Boosting business: why investing in water, sanitation and hygiene pays off

Smallholder farmers in Tanzania

Learning and insights report

WASH 4 WORK

DIAGEO

WaterAid

Contents

All photography in this report: WaterAid/Sam Vox

Executive summary

Having safely managed water, sanitation and hygiene (WASH) infrastructure in the workplace is vital to business performance and success. These essential services are foundations for the health and well-being of employees, reducing medical and sick pay costs, and boosting staff motivation and productivity.

WASH considerations should be included in a company's water stewardship strategy and seen as an opportunity to strengthen operational resilience and performance. WASH investment is also a way to build brand perception value and mitigate supply chain and climate risk, while addressing a whole host of environmental, social and governance (ESG) criteria.

Boosting business: why investing in water, sanitation and hygiene pays off is a first-of-its kind pilot research project measuring the return on investment (ROI) and other business benefits of improving WASH services and behaviours in the workplace and employees' communities.

In collaboration with Diageo, Gap Inc., HSBC, Twinings and ekaterra (which was part of Unilever when this project started), WaterAid has measured the tangible impact of WASH investment in ten workplaces across four countries. This includes tea supply chains in India and Kenya, apparel and leather supply chains in Bangladesh and India, and agricultural smallholder farmers in Tanzania.

In Tanzania, the agricultural sector has a critical and vested interest in long-term, sustainable access to water resources. It requires the right quality and quantity of water for farming and the health and livelihood of its workforce.

With the increasing impacts of climate change, and a growing population, this water-intensive sector is competing for access to natural supplies. By investing in WASH facilities, particularly those that are climate-resilient, farmers can realise their rights, improve health and wellbeing, and companies can promote holistic water management solutions across the sector and build resilience within their own business.

This pilot study focused on the impact of WASH intervention for smallholder farmers and their communities in Machochwe village in Tanzania's Mara region. While the research lacked sufficient quantitative data to calculate an overall ROI, qualitative evidence was gathered showcasing a range of business and community benefits. The project provided valuable insights and lessons on implementing WASH in an agricultural setting, including highlighting the impact of climate change and the importance of collaboration. Above all, it also revealed valuable learning points for building a long-term strategy and a holistic approach to WASH for lasting change.

Joyce Mwita is a farmer in Machochwe village, Serengeti, Tanzania. May 2022.

1 Introduction

Maria Gabriel working on her farm in Machochwe village, Serengeti, Tanzania. May 2022.

Yakobo Mubere Mwita is a farmer in Machochwe village, Serengeti. Tanzania. May 2022.

The role of water, sanitation and hygiene (WASH) in economic development and resilience is relatively well documented,[1] but its impact on workplace performance through farmer health and wellbeing is less well evidenced.

Boosting business: why investing in water, sanitation and hygiene pays off aims to build a strong case for action and investment in WASH throughout corporate supply chains and communities. The research focused on smallholder farmers funded by Diageo in Machochwe, Serengeti district council in Tanzania. It set out to measure the return on investment (ROI) and explore the wider business benefits of expanding these essential services at speed and scale – showing companies, brands and suppliers the positive impact they can have on smallholder farmers and their communities, at the same time as ensuring business productivity and growth.

Everyone, everywhere has a human right to water and sanitation – at home, in their community and at work.

1. Vexler C, Walker O, Mortlock C, et al (2021). *Mission-critical: Invest in water, sanitation and hygiene for a healthy and green economic recovery*. WaterAid and Vivid Economics. UK. Available at: washmatters.wateraid.org/sites/g/files/jkxoof256/files/mission-critical-invest-in-water-sanitation-and-hygiene-for-a-healthy-and-green-economic-recovery_0.pdf (accessed 17 Jul 2022).

Joyce Mwita, Farmer, uses the water from the newly-installed kiosk in Machochwe village, Serengeti, Tanzania. May 2022.

Context

The sector

Agriculture is the largest and most important sector in Tanzania's economy, making up almost 30% of its gross domestic product (GDP) and employing three quarters of its workforce. The most common food crops in Tanzania are maize, wheat, rice, sweet potatoes, bananas, beans, sorghum, millet and sugar cane. Cash crops include coffee, cotton, cashew nuts, tobacco, tea and sisal. Large numbers of cattle, goats, sheep and poultry are also widely farmed.

Tanzania's agricultural sector is dominated by smallholdings – defined by the United Nations Food and Agricultural Organization (FAO) as being under two hectares (ha) in size. Smallholder farmers sell their crops in local markets and make up over 75% of the country's total agricultural output.[2] However they can get trapped in a cycle of low intensity, subsistence farming, with low yield and insufficient profit to make beneficial investments. They face a range of challenges, including obtaining and paying for quality seeds, fertilisers and pesticides; dependence on rainfall; and being responsible for transporting their goods.

Some smallholder farmers have formed community groups and village community banking (VICOBA) groups are common,[3] providing grassroots group-based micro-finance programmes. A VICOBA group is designed to provide credit to people on low incomes who need capital to start their own business.[4] Often, farmers in cooperative unions or VICOBA groups sell their crops directly to companies as raw materials for production, which gives the farmer a consistent buyer, free seeds and technical support.

The agricultural sector is highly vulnerable to climate impacts. Frequent and prolonged droughts are already being experienced in semi-arid areas of Tanzania and are expected to worsen under current climate change forecasting.[5] Extreme temperatures and reduced rainfall can impact on crop yields, the duration of crop growth and the ability to plant crops in the first place, which in turn, impacts the resilience of business supply chains.

Climate change also threatens food security and the amount of water smallholder farmers, and their families have for agriculture and domestic use, to support health, livelihoods and well-being.

Joyce Mwita, Farmer, washes her clothes outside her home in Machochwe village, Serengeti, Tanzania. May 2022.

2. Tanzania Invest (no date). *Smallholder farmers*. Available at: tanzaniainvest.com/smallholders (accessed 11 Jul 2022).
3. Kitega Community Centre (no date). *Village community banking* (VICOBA). Available at: kitegacc.org/campaigns/village-community-banking-vicoba (accessed 11 Jul 2022).
4. A study in 2022 found that VICOBA loans had a positive impact on the income of smallholder farmers and improved their living conditions, as well as assisting them to climb out of poverty. See: Mrindoko AE (2022). *Impact of village community bank loans on smallholder farmers' household income in Kiteto District, Tanzania*. African Journal of Applied Research. vol 8, no 1, pp 280-308. Available at: ajaronline.com/index.php/AJAR/article/view/459 (accessed 11 Jul 2022).
5. Mdemu MV (2021). *Community's vulnerability to drought-driven water scarcity and food insecurity in central and northern semi-arid Areas of Tanzania*. Front Clim. 27 October 2021. Available at: frontiersin.org/articles/10.3389/fclim.2021.737655/full (accessed 11 Jul 2022).

Women make up more than half of the agricultural smallholder farming workforce in Tanzania and also carry out most of the domestic activities, meaning they are disproportionately affected by poor WASH services and the impacts of climate change.

Maria Gabriel, Farmer, washes dishes outside her home in Machochwe village, Serengeti, Tanzania. May 2022.

WASH and women's empowerment

Women and girls need to be involved in the planning and provision of WASH services at all levels and are empowered when they have control over their WASH needs.

They have the first-hand experience and know-how to understand what is best for their communities and can help realise other benefits. For example, women can improve the health of their families when they control the quality of water used in their homes.

When women participate in decision making, they experience better access to WASH, more respect from the community, and increased confidence, which leads to changes in attitudes towards their leadership and participation.[6] The involvement of men and boys is also important to support progress towards gender equity.

The workplace

Machochwe village, part of Serengeti district council in Tanzania's Mara region, is made up of six smaller sub-villages (Mabatini, Germany, Maguha, Nyangoso, Mtulya and Kichongo), with a total population of 4,096 people.

In the area, 30 cooperative smallholder farmers (11 men and 19 women), most of which live in Kichongo sub-village, have formed Nguvukazi VICOBA 715 banking group. The proportion of men and women in the VICOBA group is representative of women's dominance in smallholder farming.

The VICOBA has an established relationship with Serengeti Breweries Ltd. (SBL), the second largest beer company in Tanzania, and subsidiary of East African Breweries Ltd. (EABL), owned by Diageo. It supplies SBL's factory in Mwanza with sorghum and millet and in return, SBL provides the farmers with free seeds and technical advice, monitoring the whole cultivation process from plantation to harvesting. After harvesting, the individual farmers are responsible for shipment of their crop to the nearest SBL plant, however, there is no contract in place. See Figure 2 for an illustration of the beer brewing supply chain.

5. Mdemu MV (2021). *Community's vulnerability to drought-driven water scarcity and food insecurity in central and northern semi-arid Areas of Tanzania*. Front Clim. 27 October 2021. Available at: frontiersin.org/articles/10.3389/fclim.2021.737655/full (accessed 11 Jul 2022).
6. WaterAid (2022). *Integrating gender equality into water, sanitation and hygiene projects*. Available at: wateraid.org/gender-guidance

Figure 1: Location of Machochwe village

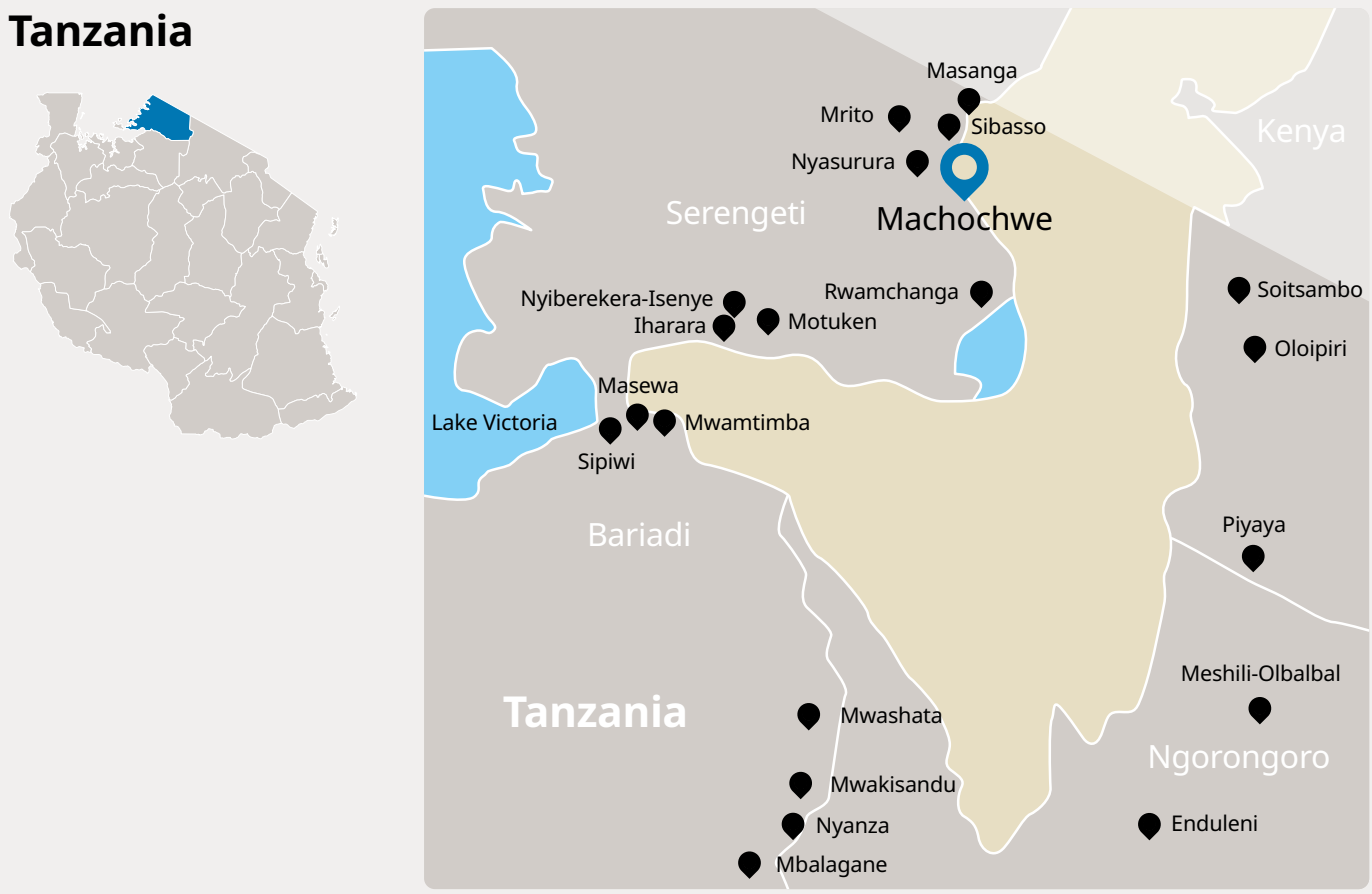
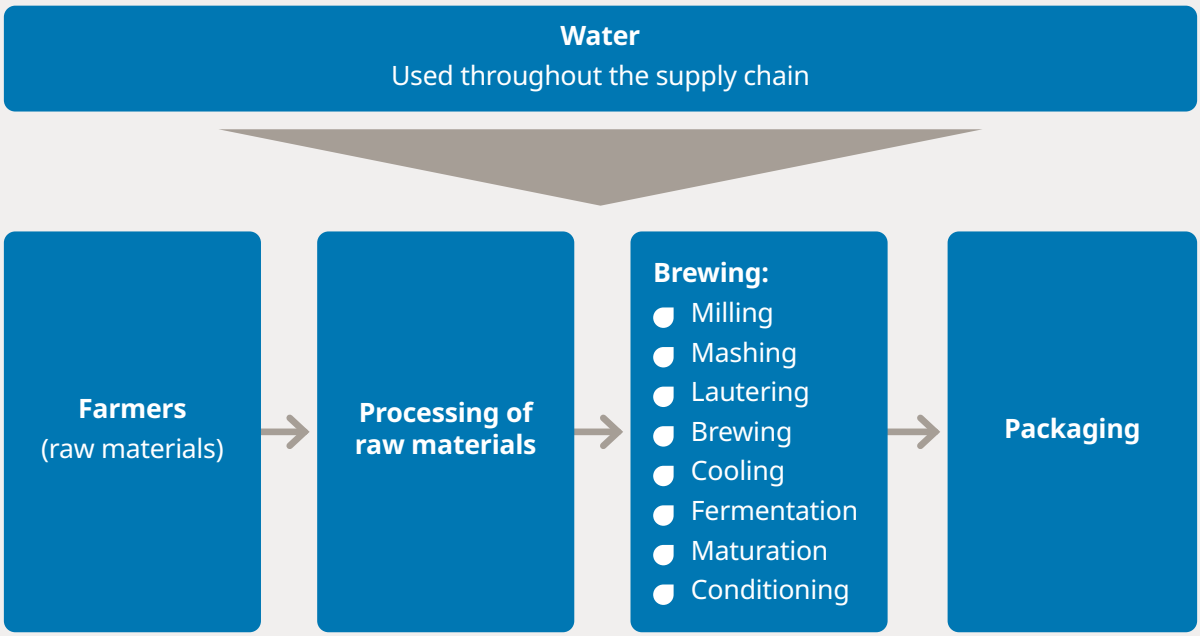


Figure 2: Beer-brewing supply chain



Joyce Mwita, Farmer, harvests crops in Machochwe village, Serengeti, Tanzania. May 2022.

WASH baseline

Despite Tanzanian Government initiatives, only 60% of people in rural areas have access to safe water services.[7] The WASH baseline status for the Nguvukazi VICOBA 715 smallholder farmers is described in Table 1. Due to COVID-19 limitations, the baseline study had to be delayed until after WASH intervention work was underway.

Julius Gibore Marwa checks the sorghum crop at his farm in Machochwe village. Serengeti, Tanzania. May 2022.

Table 1: Overview of WASH baseline conditions, aligned with JMP service level[i]

Household, smallholding and community
Water • No reliable water source at the smallholding or in the household. • People have limited access to a water service from handpumps and a public tap; 46% use unimproved and surface water for drinking and domestic consumption. • Domestic-scale rainwater harvesting in some households. • Limited treatment of drinking water – 35% boil drinking water as common/primary treatment. • Four handpumps, which dry up during the dry season, so people walk on average 1–4km to collect water, spending on average 4–6 hours a day. • On average, a farmer loses around 7.5 working days each month due to collecting water, with average distance to water being 1,093m away.
Sanitation • No farmer has access to a toilet near or on their smallholding (place of 'work'), so open defecation is common. • 77% of people in the community, at household level, have basic or limited access to improved facilities; the rest use unimproved facilities and also practice open defecation.
Hygiene • 30% of people in the community have access to limited handwashing facilities (without soap) at household level, therefore most have no handwashing facilities at home. • Handwashing is not common, given the lack of access to water and handwashing facilities. • Poor waste management practices.

7. Tanzania Water and Sanitation Network (TAWASANET) (2019). *No-one left behind: Putting the water sector to work for inclusive growth and sustainable industrialisation – Water Sector Equity Report*. Available at: tawasanet.or.tz/files/TAWASANET%20Equity%20Report%202019.pdf (accessed 11 Jul 2022).

i. The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) reports on country, regional and global estimates of progress on WASH. The JMP service ladders are used to benchmark and compare service levels across countries. See: washdata.org/monitoring

Maria Gabriel, Farmer, relies on rainwater for cooking, cleaning, drinking and bathing. Machochwe village, Serengeti, Tanzania. May 2022.

Case study – Farmer

Maria Gabriel is a 62-year-old smallholder farmer in Machochwe, who supplies 200kg of millet to Serengeti Breweries Ltd. each year.

Every morning, she wakes up early to help prepare her grandchildren for school before heading out into her smallholding, where she works until the afternoon.

During the rainy season Maria harvests rainwater at home, but when supplies run out, she must collect unsafe water from a polluted river or well. She collects at least six buckets of water a day for her family, her family, which she uses for drinking, washing, cooking and cleaning.

Maria said, **"Water is life. I need it every day. I have 40 buckets at home, and I use them to store drinking water for when the dry season comes. The water source is nearby but it's not clean. For instance, in the river, people wash clothes, bathe and toilet just beside the river, and I must use the same polluted water. It is not right, and it is not safe, but I don't have a choice. This is the same as the traditional well."**

Maria is aware of the need to wash her hands to stay safe from COVID-19, but the lack of access to water makes it difficult. She said, **"We do wash our hands before eating, but that's all, given the scarcity of water. Perhaps we could do more if water was not an issue right now... I wish for a clean and safe water source nearby."**

2 Methodology

Beatrice Marwa and her family rely on two unreliable water sources, rainwater and water from a nearby well. Serengeti, Tanzania. May 2022.

Measuring WASH impact

We used an outcome and impact pathway to understand which potential WASH interventions could help improve people's access to safe water in the village. Research showed that building a new water kiosk would lead to many people using safe drinking water, cutting waterborne illnesses (and related costs) and contributing to a healthier, happier farming community.

Another important benefit would be a reduction in the time needed to collect water, freeing up time for productive work, including farming, caring for family members (children and sick people), education and recreation. Ultimately, more time on the farm would benefit both the farmers and SBL.

Because the baseline study and data collection had to be delayed as a result of the COVID-19 pandemic, recall questions were asked to ensure that the data collected was aligned with the period before intervention.

Table 2: Timeline for project

Study period	Timeline
Baseline (delayed due to COVID-19)	September 2021
Intervention – water kiosk completed	May 2021
Endline	May 2022

Research limitations

The pilot project was carried out during the global COVID-19 pandemic, leading to unforeseen challenges and limitations in data collection and productivity. The objective of the study was not to understand the business impacts of a post/non-pandemic scenario, therefore these are not fully understood or discussed.

The project was limited by insufficient knowledge of the smallholder context, which had implications on project design, implementation and meant the focus of the intervention was solely water provision. There was a lack of data from smallholder farming supply chains which made it difficult to measure and calculate quantitative data and demonstrate impact during the project period. However, the report was able to highlight the real-life challenges smallholder farmers face in a changing climate and demonstrate the business benefits of investing in WASH through qualitative and anecdotal evidence.

Beatrice Marwa, Farmer, washes the dishes at her family home in Machochwe village. Serengeti, Tanzania. May 2022.

Measuring financial value to the businesses

To understand and measure the ROI and business benefits derived from improving WASH in the workplace and communities, we defined an outcome and impact pathway for the project. Please start reading the diagram from stage '1. Investment/inputs'. This pathway lists all indicators that we endeavoured to collect data on as part of this project. However the project did not generate the necessary quantitative data, therefore white text indicates which indicators were tracked. The indicators in black were not tracked for this project.

Outcome and impact pathway

3 Outcomes

Community level

Farmers and family have:

- Improved access to water

2 Outputs

Community level

Capital:

- Borehole, water kiosk and guard house

4 Impacts

Benefit to people

- More time for farming, leading to increased production
- Enhanced community spirit
- Less illness in family
- Increased job satisfaction and morale
- Time saved from not collecting water
- Decreased personal medical costs
- Increased personal

Benefit to supplier

Quantitative:

- Improved yield/production
- Improved quality of crop
- Improved productivity

Qualitative:

- Better reputation for SBL
- Better relationship between SBL and farmers
- More reliable supply from smallholders (supply chain resilience)

1 Investment/inputs

- Capital cost
- Operation and maintenance (O&M) cost
- Opportunity cost

5 ROI*

No ROI was generated.

* The ROI is calculated by comparing baseline and endline data for the project period and is called the 'Project ROI'. However, the outcomes are often not visible in the short timeframe of the programme. To understand how the programme affects in the long-term, the ROI is projected for a period of 10 years and is called 'Projected ROI'. We take an average of factory level ROIs to calculate the overall ROI.

Implementation

Joyce Mwita, Farmer, used to spend 5–6 hours searching for clean water. Now it only takes her 5 minutes to collect water from the new water kiosk in Machochwe village, Serengeti, Tanzania. May 2022.

Ordinarily, WaterAid would design a full holistic WASH programme with water provision, sanitation facilities and hygiene behaviour change training; however, given the scope of the project, water was prioritised.

Hydrological assessments were carried out and in May 2021, a borehole and water kiosk were built 1km away from the centre of Mabatini sub-village where the right quality and quantity of groundwater was available. The borehole, paid for by Diageo, provided clean water to 500 people, with users paying 50 Tanzanian shillings ($0.02) for every 20-litre bucket of water which went towards the ongoing maintenance costs.

Focusing on one aspect of WASH does have limitations and impacts on the sustainability of the programme. For example, investing in water without hygiene and sanitation can't resolve the issues of water-related and waterborne diseases if people still choose to collect surface water due to poor hygiene knowledge. However, based upon an initial assessment and discussion with key stakeholders, water provision was identified as a priority.

Groundwater availability effected the impact of the intervention. The location of the water kiosk, 4.2km from Machochwe village centre where most of the farmers live, meant the reach of the planned water provision project was limited. See Figure 3 for the locations of the water kiosk/ borehole in relation to Machochwe village centre.

"Water is one of the most important human needs and we support areas with serious shortage where our contribution makes a real difference. WASH is linked to good health. With no good health there is no productivity. But when farmers are healthy, they can produce more and therefore provide for their families and improve wellbeing."

Justine Damian, Communication and Sustainability Manager, Serengeti Breweries Ltd.

Figure 3: Location of water facilities (borehole/water kiosk)

4 WASH outcomes

Yakobo Mubere Mwita, Farmer, says his family's health has improved since the installation of the water kiosk. Machochwe village, Serengeti. Tanzania. May 2022.

Project observations

Initially, it was estimated that the water kiosk would support around 500 people living in the sub-village of Mabatini, but in reality, very few farmers were able to benefit because they lived too far away.

If community members and farmers are too far from the kiosk to benefit or choose not to use it, on average they will spend 4–6 hours a day walking between 1–4km to collect water, which equates to 7.5 working days each month. We estimate the resulting costs associated with farmers missing work due to collecting water to be around 3,744,000 Tanzanian shillings ($1,605) in both farming seasons.

Since the water kiosk was installed, Yakobo Mubere Mwita, Farmer, and his family now have clean water to drink. Machochwe village, Serengeti. Tanzania. May 2022.

Case study – Farmer

Yakobo Mubere Mwita is a 69-year-old farmer who supplies Serengeti Breweries Ltd. with 200kg of millet from his smallholding annually.

His children are responsible for collecting water for the family from the new water kiosk, a one-hour round trip away, and the traditional well, which is closer to home (a 10-minute round trip).

He said, **"I use the water from the kiosk because it is very clean compared to the water from the well. We use at least two buckets of water for drinking and cooking daily. The water from the well we use for other activities like washing clothes, bathing, cleaning the house, and so on."**

"To me, the kiosk has been a good thing that happened in recent years. My children used to have stomach aches because of drinking unsafe water from the well, but now we drink the water from the kiosk..."

Yakobo understands the importance of handwashing, and passes this on to his children, **"I always tell my children to wash their hands before eating so that they can avoid diseases like [we had] before."**

He is looking forward to the water supply being extended, **"I use the kiosk water for just drinking and cooking because the kiosk is a little bit far from where I live. But if the kiosk taps get extended closer to where I live then I will be very happy."**

Case study – Farmer

Joyce Mwita is a 40-year-old farmer, wife and mother of four children. Her family's smallholding in Machochwe village grows maize, cassava and sunflowers, along with sorghum and millet, which they sell to Serengeti Breweries Ltd. Before the WaterAid and Diageo project, Joyce would spend hours every day searching for water. She said, **"I used to walk 2–3 hours searching for water, and I didn't have time to rest and do other activities like now."**

Since the installation of the water kiosk in her village, Joyce now only spends ten minutes collecting clean water every day, **"I have been collecting water from the kiosk which is very nearby to my home for a year now and it is better compared to before. This water is good, and you can hardly taste salt unlike other water sources. I use this water mainly for cooking, drinking and washing."**

When COVID-19 hit, handwashing was more important than ever. The water kiosk provided Joyce's family and community with essential handwashing facilities that can be used now and in the future to help protect their health.

She said, **"I haven't heard about COVID for a while now, but I still wash my hands because the water source is just nearby. My grandchildren wash their hands too and they drink the water from the kiosk."**

Even though the kiosk has brought much needed change to Machochwe, Joyce hopes to one day have a clean water source at her home so she can grow food, even in the drier months. She said, **"Even though the kiosk is not so far from my home, I would still like to have my own tap here a home so that I can use it to water my vegetable garden during summer."**

Joyce Mwita, Farmer, harvests sorghum at her farm in Machochwe village, Serengeti, Tanzania. May 2022.

The cost of water at the kiosk in Mabatini (50 Tanzanian shillings ($0.02) per 20 litres water) can be a deterrent. Most community members prefer unimproved and surface water over the water from the kiosk because it is free and, in some instances, closer to home. In addition, many may not fully understand the value of using an improved water source due to insufficient hygiene awareness training.

An extension of the water network is now underway to improve the supply throughout the Machochwe community, paid for by the Government of Tanzania through the Ministry of Water. The piped extension work, which began in February 2022, will provide 16 domestic water points and one kiosk when complete.

The new water kiosk has had a positive impact on the health and work of the farmers and wider community living in Machochwe. Serengeti, Tanzania. May 2022.

Julius Gibore Marwa at his farm in Machochwe village, Serengeti, Tanzania. May 2022.

Case study – Farmer

79-year-old Julius Gibore Marwa is a retired teacher and farmer who supplies 200kg of millet to Serengeti Breweries Ltd. a year, and raises cattle on his smallholding.

Julius and his family rely on two water sources. They harvest rainwater at home during the rainy season, and the grandchildren collect water from the traditional well, a five-minute walk away during the dry season.

He said, **"Water is very important to everyone, including me. During the rainy season, I collect rainwater at home. It goes through the rooftop and is stored in a tank. Before drinking it, I boil it to kill the germs – just because it's rainwater it doesn't mean that it's clean. During the dry season, we use water from the traditional well. The water is not safe... but it helps us to get by with activities such as cleaning and washing."**

Julius is aware of the water kiosk, but it is currently too far away from where he lives. He said, **"I am not using the water from the kiosk because it's far from my home, so I use the sources that are nearby. I would love to have a water tap at my home... I would be very happy if I get one at home or closer to home."** The planned network extension will reach Julius and his family – bringing clean water to his farm.

● Joyce Mwita, Farmer, collects water from the newly-installed kiosk in Machochwe village, Serengeti, Tanzania. May 2022.

Projected benefits

After the planned extension (pipework and taps) of the water network is complete, water scheme management is in place and hygiene training has been fully delivered to the community, the potential benefits of the project will be fully realised including:

- At least limited or basic access to a reliable source of safe water, compared to the unimproved and surface water currently used.
- Water no more than 400m away (which is within government standards), compared to the average distance of 1,093m reported at baseline.
- Sufficient water for hygiene practices when defecating, compared to having to use grasses and corn cobs.
- More access to water for handwashing and hygiene, compared to very few handwashing facilities due to water scarcity.
- More reliable and sustainable access to water for domestic needs (drinking, washing, cooking and cleaning) in the context of a changing climate where there is ongoing competition for scarce supplies.

The government-funded network extension will ensure a constant supply of safe water for the farmers across the community. This will improve health and make better hygiene practices possible. The farmers and their families will spend less time collecting water and be able to spend more time farming, harvesting and attending school.

At the centre of Kichongo sub-village, where most of the VICOBA 715 members live, everyone is eager for the water network extension to be completed and the farmers are ready to pay for the water service.

It is anticipated that the water network extension will bring benefits to the community, the farmers and their families with reliable access to water, resulting in improved health, livelihoods and farm productivity.

SBL is also set to benefit, with an improved and more reliable supply of raw materials from the farmers, boosting productivity and growth of the business.

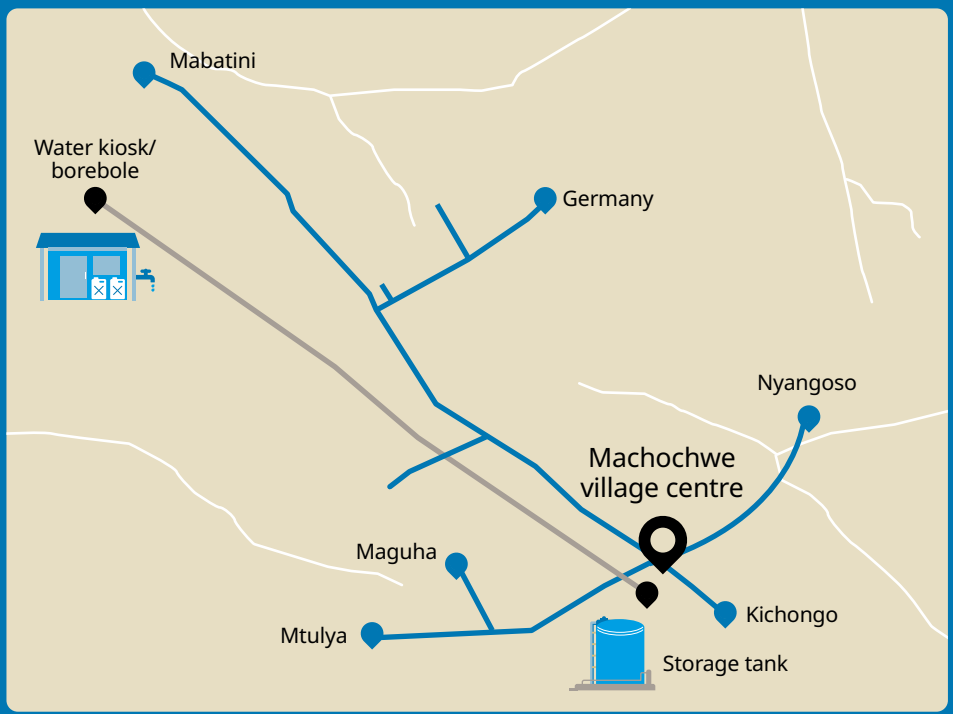


Figure 4: Location of the planned network extension

Transmission main

Distribution network

Learning and insights

Maria Gabriel, Farmer, checks the rainwater buckets at her home in Machochwe. Serengeti, Tanzania. May 2022.

In spite of the lack of quantitative data to calculate individual business benefits and a return on investment, this pilot project has highlighted several valuable lessons and insights for WASH intervention in the agricultural sector.

Capital Expenditure (CapEx) on a project can be daunting and returns might not be immediate. But companies should aim to implement WASH solutions where there is scope to do so, where suppliers are engaged and supportive, and where improvements can be made at work and in communities.

Solutions do not always require large Capital Expenditure with some low-cost solutions providing big results.

Design principles

These elements should be considered by the company and implementing partner when trying to execute a successful WASH programme where there is an objective of business return:

- **Take time** to understand the sector or the business, as well as their objectives, commitments and priorities.
- **Solicit** senior level engagement and ensure that suppliers are engaged and supportive of what needs to be implemented.
- **Identify** the 'low-hanging fruit' where there is scope for making improvements in workplace WASH provision and consider the communities where the smallholder farmers live.
- **WASH** solutions should be context specific and climate resilient – designed for the business and objectives of the project.
- **Consider** effort vs. reward when identifying WASH solutions for the business, large CapEx isn't always required.
- **Consider** potential of reach, scale and replication across the business.
- **Leverage** funding from government or other stakeholders which both offsets the company costs but also enhances the outcomes and results.

Climate change is impacting smallholder farmers and supply chains

Climate change is already affecting water access – impacting smallholder farmers' reliance on rainfall for their livelihoods and day to day life, and having a knock-on effect on the resilience of supply chains.

Tanzania has experienced drought[8] in recent years and according to the Machochwe Village Agricultural Officer, there were two periods of extreme drought in the village over the project period, from July to August 2021 and January to February 2022. These coincided with important stages in the agricultural cycle, impacting productivity and preventing the VICOBA 715 farmers from selling their sorghum and millet to SBL due to poor quality and yield.[ii]

As a result, SBL has not received a consistent supply of grain from the VICOBA group, and the smallholder farmers have therefore not had reliable income or food for their families. As the impacts of climate change worsen, the effect on both farmers' access to water and the production of growing crops will be more severe.

Climate-resilient, inclusive and sustainable WASH services increase the availability of water in times of scarcity, providing supplies for people's basic needs, health and hygiene, and livelihoods. They can reduce the overall disease burden, help people to better withstand the difficulties that climate change brings[9] and make communities more resilient.

8. International Federation of Red Cross and Red Crescent Societies (2022). *Tanzania: Food insecurity (drought) – emergency plan of action (EPoA), DREF Operation MDRTZ030. Format Situation Report.* Available at: reliefweb.int/report/united-republic-tanzania/tanzania-food-insecurity-drought-emergency-plan-action-epoa-dref (accessed 11 Jul 2022).
9. WaterAid (2021). *Programme guidance for climate resilient WASH*. Available at: washmatters.wateraid.org/sites/g/files/jkxoof256/files/programme-guidance-for-climate-resilient-water-sanitation-and-hygiene.pdf (accessed 11 Jul 2022).

ii. SBL has subsequently supplied higher yield seeds to the VICOBA farmers.

Yakobo Mubere Mwita, Farmer, tends to his livestock in Machochwe village, Serengeti. Tanzania. May 2022.

Stakeholder collaboration is essential for sustainable WASH

Poor sustainability of infrastructure is cited as one of the biggest constraints to universal access to safe water in rural parts of Tanzania, with around 60% of water schemes reportedly non-functional due to either poor design or mismanagement.[10]

To achieve sustainable WASH, strong political systems and infrastructure are needed to ensure WASH gains last and deliver benefits to everyone in society, requiring the engagement of both businesses and government.[iii] Clarity on roles and responsibilities will enable multiple stakeholders to reach more people and build a stronger system. Effective engagement between SBL, WaterAid and the Tanzanian Government has leveraged additional funding, enabling this project to be a longer term, sustainable and more holistic WASH solution for the community – beyond a single borehole and water kiosk.

Sustainable results take time to achieve

To achieve sustainable improvements to WASH access, a long-term strategy is needed. Building relationships between stakeholders and understanding the needs of communities takes a sustained investment of time and effort.

A WASH project can be the first step in improving the resilience of communities as well as people's livelihoods and the businesses that rely on them. Initial challenges can be overcome with a combined approach from multiple stakeholders committed to problem solving and effective project design. The combined support and intervention from Diageo, SBL, WaterAid, Tanzanian Government departments and the farming community has led to better overall results, with current plans for a network extension, however this has taken time and effort and should not be underestimated.

Holistic WASH solutions deliver the most value

In this case, water provision was identified as an immediate priority for the life and livelihoods of people and the farming community. This initially limited the impact and sustainability of the project.

Taps and toilets are fundamental, but for the maximum benefit to be achieved, these must be combined with education on the importance of using safe drinking water, toilets that ensure proper waste disposal, and improved hygiene practices. WASH projects that focus on one pillar of WASH can only be fully successful if the other two pillars are already robust. The project in Tanzania would have been strengthened and likely delivered even better results if the water provision programme had been supported by a sanitation programme and hygiene training at the same time.

10. Tanzania Water and Sanitation Network (TAWASANET) (2019). *No-one left behind: Putting the water sector to work for inclusive growth and sustainable industrialisation – Water Sector Equity Report*. Available at: tawasanet.or.tz/files/TAWASANET%20Equity%20Report%202019.pdf (accessed 11 Jul 2022).

iii. WaterAid advocates system strengthening, which means understanding that WASH exists in a complex system with many component parts and within different social, economic, political and environmental contexts. It involves identifying and working to address the barriers in behaviours, policies, processes, resources, interactions and institutions that block achievement of inclusive, lasting, universal access to WASH. See: washmatters.wateraid.org/sites/g/files/jkxoof256/files/2020-10/suswash-global-learning-report-executive-summary.pdf

Call to action

Improving WASH provision for smallholder farmers in remote, sparsely populated agricultural context is challenging. But it has great potential to build resilience, and strengthen supply chains, boosting the livelihoods of some of the most climate-vulnerable people.

To improve WASH access at the scale required, businesses have an important role to play alongside government. Even though the farmers may be a crucial part of a complex supply chain, smallholders are not directly contracted by a company and are often outside its sphere of influence. Therefore, the provision of WASH for smallholder farmers is, in reality, a community WASH project with benefits to business and the community.

When planning and implementing a WASH intervention for smallholder farmers, we recommend the following, based on our learning and insights from this project:

- Collaborate with:
  - A WASH implementing partner to put climate-resilient WASH programming in place, ensuring minimum commitments[iv] are met and that WASH solutions are relevant for agricultural 'workplace' setting, contexts and scale.
  - Other companies sourcing from common smallholder suppliers in similar geographies and sharing similar objectives for the best results.[v] This collaborative approach can support pooling of funding, leverage with other stakeholders, and sharing of good practices.
  - Government to enhance the reach and impact of national and local WASH improvements already underway.
- Understand what your peers are doing with regards to the human right to water and sanitation, and consider the UN guiding principles on business and human rights.[11] These guiding principles and frameworks can support decision making regarding your sphere of influence and responsibility, which in agricultural supply chains can be challenging to identify.
- Make a long-term plan and allow time for results to be seen. Keep your plan flexible so challenges can be addressed as they arise and the project can adjust to the changing context, especially impacts of a changing climate on agricultural productivity.
- For the biggest business benefits and value to the community, design your WASH at work implementation as a holistic solution, considering water, sanitation and hygiene interventions.

How could your company benefit from WASH investment? To find out, visit **wateraid.org/boosting-business**

iv. For more on the minimum commitments to climate-resilient WASH, see: WaterAid (2021). *Programme guidance for climate resilient WASH*. Available at: washmatters.wateraid.org/sites/g/files/jkxoof256/files/programme-guidance-for-climate-resilient-water-sanitation-and-hygiene.pdf

v. WASH4WORK (wash4work.org) and the Water Resilience Coalition (ceowatermandate.org/resilience) provide a valuable forum for collective action opportunities and guidance.

11. The CEO Water Mandate (2015). *Guidance for Companies on Respecting the Human Rights to Water and Sanitation: Bringing a Human Rights Lens to Corporate Water Stewardship*. Available at: ceowatermandate.org/wp-content/uploads/2018/09/Guidance-on-Business-Respect-for-the-HRWS_(1).pdf (accessed 21 Jul 2022).

Front cover image: Julius Gibore Marwa, Farmer, at his farm in Machochwe village. Serengeti, Tanzania. May 2022.

WaterAid is an international not-for-profit, determined to make clean water, decent toilets and good hygiene normal for everyone, everywhere within a generation. Only by tackling these three essentials in ways that last can people change their lives for good.

Joyce Mwita is a farmer in Machochwe village, Serengeti, Tanzania. May 2022.

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