

World Vision®



# Water, the Hub of Life

WATER, SANITATION AND HYGIENE IN KENYA

2014

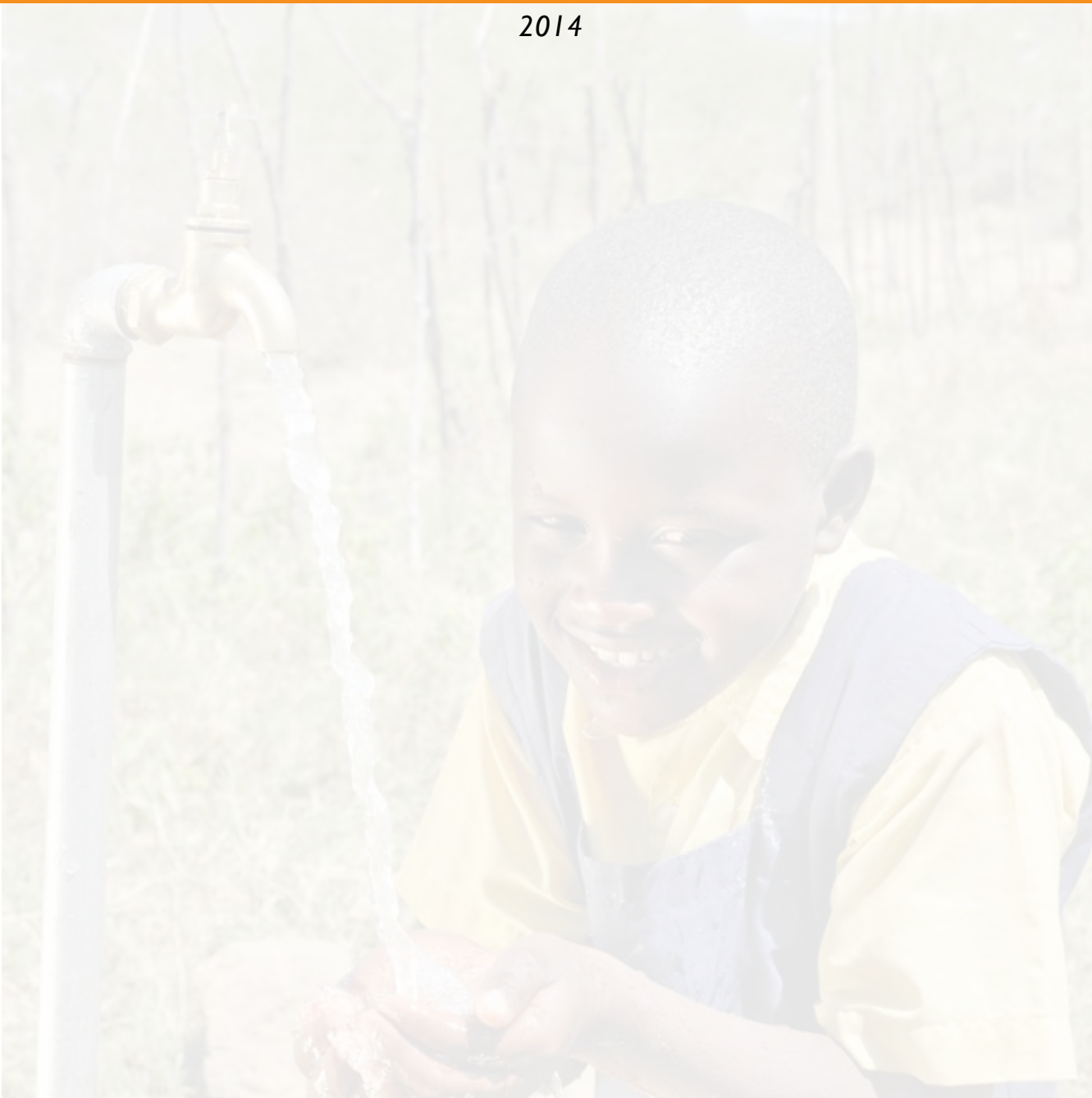




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2014





# Water Sanitation and Hygiene in Kenya

## Overview and opportunities

Kenya is classified as a chronically water scarce country. It has limited natural endowment of fresh water at 647 m<sup>3</sup> per capita annually—below the United Nations recommended minimum standards of 1000m<sup>3</sup>. According to the Kenyan Government, this is projected to fall further to 245 m<sup>3</sup> per capita by 2025. Kenya's safe yield has been assessed to be 7.4 billion cubic meters (BCM) for surface water resources and 1.0 BCM for ground water per annum. However, the current water abstractions at 1.6 BCM annually are less than 20 percent of the safe yield potential for development, indicating an extremely low level of development of the available water sources.

Kenya has room for extensive development towards achieving maximum utilization of the renewable fraction of freshwater resources. Access to safe water by both rural and urban populations is limited (49 percent and 68 percent respectively) and declining due to non-performance of existing schemes. Impact has been more limited for the poor as investments have tended to benefit the affluent.

Statistics from the Kenya Government show that over 5.8 million Kenyans still engage in open defecation. There is limited understanding among many on the impact of poor Water Sanitation and Hygiene (WASH) practices on health, especially health of young children. There is also inadequate provision and poor management of existing WASH facilities.

World Vision in Kenya has positioned WASH as a priority intervention program in its strategic planning. Activities in the sector are implemented in 44 of the 57 field programs referred to as Area Development Programs (ADPs) in Kenya.

Our objective is to improve the health and well-being of children, their families and communities by empowering them to embrace a culture of safe sanitation and hygiene, while managing clean water supplies. World Vision seeks to support communities in the operation areas to increase their access to potable water from an average of 24 percent (2010) to about 70 percent, and that of sanitation and hygiene knowledge from 29 to 89 percent by 2015. The major causes of morbidity in Kenya have been identified as diseases and conditions arising from poor environmental management, particularly those relating to lack of safe drinking water; poor sanitation, hygiene and waste disposal systems. WASH sector interventions target to promote awareness on the co-relation between environmental hygiene and disease prevalence.

World Vision's WASH interventions are geared towards achieving target number seven of the United Nations Millennium Development Goals (MDGs) to halve the proportion of the population without access to safe drinking water by 2015.

*WASH staff at work in Kirindon ADP, while community members look on. WVK utilises in-house technical team to carry out hydrogeological services. This enables the work to be done faster, more efficiently and with enhanced quality.*

# Acknowledgement



The WASH photobook is an initiative of World Vision Kenya led by the National Director Dickens Thunde and the East Africa Regional WASH Learning Centre led by its Director Dr. Girma Begashaw, who provided much needed support and advice to realize this publication.

Special thanks to the World Vision Kenya WASH Team led by Stephen Munyiri, with support from Job Kitetu, Joffrey Cheruiyot, Josphat Mukindia, Wanjiku Kuria, Hannah Ngugi, Francis Huhu, Chanasa Ababa, Charles Bichage and Cheruiyot Kipngeno. The WASH Team provided technical advice and data towards finalization of this publication. Appreciation also to the WASH field teams who provided valuable support to the photobook.

The Communications Department provided content, photographs and editorial support.

Special appreciation to communities and donors who have made the achievement of WASH services for children in Kenya a reality.

Thank you all.  
*WVK Communications Department*

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*Cover photo: A schoolgirl washes her hands in Wema ADP, Nakuru County.*

This WASH photobook illustrates and describes World Vision's WASH work in Kenya. It tells the stories of transformed lives through the impact of WASH interventions.

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*One of the pipeline extension projects that enables children to access water at their homesteads in Wema ADP, Nakuru County similar to what WV Kenya has undertaken in various ADPs. The water is often sourced from a deep well or protected spring.*





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# Challenges facing WASH services in Kenya

According to the Kenyan Government, access to Water Sanitation and Hygiene (WASH) services in Kenya remains low. About 49 percent of the population has access to clean drinking water, while those with proper sanitation are only 45 percent. The percentage practicing appropriate hygiene, which includes proper use of latrines and hand washing during critical moments stands at about 30 percent.

The WASH challenges in Kenya can largely be attributed to:

#### **Inadequate Resources and Poor Governance Systems:**

While the Kenya government is a signatory of major WASH protocols, and has a clear policy on provision of water services and environmental sanitation, there are limited resources to meet the needs. Inefficiency in the management of the available resources, lack or inadequate monitoring and evaluation systems of the processes, outputs, results and impacts of the interventions are also major drawbacks.

#### **Inadequate Partnerships among Development Partners:**

Most development partners in the WASH sector operate as individual entities, as opposed to working through structured partnerships. This has led to contradictory approaches at the community level and duplication of interventions.

**Effects of Climate Change:** High temperature, rainfall patterns and concentration of rainfall in the higher altitudes is an additional challenge to adequate WASH services

**Inadequate Disposable Household Incomes:** High poverty and low literacy levels are a barrier to ability and willingness to contribute user fees for WASH services, therefore affecting the long term sustainability of WASH interventions.

**Inadequate Disaster Management Strategies:** While some areas in Kenya are prone to disasters such as drought or floods, the national disaster management strategy is in its formative stage and current efforts appear ineffective and slow to respond.

**Weak Institutional Infrastructure for Coordination of WASH services:** Kenya lacks an institutional infrastructure to coordinate and harmonize the operations of several key government ministries that are responsible for aspects relating to WASH services.

*A water kiosk at Matete ADP, Kakamega County. WVK supports the community to access water, and in this case from two points. Looking on from the kiosk is Sean Kerrigan (WV Global WASH Director, Sean Kerrigan (left) and WVK WASH Director Stephen Munyiri). The community members manage the facility and also use it as an income-generating activity point by running a small shop in it.*

## World Vision responding to WASH challenges in rural Kenya

A recent survey conducted by World Vision established that most rural communities in Kenya identify access to safe drinking water as the main need affecting them. The survey is a confirmation of findings from similar studies by the government and other agencies which indicate that up to 60 percent of the population do not have access to safe drinking water, while 49 percent lack basic sanitation facilities.

*Former Water Minister Charity Ngilu commissions WV's new drilling rig at Mutomo ADP, Kitui County. Looking on is WVK Deputy National Director Pauline Okumu (right). Partly hidden is WVK Drilling Manager, Francis Huhu. WVK partners with both national and county governments in efforts to access water to thousands for people.*





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THIS WATER KIOSK WAS CONSTRUCTED  
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United by Sustainable Goals



## THE KENYA INTEGRATED WASH INITIATIVE

In October 2010, WV in Kenya launched a five-year WASH project named the Kenya Integrated Water Sanitation and Hygiene Initiative (KIWI) at a cost of over KSh. 4 billion (USD 46.8 million).

The project seeks to improve access to water and promote proper sanitation and hygiene targeting to reach more than 700,000 people in Kitui, Mwingi, Malindi, Kisumu, Transmara, West Pokot, Turkana, Baringo, Matete, Bamba, Nakuru, and Kajiado areas. The project sites are located in the Arid and Semi Arid regions where in some cases; up to 92 percent of the population does not have access to safe drinking water.

The project is part of World Vision's five-year global campaign titled: "for Every Child Campaign (fECC)", whose overall goal is to improve the lives of children by helping them and their families to get sustainable access to adequate safe water, proper sanitation facilities and practice good hygiene. This project will positively contribute to the attainment of the UN Millennium Development Goals (MDGs) by 2015 as well as the Government's Vision 2030.

### Achievements

Through the WASH project, over 600,000 people have been reached with safe drinking water from various improved sources, 940,000 have access to improved sanitation facilities, and 986 VIP latrines have been constructed for schools in the last three years.

*Moyan water point in Kirindon ADP, Narok County. The water point has assisted more than 1,000 people access clean water from less than three kilometres from their homes. Similar water points situated in the 35 counties have enabled children and women to access clean water near their homes, and in a safe environment.*







## Turning dreams into a flowing reality

Accessing water was the most difficult task for Diana Tanui, a 45-year-old mother of ten. She spent up to six hours every day searching for the commodity for domestic use. She began her journey at four o'clock daily by walking to a well, some three kilometers away from her home. This was the only source of fresh water in her community, and often, she would find a multitude of fellow villagers gathered at the well for a similar duty.

Currently it takes Diana less than 30 minutes' walk to draw clean drinking water from a communal point (kiosk) set along the pipeline, near her home.

Diana is one of the 15,000 people in the area with improved access to clean water from 16 newly developed water sources supported by World Vision (Wema ADP, Nakuru County) in the last two years.

"I believe this is the beginning of a new life," Diana says. "The most difficult burden has been lifted out of my shoulders. I thank God for making this dream a reality in my lifetime."

She now plans to establish a vegetable garden and keep some dairy cows with the aim of improving her livelihood.

"I feel am now part of my community because I can attend important duties which I could not in the past," says Diana.

*An excited Diana Tanui carries water from a communal water point at Wema ADP, Nakuru County. Previously, Diana, a mother of ten, used to walk for more than six hours in search of clean water, unlike where she is taking 30 minutes.*





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This water kiosk was  
constructed by  
World Vision Kenya Marala IPA  
(U.S.A. funded program)  
in partnership with  
Samburu community in F...

## Reducing disease burden

In the past, Frida, a 34-year-old mother of five from Marafa, Kilifi County, a remote community in Kenya's coastal region left home before dawn to collect water from the nearest stream. Because of the long journey, she would return home three hours later with just a gallon of water; far too little to meet her family's need of three gallons every day.

Besides, the long and tiring journey, the water was salty, and often contaminated with disease-carrying pathogens.

During the rain seasons, she depended on rain water collecting in open ponds nearby, and because open defecation is common in the area, the water was contaminated. Due to this, Frida's children often suffered from diarrhoea and bilharzia (two most common diseases affecting children in the area). This made Frida a frequent visitor to the dispensary, where she would make at least three visits every month for similar ailments.

"My children were often getting ill," she says. "I knew it was caused by the water we were using but there was nothing much I could do to prevent it."

But this condition improved when Gandini Water Scheme (a 15-kilometer pipeline extension supported by World Vision in Marafa Area Development Program) reached her village.

Currently, Frida collects at least five gallons of clean water for her family from a communal water point (water kiosk) located about 50 meters from her home. Her frequent trips to the dispensary have reduced. In fact, she cannot easily remember the last time she sought medication for water-borne diseases for any of her family members.

"My life is better now," Frida says. "I am happy because my children are now well. We no longer frequent the dispensary as we used to."

Frida is a peasant farmer and is happy that having clean water within her neighbourhood has given her a chance to concentrate on her farm.

### About Gandini Water Scheme

The first phase of the scheme is currently providing clean drinking water to 7,000 people from three villages: Ulaya ndogo, Bungale and Gandini (Frida's village). The scheme will ultimately cover 35 kilometers.

Gandini project has 59 registered members, and is managed by 11 committee members, among them four women. The committee is planning to extend the pipeline by themselves to a neighbouring village, some five kilometers away, using the proceeds from the sale of water. Already, they have bought 30 pipes and constructed two water points, to the outlying communities.

*Frida Karemba with her daughter at a communal water kiosk near her home, in Marafa ADP, Kilifi County. The provision of potable water has significantly contributed to the reduction of diseases such as diarrhea and amoeba. This is according to health officials in Kilifi County.*



## 3.0 ACCESS TO PROPER SANITATION

## SANITATION EXPERIENCE


Supporting local groups to administer Community Led Total Sanitation (CLTS) methodology approach enhances efficiency to trigger acceptance by local communities. The local groups can easily challenge some of their community's customs and belief systems which led to negative behaviour such as open defecation.

For instance, it was considered a taboo for a father and daughter to share a common latrine among some of the Maasai in Kenya. Community elders (revered community opinion leaders) did not consider human faeces unhygienic and should not necessarily be properly disposed, but instead deposited in the nearby bushes for their dogs to feed on. A few regarded it being 'selfish' if one discarded human waste in a pit latrine.

Other than local groups, World Vision works closely with the Ministry of Health as well as the Kenya Water and Health Organization, the body mandated in 2008 in Kenya to verify, certify and declare villages Open Defecation Free status.

*A resident of Maarifa Village, Marafa ADP, Kilifi County washes her hands using a tippy-tap. WVK promotes hygiene and sanitation through hand washing, using soap. Locally available materials are used with a tippy-tap promoted by WV Kenya.*





**WorldVision**  
**Sanitation is dignity**  
**hygiene is health**  
**Wash your hands After**  
**use.**



## 4.0 SCHOOL WASH



To ensure financial sustainability, communities contribute cash, labor, and materials during construction, rehabilitation, and maintenance of water sources and sanitation facilities. Community funds are raised for pump repair and maintenance by collecting user fees.



*(Left) A Ventilated Improved Pit (VIP) latrine at a primary school in Bartabwa ADP, Baringo County. (Above) A dilapidated pit latrine that was used before the VIP one was built. Under the WASH intervention, 163,417 boys and 173,525 girls are now practising proper hygiene and sanitation.*





## School hygiene

More than 900,000  
VIP latrines for  
schools



*Vestiner, a teacher at Makumba Primary School, Marafa ADP, Kilifi County, explains to pupils proper stages of handwashing using 'talking walls'. School children and health clubs are good ambassadors of hygiene.*



*Amkeni Youth Group perform a skit during celebrations to mark Open Defecation Free (ODF) zone for Maarifa Village, Bamba ADP, Kilifi County. Local drama groups are often used to create awareness about hygiene and sanitation and also in celebration of achievements of ODF villages.*





## Gains through School hygiene program

Children are considered to be effective community change agents because of their ability to easily transfer knowledge they acquire at school to their families and communities. World Vision through the school WASH program supports school children in Kenya to improve their hygiene and sanitation. In addition to WASH infrastructure, we also help children to improve their hygiene knowledge and practices.

*A schoolgirl washes her hands at a primary school in Bartabwa ADP, Baringo County .WVK supports hygiene and sanitation in the schools by provision of a hand washing stations, and water at institutions, to ensure sustainability of the initiative.*



CHETAMBE PRIMARY SCH  
SUPPORTED BY WORLD VISIO

## SANITATION



- using the toilet keeps germs away
- Friends of SOPO use the toilet and keep it clean
- Clean toilets make school fun



Sanitation is Dig

COOL VIP LATRINE  
N-KENYA MATETE IPA.

## HAND WASHING

- 
- Wash your hands with soap and clean running water & stay free from germs diseases
  - Wash your hands with clean running water & soap after visiting/ using toilet
  - Wash your hands before, during and after preparing food
  - Wash your hands after touching garbage

World vision

Transforming lives



Community Hygiene is Health

*'Talking walls' with hygiene messages at a primary school, in Matete ADP, Kakamega County. Since the messages are accessible to school goers, the children easily entrench them into practice and become ambassadors of hygiene in the community.*

"Mikono Safi hu"





## 5.0 COMMUNITY EMPOWERMENT

## CLTS: Challenging negative cultural beliefs

In keeping with their strong cultural beliefs and a conducive environment, only eight percent of the population in Namanga, a rural community in Kenya had latrines within their homesteads in 2011. Open defecation was common among many people in the community. Using a latrine to dispose human waste was considered a foreign lifestyle in this pastoral community.



*A billboard urges locals to wash hands after critical moments, at Kainuk ADP, Turkana County. Community members are urged to wash their hands at four critical times; after visiting a toilet, after changing a baby's nappies, before preparing and eating food.*

# Unique water harvesting method

## ROCK CATCHMENT TECHNOLOGY IN RAIN-WATER HARVESTING

Rock Catchment is an area of an outcrop rock surface developed to harness and channel rainwater falling on it into a storage tank for productive use. Under this technique, rain water run-off gravitates into a reservoir along stone gutters mortared onto rock surface. Water from the catchment reservoir is piped into closed storage tanks to prevent possible contamination and evaporation.

A rock catchment is a valuable water harvesting technique, even in areas receiving low rainfall. It collects up to 90 percent of the water falling on the catchment area.

## KAPSASIAN ROCK CATCHMENT

Kapsasian Rock Catchment comprises an area of 1,200m<sup>2</sup> of rock surface. This is about a quarter of the entire rock area. It is levelled and lined with gutters on the sides and a retaining wall constructed at the lower end. From there, the drawing pipes are fitted into a filtration unit and carry filtered water into two reservoirs using gravitational force. The rock catchment is now the source of clean drinking water to about 1,600 people, including children from the nearby primary school. The area receives an annual rainfall above 1,200 mm, making rain water harvesting the most viable solution to the perennial water challenge in the area.

# 1200

The amount of annual rain water in millimetres harvested from Kipsasian rock catchment area.



World Vision supports communities in areas where it operates to develop large outcrop rock surfaces to harness rain run-off. Large rocky outcrops which over the years were considered wasted land are now useful rain water harvesting facilities.



*A rock catchment in Kirindon ADP, Narok County. It is used to harvest rain run-off.*

## MALENYU ROCK CATCHMENT

In the past, people from Malenyu, a remote community in Eastern Kenya walked for over six kilometers to access water. Even after the struggle, the little water they collected was salty or worse contaminated with pathogens. Women and children would struggle to get to the top of a hill, where they drew water from a shallow pond on a rock surface.

Often, children would wake up at five o'clock in the morning to join their parents in search of water; in the process, children were often late or missed school. Taking a bath was considered a luxury; few could afford.

But this situation changed for the better, when World Vision (Mutomo ADP) through 'for Every Child Campaign' (fECC) project supported the community to develop a

rock surface to collect and harness rain water run-off for domestic use.

This technology is currently the source of clean drinking water for over 5,530 people, who access it within 30 minutes, from their homes. Children can now enjoy learning as they spend less time looking for water.

Malenyu Rock Catchment will ultimately comprise of eight reservoir tanks, which will be adequate to supply clean water to the community for up to eight months during the dry season.

"Our children no longer miss school and they can bathe as often as they wish because we now have sufficient water in our homes," says Jemmy Kilundo. "We can sleep well without worrying about water and we can now spend more time at our farms."





A rock catchment in Mutomo ADP, Kitui County. One of the technologies WVK has used to harvest rainwater is through rock catchment. Water is harnessed in arid and semi-arid areas that have flat rocks. Embankments are made around the rock and pipes connected from the catchment to a water tank. The catchment is fenced to avoid incursion by people and animals.



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## Achievements

- 85 solar-powered boreholes drilled benefitting over 200,000 people and 150,000 cattle.

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## Solar-powered boreholes

A water system comprising of a borehole solar-powered pump, elevated solar panel, elevated water tank, water kiosk and animal watering troughs.



## Sustainable technology in water supply

Kenya, like many other Sub-Saharan countries, is endowed with abundant solar energy, but beyond its natural form, the huge potential remains underutilized in the region. Before the solar power innovation, communities had little regard for the year-round supply of free solar energy in their midst. The scorching sun was often associated with a parched dry earth, resulting in acute water and food scarcity. With solar power, the community has gained appreciation for solar energy



*Tuyotich Water Project community members hold a meeting under an elevated solar panel at Wema ADP, Nakuru County.*

## WHY SOLAR ENERGY

- **Accessible:** Most areas where WVK operates are remote and are not connected to the national electricity grid.
- **Reliable:** Survey indicated that deep wells sunk in the past by other organizations were no longer operational mainly due to broken generator sets for pumping water.
- **Durable and affordable:** Solar systems have a longer lifespan and lower maintenance costs than generators. Money spent on solar systems is recuperated within five years as compared to over seven years for diesel-powered generators. Solar panels have a warranty of up to 25 years, while pumps have a maximum two-year warranty.
- **More versatile:** Solar systems work with deeper boreholes than hand pumps do, as well as extract more water that can serve more than one water point (Above 250 m TDH with high yield of more than 25m<sup>3</sup>/Hr).
- **Eco-friendly:** Solar power is environmentally clean.



*Solar panels power used for pumping water from a deep well in Matete ADP, Kakamega County.*





## 6.0 BEST PRACTICES

## Program social sustainability

World Vision promotes long term social sustainability and ownership of WASH programs by training community members to operate and maintain WASH facilities. Program beneficiaries are facilitated and encouraged to establish functional leadership such as Water User Committees to oversee the operation of the WASH interventions.

*Members of Kosano Community-led Total Sanitation (CLTS) Group, Katito ADP, Kisumu County display a latrine slab they make and sell to the community. WVK supports communities to make locally-made sanitation slabs as a business. Kasano CLTS Group members were taught how to mould the latrine slabs (sanitation platforms).*





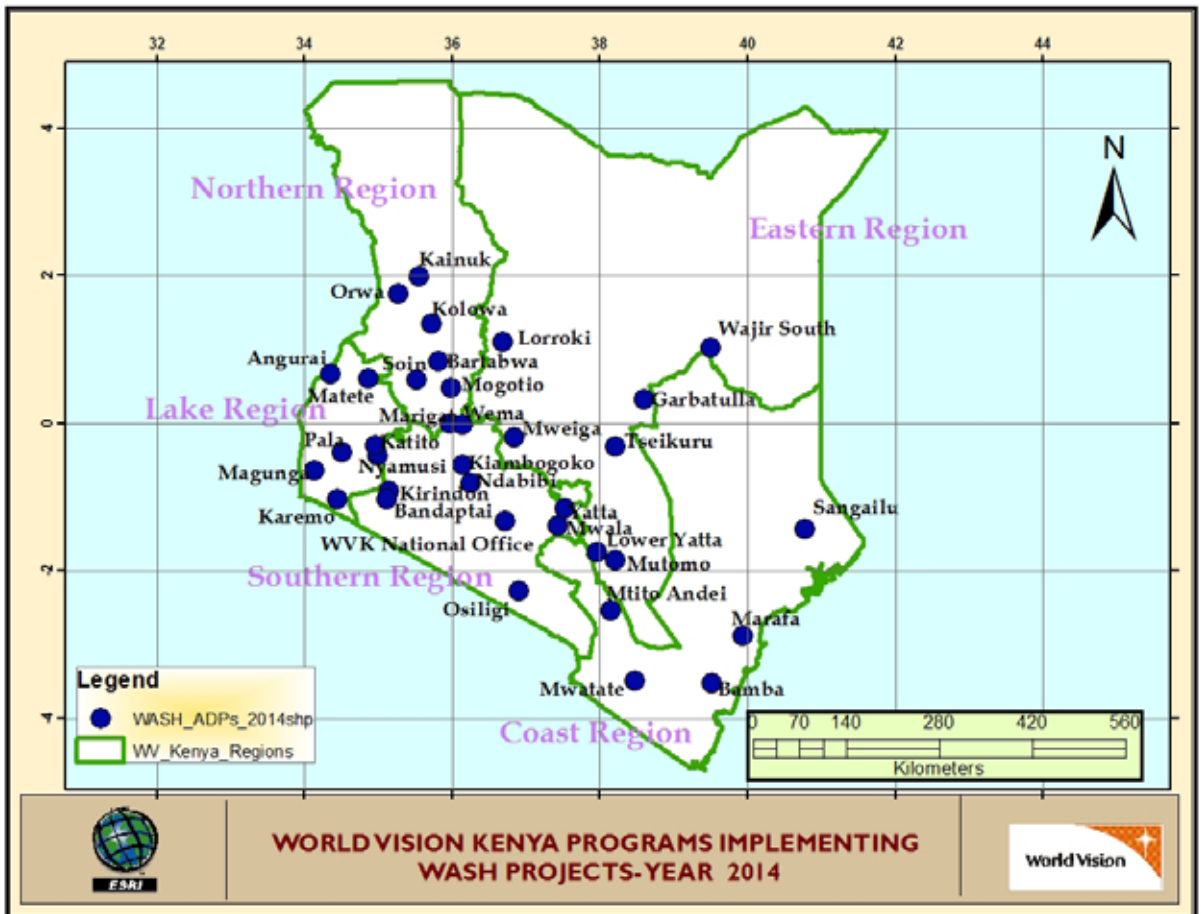


*A schoolgirl happy to draw clean drinking water from a communal water kiosk in Matete ADP, Kenya. Water is sourced from a solar-powered borehole. WVK has endeavoured to provide access to water for vulnerable children. In 2013, over 58,000 girls benefited from the WV Kenya WASH programme.*

# EDITORIAL TEAM

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Support for this publication has been provided by WASH team led by Stephen Munyiri, WASH Director and May Ondeng, Communications Manager. This publication has been compiled by Dennis Mosota, WASH Communication Officer. Stories and pictures contributed by Kenneth Kibet and Dennis Mosota. Content development by Titus Wakeru, WASH Program Officer.



# About World Vision

WorldVision is a Christian humanitarian organization dedicated to working with children, families, and their communities to tackle the root causes of poverty and injustice. We serve alongside the poor and oppressed regardless of a person's religion, ethnicity, or gender as a demonstration of God's unconditional love for all people.

Since 1974, World Vision Kenya (WVK) has helped millions of children and families by providing emergency assistance to those affected by natural disasters, developing long term-solutions within communities to alleviate poverty and advocating justice on behalf of the poor.

## Vision

Our vision for every child, **life in all its fullness**; Our prayer for every heart, the **will to make it so**.

## Mission

Our Mission is to follow our Lord and Saviour Jesus Christ in working with the poor and oppressed to promote human transformation, seek justice and bear witness to the good news of the kingdom of God.

## How we serve

To help secure a better future for every child, WVK, seeks to help individuals and other communities recognize the resources that lie within them to make change possible. We work through a transformational development approach that is community-based, sustainable and focused on the well-being of children.

WVK works in partnership with local institutions, the Government of Kenya, other NGOs, churches, donors agencies, and the private sector; among others. We are deliberate in partnering with organizations that focus on child well-being issues. We raise resources through international and local donors. We believe by working together, we can make a lasting difference in the lives of children and families who are struggling to overcome poverty.

## Our Operations in Kenya

WorldVision's programme interventions in Kenya include: Water Sanitation and Hygiene (WASH), health, nutrition, HIV and AIDS, education, food security, economic development, child protection, policy and governance, advocacy, food aid and Humanitarian Emergency Affairs.

WVK is present in 35 counties, mainly in arid and semi-arid regions, through 57 Area Development Programs (ADPs) or field programs. WorldVision sponsors over 156, 066 children in the 53 ADPs in Kenya.





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