Muthambi 4K Water User Association

Five-Year Financial Sustainability Action Plan: Booklet

Released 2020







Table of Contents

4 Introduction
5 Questionnaire Findings
8 Objectives
11 Financial Sustainability Action Plans
18 WASREB Progress Indicators
21 References
22 Thank You

• Introduction •

This booklet was designed as supporting material for the five-year financial sustainability action plan poster. It aims to provide more details on the key findings and actions as well as support the progress monitoring. This booklet includes the explanations for the recommended action steps and a table for tracking the progress towards reaching the objectives. It also provides findings from the customer questionnaire and identification of the business model. The financial sustainability action plan was developed during workshops in February 2020. The purpose of this booklet is to help track the progress towards the utility's targets and is intended to be used as a workbook to be filled in with further details such as people responsible for actions, resources allocated to the activities and timelines and completion dates. As this booklet is intended to be utilized by the utility, it focuses on the findings and actions and does not explain the methods. More information on the methods and project implementations can be found in the General Recommendations – booklet provided to the Water Sector Trust Fund.

• Questionnaire Findings •

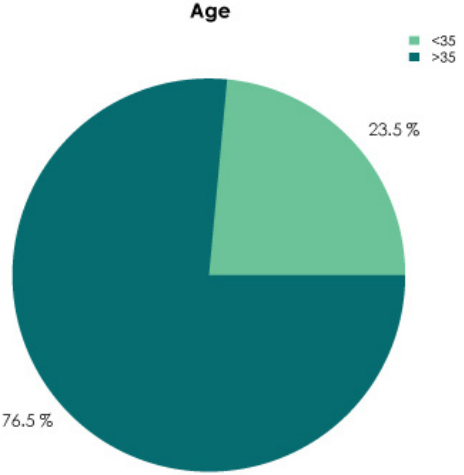
A total of 149 customers filled in the questionnaire. From all the questionnaire respondents 59% were male and 76.5% were over the age of 35, while 72% were unemployed. The average household size was 4.9 residents per household.

23.8% of customers feel like the water supply isn't enough for their needs.

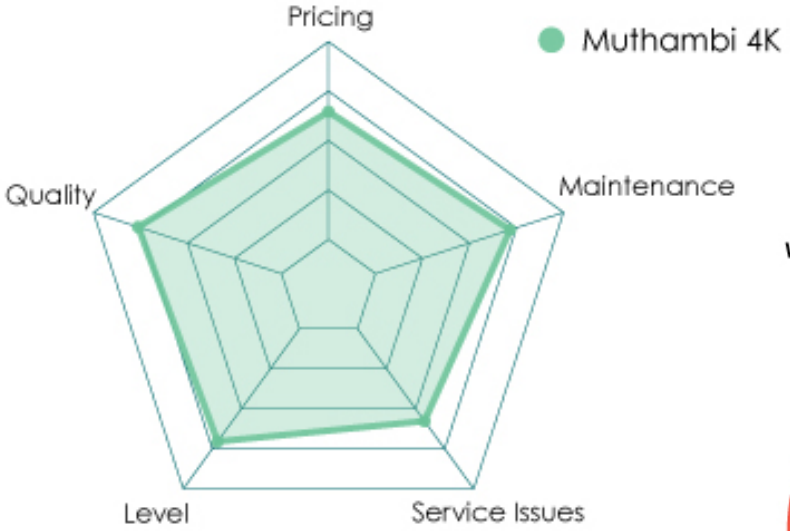
3 customers (2.1%) reported having had waterborne diseases. 30.4% of households treat their water at home mostly by boiling and adding chemicals..

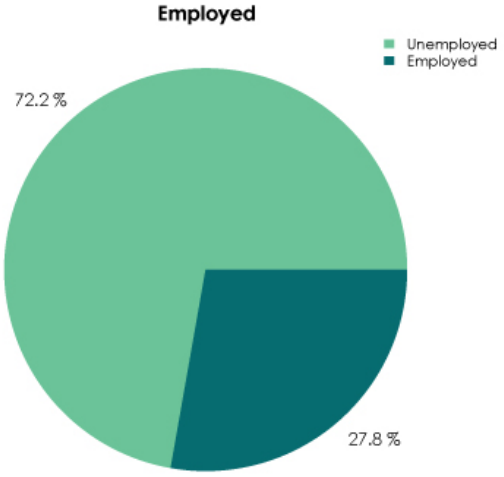
In Muthambi three customers were using a river, shallow well or other and one was using a water kiosk as their main source of water. The rest (97.3%) had a household connection. 107 customers (73.8%) with a household connection were also utilising an additional source of water. Most of the customers were using river, shallow well or other as their additional source of water.

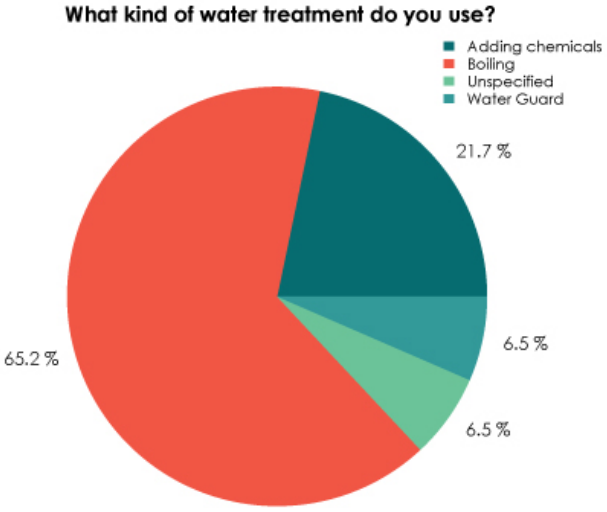
Customers felt least informed about service issues. Customers were overall quite satisfied with water quality and customer service.

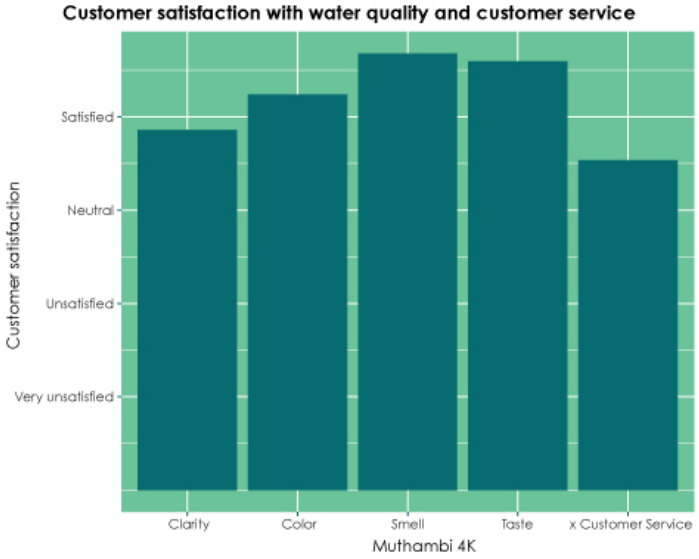


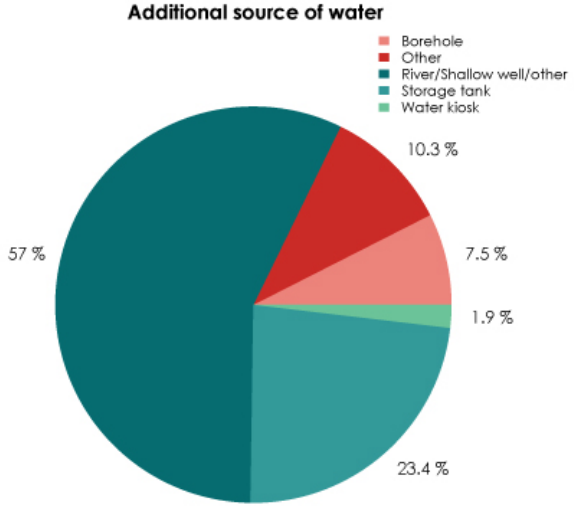
How well are the customers informed?

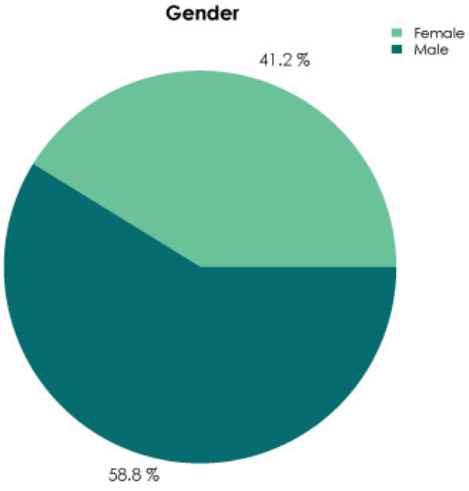







Customer satisfaction with water quality and customer service
Satisfied
Neutral
Unsatisfied
Very unsatisfied
Customer satisfaction
Clarity
Color
Smell
Taste
x Customer Service
Muthambi 4K


Additional source of water
Borehole
Other
River/Shallow well/other
Storage tank
Water kiosk
10.3 %
7.5 %
1.9 %
23.4 %
57 %


Gender
Female
Male
41.2 %
58.8 %

• Objectives •

The key objectives for the Muthambi 4K Water Users Association were established based on the workshops and discussions on the 22.2.2020 and the questionnaire findings. They describe the main areas of focus for the utility that are presented in the Financial Sustainability Action Plans.

- **Revenue collection and sensitization:** According to WSTF (2017, p.32) revenue collection efficiency is one of the key elements for ensuring survival of any business entity. As revenue collection efficiency directly affects the cash flow of a utility (Banda & Mwale 2018), poor revenue collection is one of the reasons rural water services suffer from low sustainability (WSTF 2016, 23.) Based on our discussions with the utilities, we recommend using multiple techniques for sensitizing customers about the importance of paying. According to our findings, this can increase utility's reliability, customer satisfaction, and financial stability.

- **Establish and minimize the amount of NRW:** High NRW level affects the financial sustainability of a water utility, as it makes it harder to meet existing demand and poses a risk to the water security (WASREB 2019, 12-13). Establishing and reducing NRW can help to increase water supply, cut operating costs and thus, lead to improved service delivery and customer satisfaction (WASREB 2019, 13).

- **Customer communications:** It is commonly known that customers are the key of all utility's operations, as without them, there would not be a need for operations at all. Thus, according to our findings, focusing on customer communications is essential. Our findings indicate that by ensuring that customers have a way to reach information needed and communicate with the utility, the customer satisfaction can increase.

- **Maintenance:** According to our findings, proper and timely maintenance increases the sustainability of the utility by increasing the efficiency and working life of the infrastructure. We recommend training the maintenance employees well and ensuring that they have the resources needed for proper maintenance.

- **Conservation of water source:** Protecting natural resources with a view to establishing a sustainable system of development is the mandate of the national government (WASREB 2019, 6). To ensure that also the operations of the utility do not harm environment and development of the system is possible in the future, we recommend proper conservation planning and using resources on conservation.

- **Human resources:** By having management training and technical O&M training, the utility can improve their functionality (Caritas Switzerland 2018). Thus, we recommend having regular training on management, technical skills and financial skills to improve the operations, and also increasing communication between committees to ensure that all working in the utility are working towards same goals and targets.

- **Transparency and collaboration:** Transparency of accounting increases the payment rate of monthly tariff (Schweitzer and Mihelcic 2012) and according to our findings, transparency helps with collaborating with other utilities, county and other major stakeholders of the utility. Our findings show that utilities that are collaborating with counties and other utilities are working more effectively, thus we recommend being transparent about all operations to all parties interested and working together with major stakeholders to improve the water services.

- **Expanding services:** According to our findings, the utility has potential of expanding services to new areas and customers. We recommend looking into these possibilities when the utility has the financial resources needed available, and has ensured that the water source is not endangered due to the expansions.

- **Water quality:** Water quality has a direct impact on the health of consumers (WASREB 2019, 33) and thus, by testing and improving the quality of water, the utility ensures the safety of its customers. Based on our findings, we recommend

that the utility monitors the quality of water regularly, publishes the results of the monitoring to increase transparency and when needed, focuses resources on improving the quality of water.

- **Planning:** Planning helps an organization to stay focused, anticipate and avoid obstacles, and set goals and measure success (Abrams 2003, p. 34). By using strategic planning and creating a performance improvement plan, a water utility can create a common focus, bring out structural deficiencies and enhance accountability and transparency (Mugabi, Kayaga and Njiru, 2006). We recommend using time and resources for planning all projects organized, to ensure that all aspects of the projects are considered and that they lead to desired results. Also, to increase transparency of the utility, we recommend that all plans should be written down and available for everyone to see.
- **Business model mapping:** Identifying and planning the most suitable business model based on the *WASREB Guidelines for Provision of Water and Sanitation Services in the Rural and Underserved areas* is important for establishing a clear plan on the management structure and business progress plan towards becoming licensed. These steps include collaboration with different stakeholders such as County Government, regulated Water Service Providers and WASREB as well as public participation (WASREB, 2019). It is also useful to identify, whether private sector services could be utilized for more efficient operations and maintenance (WSTF, 2017). Monitoring the utility's performance with the WASREB progress indicators can provide useful information on the utility's operations and is also one of the licensing requirements (WASREB, 2019).

Financial Sustainability Action Plan

Year 1: Organize and Sensitize

Deadline (Date)	Activity	Sub-Activity	Related Objective	Success Indicators	Person Responsible	Resources	Completed (Date)
	Institutionalizing a business plan	Creating a business plan for more structured direction and strategy	Planning	A business plan institutionalized			
	Establish collaboration and associations with other similar utilities in the same county	With the support of WSTF, agree on a self-regulating standard in close collaboration with the County Government.	Transparency and collaboration	Self-regulating standards with similar utilities established			
	Saving funds for conservation of water source	Allocate a portion of the revenue to the environmental cost recovery, supporting the catchment protection through WRUA/CFAs	Conservation of water source	To enable protection and conservation of the water source and riparian land			
	Acquiring an automated billing system/ accounting software	Procurement and installing of automated billing system to combine with accounting (such as Quickbooks)	Revenue collection and sensitization	Increased revenue collection, billing and accounting efficiency			
	Penalizing those with illegal connections	Establish penalties with CG on illegal connections	Establish and minimize the amount of NRW	Penalties for illegal connections established			
	Creating public awareness and sensitization	Hold regular barasas and quarterly customer meetings	Customer communications	Increased revenue collection, customer understanding and satisfaction			

Year 1: Organize and Sensitize

Deadline (Date)	Activity	Sub-Activity	Related Objective	Success Indicators	Person Responsible	Resources	Completed (Date)
	Identifying the business model and delivery option according to the WASREB Guidelines	Situational Analysis by County Government to identify a suitable business model	Business model mapping	Business model identified with County Government			
		Selection of Delivery Option	Business model mapping	Delivery option selected			
		Public/Stakeholder Engagement	Business model mapping	Stakeholders engagement procedures finalized			

Year 2: Increasing Service Efficiency

Deadline (Date)	Activity	Sub-Activity	Related Objective	Success Indicators	Person Responsible	Resources	Completed (Date)
	Air valves on main pipes	Installation of air valves on main pipes	Maintenance	More accurate meter readings through installed air valves			
	Enhancing good customer service	Improving the customer communication platform	Customer communications	Higher customer satisfaction			

Year 2: Increasing Service Efficiency

Deadline (Date)	Activity	Sub-Activity	Related Objective	Success Indicators	Person Responsible	Resources	Completed (Date)
	Line patrolling	Frequent line patrolling to identify bursts and leakages	Establish and minimize the amount of NRW	Quick response to leakages and bursts			
	Allocate resources to decrease NRW	Consider enhancing NRW office or acquiring new equipment, e.g. zonal/ smart meters	Establish and minimize the amount of NRW	Need and possibility to acquire supporting equipment identified			
	Water supply systems	Augmentation of the old water supply systems	Maintenance	Old water supply augmented to match rising water demand			
	Enhancing good customer service and steady water supply	Develop and implement an O&M management plan	Maintenance	Improved customer satisfaction			
	Operationalization of the delivery option	Procurement and contracting of private operators if needed	Business model mapping	Private operators engaged if necessary			
		Implementing institutional changes identified in the delivery option	Business model mapping	Institutional changes implemented			
	Revising Financial Sustainability Action Plan	Revising Financial Sustainability Action Plan for the 3rd- 5th years	Planning	Action plan revised			

Year 3: Social and Environmental Sustainability

Deadline (Date)	Activity	Sub-Activity	Related Objective	Success Indicators	Person Responsible	Resources	Completed (Date)
	Capacity building and training of the staff and board members	Supporting on-job training (technical)	Human resources	Increased operational efficiency by improving skills			
		Sponsoring studies, if possible, to bring skills	Human resources	More qualified staff, skills and knowledge			
	Consider the need to employ qualified staff	Hiring quality personnel if needed	Human resources	More qualified staff, skills and knowledge			
	Protecting the riparian land	Supporting the catchment protection through WRUA/CFAs	Conservation of water source	Increased resilience and environmental sustainability through secured water source			
	Setting policies for management qualifications	Create a management qualification and selection criteria in close collaboration with the County Government and local leadership	Transparency and collaboration	Increased transparency and reliability of the utility			
	Collaborating with other stakeholders	Seeking advice, knowledge and training from county government, and WSTF. Sharing own knowledge with other water utilities	Transparency and collaboration	Bringing in new ideas and knowledge that have been tried and tested by others			

Year 4: Expand and Upgrade

Deadline (Date)	Activity	Sub-Activity	Related Objective	Success Indicators	Person Responsible	Resources	Completed (Date)
	Consider the need and possibility to extend and upgrade network and equipment	Consider constructing additional water storage facilities	Expanding services	Plan for the need of additional water storage facilities created			
		Consider constructing larger storages for pipes and fittings	Expanding services	Plan for the need of additional storage facilities created			
	Review tariff structure	Review altering the tariff structure	Business model mapping	Tariff structure updated to increase efficiency and sustainable water use			

Year 5: Plan for the Future

Deadline (Date)	Activity	Sub-Activity	Related Objective	Success Indicators	Person Responsible	Resources	Completed (Date)
	Consider the possibility to acquire revenue from other sources	Think of new revenue possibilities like bottling water or selling seedlings	Expanding services	Bring new ideas and a plan for growth			
	Plan the construction of full water treatment plant	Consider and carefully plan the need and possibilities of the treatment plant	Water quality	Plan for construction of the water treatment plant created			
		Seek advice from the county government, WSTF and other utilities	Water quality	Getting advice and guidance and bringing new ideas and skills			
	Creating a Financial Sustainability Action Plan	Make a financial sustainability action plan for the next five years	Planning	New financial sustainability action plan created with measurable and actionable steps			

• WASREB Progress Indicators •

This is a template for monitoring and evaluating the utility's progress through measurable indicators. It is recommended, that the utility strives to measure their progress through these indicators, because this information is important for the utility to become licensed. More information on calculating these indicator values are provided by WASREB and WSTF and Majidata website (2018). The progress indicators are the national indicators set by WASREB (2018) and they are defined followingly:

- **Operation and Maintenance (O+M)** Cost Coverage is the extent to which a utility is able to meet its O+M costs from internally generated funds. O+M Cost Coverage is critical to the performance of a utility as it is a first step towards full cost coverage. It ensures long term financial sustainability.

- **Drink Water Quality (DWQ)** measures the potability of the water supplied by a utility. It is a critical performance indicator since it has a direct impact on the health of consumers. This is a weighted composite indicator measuring compliance with residual chlorine standards (40%) and bacteriological standards (60%).

- **Revenue Collection Efficiency** refers to the total amount of money collected by a utility expressed as a percentage of the total amount billed over the same period. It has been used to measure the effectiveness of the revenue management system in a utility.

- **Water Coverage** refers to the number of people served with drinking water expressed as a percentage of the total population within the service area of a utility. It is critical in tracking the progressive realization of the right to water with regard to the accessibility component in the normative content of the right to water.

- **Pro-poor assessment.** WASREB has developed a tool for assessment of utility performance with respect to services in Low Income Areas (LIAs). The tool not only monitors the level of pro-poor services but also gives guidance on improving services in these areas. The tool consists of four sub-indicators namely: i) Service coverage in LIAs, ii) Service levels in LIAs, iii) Strategy and organisation with respect to service provision in LIAs, iv) Compliance to standards for water kiosks.

- **Water Governance Assessment** refers to systems that are involved in decision-making about water management and water service delivery. WASREB has developed a governance indicator tool with emphasis on the following six sub-indicators: i) Utility Oversight and Supervision, ii) Information and Control Systems, iii) Financial Management, iv) Service Standards, v) Human Resources, vi) User Consultation

- **Personnel Expenditures** as a percentage of O+M Costs measures whether personnel related expenses are proportionate to overall O+M costs as defined by the respective sector benchmarks.

- **Metering Ratio** is the number of connections with functional meters expressed as a percentage of the total number of active water connections. It is an empirical way for a utility to ensure that consumers only pay for what they consume. It is expected that the functionality of these meters is occasionally ascertained by the utility by sampling them for calibration or replacing the aged ones through adoption of a metering policy.

- **Non-Revenue Water** is the difference between the amount of water put into the distribution system and the amount of water billed as authorized consumption. It comprises of both commercial (apparent) losses and physical (real) losses. It is an operational indicator contributing to the sustainability question of the utilities and therefore is a significant measure that facilitates evaluation of the efficiency of operations by the utilities.

- **Hours of Supply** refers to the average number of hours per day that a utility provides water to its customers. It measures the continuity of services of a utility and thus availability of water to the customer. It is an important indicator on quality of service and shows the extent to which the utility is making progress towards the fulfilment of the human right to water and sanitation in terms of availability.

- **Staff Productivity** refers to the number of staff in employment for every 1,000 connections (total registered water and where applicable, sewer connections). It measures the efficiency in staff utilization. Staff productivity is affected by factors such as size of a utility, the nature of human settlement (distances between connections and number of towns served), skills mix, and the extent of outsourcing for services and whether a utility provides water alone or water and sewerage services together, among others.

Indicator	January	February	March	April	May	June	July	August	September	October	November	December
Operation & Maintenance Cost (%)												
Drinking Water Quality												
Revenue Collection Efficiency												
Water Coverage												
Pro-poor Assessment												
Governance Assessment												
Personnel Expenditure												
Meter Ratio												
Non-Revenue Water												
Hours of Supply												
Staff Productivity												

References

Abrams, R. 2003. The Successful Business Plan: Secrets & Strategies. 4th ed. Palo Alto, USA: Running 'R' Media. 417p. (Successful Business Plan Secrets and Strategies) ISBN 0966963563

Banda, E. & Mwale, F. 2018. Utility performance in supplying water to informal settlements: A case study from Malawi. Utilities Policy. Vol. 55. P. 151-157. doi:10.1016/j.jup.2018.09.009

Schweitzer, R. & Mihelcic, J. 2012. Assessing sustainability of community management of rural water systems in the developing world. Journal of Water, Sanitation and Hygiene for Development. Vol.2:1. P. 20-30. doi:10.2166/washdev.2012.056

Mugabi, J., Kayaga, S. & Njiru, C. 2007. Strategic planning for water utilities in developing countries. Utilities Policy. Vol. 15:1. P. 1-8. doi:10.1016/j.jup.2006.10.001

WASREB. 2019. Guidelines for provision of Water and Sanitation Services in the Rural and Underserved areas.

WASREB. 2019. Impact: A performance report of Kenya's water service sector – 2017/18. [Accessed 16 Jan 2020]. Available at: https://s3-eu-west-1.amazonaws.com/s3.sourceafrica.net/documents/119257/WASREB-Impact-Report-2019.pdf

WASREB & Water Sector Trust Fund. 2018. Majidata-portal. [Accessed 15 May 2020]. Available at: http://majidata.go.ke/public-portal/

Water Sector Trust Fund. 2017. Service delivery model toolkit for sustainable water supply. [Accessed 16 Jan 2020] Available at: https://waterfund.go.ke/publications?download=88:service-delivery-models-toolkit-v2

Water Sector Trust Fund. 2016. Support to equitable access to quality water, basic sanitation and enhanced water resources management for the underserved communities in rural Kenya – Joint 6 Programme. Project document.



• Hamjambo! •

We'd like to thank the Muthambi 4k Water User Association for warmly welcoming us into their community. We learned a lot from Muthambi 4K's successes during our meeting, and that has helped us get a better perspective on rural water utilities. Although there are still challenges to face in Muthambi 4K, we believe the members of the utility are highly motivated and have proven themselves capable. We hope this 5-year action plan serves you well, and we wish the entire community the best of luck in achieving their goals. Asante sana!

SuWaMa 2020
Felipe da Silva
Arunima Jain
Maria Kosonen
Oona Oikarinen