drinking and domestic use, had to wait for a long time.

Our approach
To increase sustainable access to water in this community, WASH Alliance Kenya supported the community to build sand dams to retain rainwater. Installing sand dams is the most cost-effective method of water conservation in dryland environments. They provide an improved, local and reliable source of water for communities living in remote, rural areas. Simply by capturing rainwater, sand dams transform drylands into places where people, plants and animals can thrive. Whereas many technological solutions serve only to abstract water from the aquifer, without consideration of how to replenish it, the sand dams recharge the groundwater acquirers and support growth of vegetation around the riverbeds. Over time, such approaches only diminish the long-term sustainability of ecosystems and water supplies. A mature sand dam can store up to 20 million litres of water. This replenishes after each rainfall but, even without regular rain, can support over 1000 people with a year round local source of water. There are three options for water abstraction from sand dams: traditional scoop holes; an infiltration gallery leading either to a pipe or tap through the dam wall; or to a sealed shallow well with a hand pump.

By storing water within sand, sand dams protect it from contamination with animal faeces, and filter the water clean for abstraction. In this way, they increase access to an improved water source: one of the key measures for reducing incidences of diarrhoea. Compared to open water dams, sand dams do not provide a breeding habitat for mosquitoes. They therefore contribute to a reduction of malarial infections.

A SAND DAM STORY
INCREASING ACCESS TO WATER IN AN ENVIRONMENTALLY SUSTAINABLE WAY
This initiative emerged from a local demand for improved safe water source and therefore the community provided approximately 40% of the cost in the form of labour, provision of land to site the sand dam and provision of local materials. The initiative helped build local knowledge and skills on the technology. These have inspired the ownership and commitment necessary for the technology to be sustainable.

The water is not free, as a committee has set up tariffs to be charged on every livestock to ensure the continuity and sustainability of the project through occasional operation and maintenance.

MORE THAN 400 HOUSEHOLDS ARE BENEFITING FROM THIS SAN DAM.

Impact
More than 400 households are benefiting from this sand dam. Most people did not use the run off water because they said it’s dirty. However, the concept of sand dams has brought a very good way of preserving rainwater in the ground and also help in the recharge of aquifers.

Via this project we are now able to reach large numbers of people, mostly those who could not access safe and clean water. That has had a positive change for the community. Now that the community has access to water, there are no more water borne diseases and the children are healthy. This also applies to the men, who were unhealthy because they had to spend days and nights searching for water. Further to this, sand dams provide the water and time necessary for people to productively farm instead of spending time fetching water for the livestock.
The challenge
Open defecation was a practice widely used by the local communities in Kajiado County for a very long time. Because of open defecation, people often got sick. Diarrhoea, eye problems and other health problems made the people go to the hospital very often. Open defecation is one of the main causes of diarrhoea and other at times deadly diseases. There is also growing evidence linking open defecation to increased undernutrition and stunted growth. The search for a place to defecate can be fraught with danger, especially for women and girls. Lack of proper sanitation also means higher mortality among children under five and fewer young students, especially girls, staying in school. At the same time, the community members had no knowledge about these dangers of open defecation.

Our approach
A Community-Led Total Sanitation (CLTS) approach was used to lead the community from Open Defecation (OD) to Open Defecation Free (ODF). CLTS focuses on igniting a change in sanitation behaviour rather than constructing toilets. It does this through a process of social awakening that is stimulated by facilitators from within or outside the community. It concentrates on the whole community rather than on individual behaviours. Collective benefit from stopping OD can encourage a more cooperative approach. People decide together how they will create a clean and hygienic environment that benefits everyone. The CLTS process involves the following steps:

- Pre-triggering stage: selecting a community and building rapport
- Triggering stage: participatory sanitation profile analysis and ignition moment
- Post-triggering stage: action planning by the community and follow up

The communities were followed up for a period between three to six months. Not only were communities sensitized on the need to construct and use latrines, but also they were also encouraged to dig compost pits and have dish racks. In addition, the community sensitizations were coupled with raising hygiene awareness.
Additionally to enable the communities move up the sanitation ladder, the awareness raising meetings included sensitization on an affordable WASH financing loan offered by WASH Alliance through K-Rep Bank that was to be used only for WASH activities. The communities were encouraged to take up the loans to finance the construction of improved sanitation facilities and hence able to move from basic sanitation facilities.

The WASH financing component coupled with a village sanitation committee aids with the sustainability of the ODF behaviour and hence ensures that the community does not revert to Open Defecation.

**16,000 INDIVIDUALS NOW USE IMPROVED SANITATION FACILITIES IN KAJIADO COUNTY**

**Impact**

As a result of our work through the CLTS approach, we have had over 50 villages in Kajiado County declared ODF while an additional 50 are at various stages of follow up. An additional 16,000 individuals now use improved sanitation facilities in Kajiado County while an additional 50,000 individuals have been reached with sanitation and hygiene messages through door-to-door campaigns. The incidences of water borne diseases has greatly reduced and a case in point is where no case of cholera was reported in the year 2015 in the beneficiary villages when there were incidences in other villages.

Since everyone constructed a toilet, there are no more diseases. Also the flies that were all over the place are gone now.
The challenge
Many school programmes for water, sanitation and hygiene have organized special children’s groups. WASH clubs aims to involve children as advocates for hygiene and sanitation practices in the school and the community. Children can be powerful advocates for change among their peers, family members and the wider community. They can take part in public awareness campaigns, motivation in the home, teaching and helping younger brothers and sisters. Health clubs also help to ensure that water and sanitation facilities in the school are used, cleaned and maintained as intended. The children in the clubs explain how to use facilities to the younger children. They also help to organize the children, for example, by leading the group that may need to carry water to the school or by lining up and organizing children to wash hands before eating.

However, a shortage of water makes it difficult to implement some of their projects. Children are forced to carry water from home to school to help the club implement its projects.

Our approach
At this school in Kajiado County, the WASH club consists of 50 pupils, 30 girls and 20 boys. The pupils teach their fellow pupils how to use the toilets and they teach the importance of washing your hands. The teachers are trained on WASH at school to keep the pupils in a clean and conducive environment in order to improve their performance and health at school. The activities of the WASH club include ensuring that the school compound and the classrooms are clean and leaky tins are available for children to wash their hands after visiting the toilet to prevent diseases caused by germs.

The children can transfer their knowledge to their parents, and by doing so they help improve health at home. Skits, dances and songs are being used to pass the message to the parents. Also, several community outreaches have been done on the importance of WASH. The children have visited the community where they helped households dig a composite pits and trained them on hand washing, use of toilets and hygiene matters.
At this school, the WASH club decided to introduce a new practice of poultry keeping. Some WASH club members brought a chicken from home and the school bought a few chickens to start the project. The eggs from the chicken are given to the children of the school to improve their nutrition status and sometime the eggs are being sold to fund some of the WASH club projects. This way WASH and food security are strategically combined by this WASH club approach.

Impact

A major benefit of the WASH club is that the school is very clean. With an emphasis on cleanliness, diseases like cholera, diarrhoea and trachoma can be prevented. There are no cases of these diseases in the school anymore.

THERE ARE NO CASES OF CHOLERA, DIARRHOEA AND TRACHOMA IN THE SCHOOL ANYMORE

At the school, the WASH club activities has boosted the schools enrolment, the attendance of the children and reduced issues of absenteeism. Also the number of cases of sickness is very low compared to other areas. This can be attributed to having a clean environment and safe water.

Additionally, the sanitation and hygiene status of the households where the school going children come from has greatly improved and therefore helping in accelerating the realization the CLTS programmes conducted in the surrounding villages of Open Defecation Free villages.
The challenge

Many schools in Kajiado County currently do not have a reliable source of water for drinking and other purposes. Children had to bring water to school because of the shortage and even water points used to dry up. The children spent a lot of time and walked long distances to find water. When children had to bring the water from home to school, the children would arrive at school tired and could not concentrate in class. The children were sent out of class to fetch water as long as 5 kilometres away. Also, in the village, there were days the parents could not cook dinner because of the shortage of water. Hungry stomachs make it even more difficult to concentrate and digest everything that is being taught. The dropout rate of school-going children was rising rapidly due to the non-availability of drinking water within the school premises.

Our approach

To support the school with realising and maintaining an improve WASH situation for their students, we used rooftop rainwater harvesting. Rooftop rainwater harvesting is the process of collecting rainwater falling on rooftops in a tank for future productive use. The first rains of the season are used to flush dust from the rooftops and silt from the cistern. Thereafter, the rainwater is collected and stored. Efficiently used, enough water can be collected in this way to last the whole year. The storage tank is made above the ground and on a platform.

The school rooftop rainwater harvesting system seeks to provide a source of water for all purpose such as toilet flushing, cooking, washing hands and feet before eating and after toilet use, hygiene and finally if needed, a chemical treatment such as chlorination can be used to purify the water for drinking purposes, but this is not always necessary.

To increase the sustainability of this project, our partners formed a school management committee. Together with the teachers of the school, the committee members were trained in order to maintain and monitor this rainwater harvesting structure at the school.

RAINWATER HARVESTING AT OLCHOROIBOR PRIMARY SCHOOL
Impact
Since the inception of the rooftop rainwater harvesting project, the school attendance and enrolment has improved from 100 to 200 pupils. At the same time, the performance of the children significantly improved, from a 195 score in 2011 to a 270.3 score in 2015.

WHY IS RAINWATER HARVESTING INTERESTING FOR SCHOOLS?
(Rain)water should never be wasted and allowed to flow out of a community facing a shortage of drinking water. Rooftop rainwater harvesting is an interesting option to improve WASH in schools because:

• It is a cost-effective, simple and environmentally sustainable alternative to exploiting groundwater sources
• It provides self-sufficiency to water supply
• It reduces the cost of pumping groundwater
• It provides high-quality water that is soft and low in minerals
• RWH structures are easy to construct, operate and maintain
The WASH Alliance International is a multi-national consortium of over 100 partners worldwide. We work together with local NGOs, governments and businesses to make sure everyone on this planet has sustainable access to water and sanitation.

For more information: www.wash-alliance.org