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SAWA

COMPLETION REPORT FOR LITUHI PARISH WASH PROJECT NYASA DISTRICT COUNCIL

Name of Project:	Improvement of WASH Infrastructure
Location:	Nyasa DC, Ruvuma Region
Subject:	Completion Project Report – Phase 1
Reporting Date:	November 30th, 2025
Name of Client:	Catholic Diocese of Mbinga
Implementing Agent	SANITATION AND WATER ACTION (SAWA) www.sawatanzania.org
Funding Agent	WEFTA; www.wefta.net
Project Cost	$ 126,305.20

On 27th of November 2025, Kihuru village in Lituhi Ward - Nyasa DC, photo shows constructed infrastructures at the Lituhi Parish. Photo captured by Daniel Masubo

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1.0 Introduction

This Final Project Completion Report presents a comprehensive overview of the activities implemented under the Improvement of Water, Sanitation, and Hygiene (WASH) Infrastructures Project at Lituhi Parish Centre, located in Nyasa District. The project was implemented by Sanitation and Water Action (SAWA) in close cooperation with the Lituhi community, with generous funding support from Water Engineers for the Americas and Africa (WEFTA).

The overall objective of the project is to improve access to safe water, adequate sanitation, and enhanced hygiene facilities for the Lituhi Parish Centre, the associated hospital, religious institutions, and the surrounding beneficiary community. The interventions were designed to address critical gaps in water supply, sanitation infrastructure, and hygiene practices, thereby contributing to improved public health outcomes, environmental protection, and dignity for all users of the facilities.

The project is being implemented in two distinct phases, depending on the availability of funds. **Phase I** has been fully completed, while **Phase II** is planned to commence in **2026**, subject to funding availability. Phase II will focus on the construction of a modern hi-tech incinerator and the fencing of the hospital compound, which will further strengthen healthcare waste management and improve overall safety and security within the hospital environment.

Phase I primarily focused on the construction of new sanitation facilities, rehabilitation of existing WASH infrastructures, and the development of a reliable water source to ensure a sustainable supply of safe water for domestic and institutional use. All planned Phase I activities were successfully completed as outlined below.

The following activities were successfully completed under **Phase I** of the project:

i. ***Water quantity and quality testing*** *was conducted, and the results confirmed that the water is potable and suitable for domestic use.*

ii. ***Construction of a new water source****, specifically a well, to ensure a reliable and safe supply of water.*

iii. ***Construction of a pump house*** *to securely house and protect the pumping system.*

iv. ***Construction of a protective fence around the water source area*** *to enhance the security and protection of the facilities installed.*

v. ***Laying of water pipelines****, including approximately 682 meters of pumping main pipes from the water source to the storage tanks, and approximately 700 meters of water distribution network pipes from the storage tanks to the beneficiary areas.*

vi. ***Construction of control valve chambers*** *along both the pumping main pipeline and the water distribution network to facilitate effective control and maintenance of the system.*

vii. ***Casting and installation of pipeline marker posts*** *along the entire pipe network to clearly identify the pipeline routes and minimize the risk of accidental damage.*

viii. ***Water connections to households and institutions*** *covered by the project, ensuring access to clean and safe water for the intended beneficiaries.*

ix. ***Hospital sanitation improvements****, which included a wide range of construction and rehabilitation works, namely: construction of a new OPD toilet block with two (2) stances and associated sewage infrastructure; renovation of a toilet block in the surgical ward with four (4) stances and sewage infrastructure; extension of one (1) toilet block with one stance in the medical ward; renovation of two (2) stances in the CTC building; renovation of a staff ward including a toilet and bathroom with hot and cold water systems; renovation of a priests'ward including a toilet and bathroom with hot and cold water systems; renovation of the OPD reception office; construction of two (2) group handwashing stations located at the emergency gate and at the entrance to the reception office respectively; installation of five (5) handwashing basins at points of care; renovation of two (2) stances in the doctors' house; construction of septic tanks and soak-away pits for the surgical ward; renovation of wastewater chambers; and replacement of the sewage pipe system in the patient toilet block with four (4) stances.*

x. ***Improvements at the Sisters' House****, including renovation of four (4) toilet blocks with a total of eight (8) stances; construction of a new toilet block with two (2) stances for sisters' workers; major renovation of the corridor walkway leading to the kitchen; renovation of the corridor at the main gate; and renovation of the reception office.*

xi. ***Improvements at the Priests' House****, including renovation of three (3) toilet blocks with a total of twelve (12) stances; major renovation of corridors with a total length of sixty (60) meters; renovation of septic tanks; and construction of a new soak-away pit.*

xii. ***Improvements at the Church****, including construction of a new toilet block with two (2) stances (male and female) and extension of an existing toilet block by adding one (1) stance inside the church.*

xiii. To ensure the sustainability of the installed WASH facilities, a Water Management Committee was formed and trained, and a water tariff scheme was established to enable the collection of sufficient revenue for the operation, routine maintenance, and long-term sustainability of the water supply system.

2.0 CONSTRUCTION ACTIVITIES

2.1 CONSTRUCTION OF NEW TOILETS

2.1.1 Construction of Two-Stance Toilets for Congregations, OPD, and Sisters' Workers

The construction of two-stance toilet blocks serving the congregation, Outpatient Department (OPD), and sisters' workers was successfully completed under Phase I of the project.

a) Congregation Toilet Block

The congregation toilet block consists of two stances, one designated for males and the other for females, and is intended to serve worshippers attending church services and other religious gatherings. The facility was constructed with properly installed clean water and sewage systems to ensure safe and effective use. Each stance is equipped with a handwashing basin to promote good hygiene practices. In addition, wastewater chambers, a septic tank, and a soak-away pit were constructed to ensure environmentally safe disposal of wastewater and sewage.

Constructed toilet block for congregation

Constructed toilet block for congregation

b) OPD Toilet Block

The OPD toilet block comprises two stances (male and female) and serves outpatients visiting the health facility. The toilet block is fully equipped with all key facilities required for hygienic use, including reliable clean water supply and a functional sewage system. As part of this intervention, the project also rehabilitated four existing wastewater chambers that were previously out of use. The new toilet block was connected to the existing wastewater system, which was also

rehabilitated due to challenges such as clogged chambers, thereby restoring full functionality of the sanitation system.

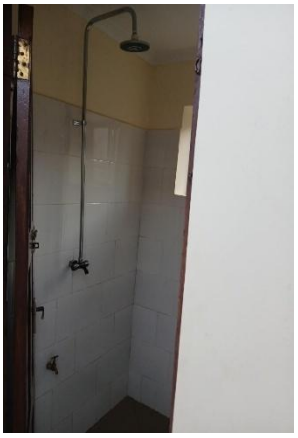
Renovated OPD reception office in the similar with OPD toilet block

Constructed toilet block with two stances for OPD

c) Sisters' Workers' Toilet Block

Prior to the project intervention, sisters' workers were using a dilapidated latrine that was no longer suitable for safe use. During a meeting held on 24th October 2025, the sister in charge reported that the workers did not have access to a proper toilet facility and requested SAWA to consider improving the situation if the project budget allowed. Following this request, SAWA, in collaboration with the Lituhi management, conducted a physical assessment and established that the existing latrine was beyond repair. It was therefore recommended that a new toilet block with two stances (toilet and bathroom) be constructed. After realizing savings during project implementation, SAWA successfully constructed a new toilet block equipped with all necessary facilities, including a combined septic tank and soak-away pit for wastewater management.

Before intervention



After intervention

Constructed toilet for priest's house workers.

2.1.2 Construction of One-Stance Toilet for Priests' Workers

The construction of a one-stance toilet block for priests' workers was successfully completed. The activities undertaken included the construction of one stance fitted with all necessary facilities, including a handwashing basin, rehabilitation of the wastewater pit (combined septic tank and soak-away pit), and connection to a clean water supply. The completed toilet block now adequately serves all workers at the priests' house, significantly improving sanitation conditions and hygiene standards.

2.2 REHABILITATION WORKS

2.2.1 Rehabilitation of the Sisters' Convent

All rehabilitation activities planned for implementation at the Sisters' Convent were successfully completed. These interventions significantly improved sanitation facilities, hygiene conditions, functionality, and the overall living and working environment within the convent. The completed activities included the following:

- Rehabilitation of one (1) toilet stance for public use.
- Rehabilitation of one (1) toilet stance serving a self-contained room.
- Renovation of the corridor walkway leading to the main gate.
- Renovation of the reception office.
- Excavation and construction of a 1 m^3 soak-away pit and installation of a kitchen washing basin.
- Construction of two (2) toilet stances for sisters' workers.
- Renovation of four (4) toilet stances for public use.

Initially, the four public toilet stances were partitioned using timber materials. The original plan was to replace the timber partitions with burnt brick walls to enhance durability and privacy. However, during implementation, it was discovered that the existing slab was structurally weak and at imminent risk of collapse. Consequently, the existing slab was demolished and replaced with a new reinforced concrete slab, followed by complete walling works. Upon completion, the renovated toilet block now consists of four stances, including two bathrooms, one fitted with a

mixed shower system and another with a single shower and two toilet stances, one fitted with a sitting toilet pan and the other with a squatting pan.

The Sisters have expressed strong appreciation for the rehabilitation works carried out at their convent. Whenever engaged, they emphasize that *"their house now looks new and attractive, and it has encouraged fellow sisters to visit them during their leave periods."*

Regarding the newly constructed workers' toilet block, **Sr. Hyasinta** stated: *"Now our workers feel treated as human beings. Their previous latrine disturbed me greatly, and I had no peace at all because of their poor sanitation environment'.*

Furthermore, **Madam Anjela Haule** expressed her satisfaction with the improved kitchen environment, stating: *"Now my kitchen environment is very attractive, and I enjoy cooking in this improved kitchen. We can wash dishes right here in our kitchen basin, which saves time because previously I had to go outside to wash them."*

Before installation of kitchen basin

Construction and installation of kitchen basin on progress

After construction and installation of kitchen basin

Installed kitchen basin

Before rehabilitation of wiring system

After rehabilitation

Before rehabilitation

After rehabilitation

2.2.2 Rehabilitation Works at the Hospital

a) Surgery Ward Toilet Block

The surgery ward originally had two (2) abandoned toilet stances that were no longer functional. Through collaboration between the project team and the hospital director, it was agreed to add two (2) additional stances to accommodate both genders. As a result, the surgery ward now has a total of four (4) toilet stances, comprising two (2) for females and two (2) for males. Overall, the rehabilitation and expansion of the surgery ward toilets were completed to a satisfactory standard.

In addition, waste pits, consisting of a septic tank and a soak-away pit, were successfully constructed to receive wastewater from the surgery toilet block. These pits were constructed at an approximate distance of 24 meters from the rehabilitated toilet block. Consequently, a total of five (5) inspection chambers were constructed along the drainage line to ensure easy access for inspection and maintenance in the event of blockages.

Before rehabilitation- surgery toilet block (4 stances)

Rehabilitated toilet for surgery toilet

b) CTC Toilet Block

The CTC toilet block currently consists of four (4) stances, of which two (2) are for public use and two (2) serve as private wards. In cooperation with the hospital administrator, the project agreed to designate the private wards specifically for priests/bishop use and hospital staff use.

The private wards were equipped with all essential facilities, including water heaters, handwashing basins, and showers. Aluminum doors were installed in the private ward toilets to enhance durability and hygiene. The priest's ward toilet was fitted with a sitting toilet pan, while the hospital staff ward was installed with a squatting pan, in accordance with user preferences.

Additionally, the ceiling of the CTC toilet block was rehabilitated through the installation of new gypsum boards, followed by skimming and painting to improve both appearance and hygiene standards.

Before rehabilitation- corridor to CTC toilet block (4 stances)

Rehabilitated latrines for CTC toilet

Before rehabilitation

After rehabilitation

After rehabilitation

2.2.3 Rehabilitation of the Medical Office (X-Ray Unit)

Initially, the medical office (X-ray unit) did not have a toilet facility. SAWA, in cooperation with the hospital administrator, agreed to rehabilitate the office by partitioning the space to create one (1) toilet stance, a registration office, and a rehabilitated X-ray shooting room.

The rehabilitation works included the construction of three (3) wastewater chambers and connection of drainage pipes with a total length of 18 meters. The medical office was further improved through skimming and painting work, as well as installation of a handwashing basin.

In addition, the drainage pipes serving the patient toilet block were replaced. The initially installed pipes were of Class A, which were later replaced with Class B pipes to enhance durability. The wastewater chamber was also reconstructed to effectively accommodate all waste drainage pipes.

Extending toilet stance at medical office

Installed hand washing basin at medical office

Extended toilet stance (medical office)

Rehabilitated medical office

2.2.4 Construction of Group Handwashing Facilities

Two (2) concrete group handwashing stations, each fitted with two taps, were constructed at the reception entrance and the emergency gate to ensure easy access to handwashing facilities and promote good hygiene practices.

The handwashing stations were designed and installed to ensure inclusivity, allowing convenient use by both children and adults.

Constructed handwashing station at the reception entance

Renovated reception office

2.2.5 Rehabilitation of Church Toilet Facilities

The construction of the toilet block inside the church for priests' use was successfully completed. The activities carried out included connections to clean water, installation of a handwashing basin, connection of wastewater systems to the septic tank and soak-away pit, and construction of a wastewater chamber.

Extended toilet block at the church!

2.2.6 Rehabilitation of Priests' House Toilet Blocks

The priests' house comprises three (3) toilet blocks with a total of twelve (12) toilet stances. On the ground floor, there are four (4) toilet stances and two (2) bathrooms, which were not functional. On the upper floor, there are two toilet blocks, each with two (2) toilet stances and one (1) bathroom, all of which required major rehabilitation.

The existing water systems were dilapidated and were replaced with new systems. The rehabilitation was successfully completed and included new plumbing installations, re-plastering, tiling, and rehabilitation of the electrical wiring system.

Due to the poor condition of the corridors, it was agreed that they should also be renovated to add value to the completed works. As a result, a total corridor length of 60 meters comprising 40 meters upstairs and 20 meters downstairs was renovated through skimming and painting. These works were implemented smoothly due to strong cooperation among all project stakeholders. In addition, thirty-two (32) existing hardwood doors were rehabilitated to improve their appearance and overall aesthetic value.

Before rehabilitation

Before rehabilitation

After rehabilitation

After rehabilitation

2.3 WATER SUPPLY

For many years, the Lituhi community experienced severe water scarcity, relying mainly on an unreliable gravity-fed water scheme characterized by intermittent supply, as well as a low-yield borehole producing poor-quality saline water that served only Lituhi Hospital. The water challenge was long-standing and deeply affected both the community and the hospital operations.

Patients visiting the hospital were compelled to carry their own water for essential needs such as bathing and cooking. In addition, the hospital frequently relied on fetching water from the Luhuhu River using a Land Cruiser vehicle to meet basic needs including cooking in the canteen, staff toilet use, and other operational requirements. Ironically, the water sourced from the river was not potable and was unsafe for domestic use; however, due to the lack of alternatives, the hospital had no option but to continue using it. This situation contributed significantly to an unconducive working environment, which in turn affected staff retention and morale at the hospital.

With funding support from Water Engineers for the Americas and Africa (WEFTA), the project successfully addressed and resolved the long-standing water scarcity challenge. The provision of reliable water supply has been described by the Lituhi community as a "dream come true," especially when residents now see clean water flowing directly from their taps. Currently, the project is serving more than 3,000 people, who now have reliable access to safe water for domestic and institutional use.

To address this challenge comprehensively, the project implemented the following key activities.

2.3.1 Development of a New Water Source

In close cooperation with Lituhi Parish, the project successfully developed a new water source (borehole) following the completion of a geophysical survey conducted to identify a suitable drilling site with high groundwater potential. Based on the survey findings, borehole drilling and construction were carried out successfully.

The borehole was drilled to a depth of 92 meters and has a yield of approximately 22,000 liters per hour, producing potable water that is sufficient to meet both the current and projected future water demands of Lituhi Parish and the surrounding community.

To ensure reliable and sustainable water abstraction, the project procured and installed a hybrid pumping system capable of operating using both solar power and grid electricity. The supply and installation of the pumping system were undertaken by a specialized pump dealer, Davis & Shirtliff. The pump was installed at a depth of 60 meters, with a pumping capacity of 14,000 liters per hour, and feeds water into two existing storage tanks with a combined capacity of 95,000 liters.

A solar power system was installed to support pump operation, consisting of 18 solar panels, each rated at 745 watts, all mounted securely on site. In addition, an AC/DC control panel was installed inside the powerhouse to manage system operations effectively. To ensure uninterrupted water supply during periods of heavy rainfall or insufficient solar energy, a three-phase electricity system was also planned to be installed as a backup power source. However, at the time of project completion the grid electricity could not be finalized due to bureaucratic processes of the government utility. The parish is continuing to follow up to complete this process.

For security purposes, a solar-powered security light was installed at the water source.

Overall, the water supply system is operating efficiently and delivering a satisfactory quantity of water. The long-standing water challenges at the parish have been fully resolved, and the surrounding Lituhi Village community now has reliable access to water. On average, the pump operates for 5 to 6 hours per day, ensuring adequate water availability for all beneficiaries.

2.3.2 Powerhouse (Pump House)

A powerhouse (pump house) was constructed to the required standards to safely house and protect the pumping equipment and control systems. The control panel was installed inside the powerhouse, ensuring secure and efficient system operation. In addition, the powerhouse also serves as an office space for keeping operational records used by pump attendants.

Overall, the construction quality meets the required standards, and the structure is functioning effectively for its intended purpose.

Aerial view of the power house

Main gate walk-way

Water point at the power point

Constructed Borehole chamber

2.3.3 Pipe Works (Pumping Main and Distribution Network)

The project successfully implemented extensive pipework for both the pumping main and the water distribution network, including the following activities:

- A total of 682 meters of 50 mm HDPE Class C pipes were laid from the constructed borehole to the hospital and parish storage tanks.
- The project replaced **110 meters** of the main distribution line using 50 mm HDPE Class C pipes. Previously, the distribution network consisted of a 1.5-inch steel pipe laid along the middle of the road. This pipe was severely dilapidated, characterized by frequent leakages, and was beyond repair.
- Construction of four (4) valve chambers, including two for the pumping main (new and old main lines) and two for the distribution main.
- Pipe laying and connections for a new distribution line, involving a total of 601 meters of distribution network, extending from the existing feeder line to one institution (Lituhi Primary School) and five (5) household connections.

Under this arrangement, the project contributed to distribution pipes, gate valves, and construction of water points, while beneficiaries contributed by excavating over 300 meters of trenches, purchasing water taps, and providing other necessary fittings.

Constructed water point at Mr. Ndomba's house

Installed pipe line marker's post

3.0 OTHER ACTIVITIES

3.1 Joint Inspection

Prior to project handover, a joint inspection was conducted by a team led by Bishop John Ndimbo, accompanied by the SAWA Director and SAWA Board Member, Eng. Daudi Makamba, in

collaboration with Lituhi management. The team visited all project implementation areas to verify and assess the quality and scope of completed works.

The inspection team expressed satisfaction with the quality of work and highly appreciated the additional improvements made, particularly at the Sisters' Convent and the Priests' House, as well as the extension of water supply to neighboring households.

During the inspection, the SAWA Supervising Engineer provided orientation to the team, particularly to the Bishop, on the operation of the hybrid pumping system and emphasized the importance of having dedicated personnel responsible for day-to-day management of the water system.

Overall, Bishop John Ndimbo expressed deep gratitude and appreciation to SAWA and WEFTA for their support, noting the significant transformation of the hospital and parish environment.

Joint team inspection of project

Inspection at the sister's convent

3.2 Capacity Building of the WASH Management Committee

During the construction period, SAWA organized capacity-building training sessions aimed at establishing a strong WASH Management Committee responsible for the operation and maintenance of the water and sanitation infrastructure. The training was finalized one day before project handover and focused on key issues, including the establishment of a water tariff system.

The training session was chaired by the SAWA Executive Director and attended by Bishop John Ndimbo, SAWA Board Member (Eng. Daudi Makamba), SAWA Accountant (Mr. Lanfranco Kapinga), Parish Priest (Fr. Timothy Ndunguru), Hospital Administrator (Fr. Deogratias Nditi), Sisters in Charge (Sr. Yasinta), five household representatives with water connections, a representative from the primary school, the CBWSO Chairman, and water caretakers (plumber and electrician).

Key deliberations included endorsement of the WASH Management Committee and its leadership structure, as well as defining roles and responsibilities to ensure project sustainability. The committee elected Fr. Deogratias Nditi (Hospital Administrator) as Chairperson, Fr. Timothy Ndunguru (Parish Treasurer) as Treasurer, Ndomba and John Mazungu as household representatives, the Head Teacher as Secretary, and Leonard Gondwe and Daudi Lwena as technical members.

The SAWA Executive Director also led discussions on project running costs, which were estimated at TZS 470,000 per month. Based on this, it was agreed that water tariffs would be set as follows:

- Five Private households TZS each 5,000, Twelve Hospital staff each 5,000, Primary school: TZS 20,000, Church: TZS 30,000, Priests' house: TZS 30,000, Sisters' house: TZS 20,000

The remaining operational costs will be covered by the hospital. The committee was given room to review the tariffs in the future, provided the project's running costs are not compromised.

For infrastructure security, it was agreed that the hospital security guard would be responsible for safeguarding the water source. In addition, the committee agreed that connecting nearby households and institutions to the water supply would strengthen community ownership and protection of the infrastructure. Consequently, five households and one primary school were connected, with plans to support additional households in the future to reduce water shortages caused by limited RUWASA supply.

3.3 Project Inauguration and Handover

The official project handover took place as planned on 28th November, following a church service led by Bishop J.C. Ndimbo at Lituhi Parish. The project inauguration was held at the newly constructed water source, where a project message from SAWA emphasized sustainability, followed by a speech from the Bishop expressing deep appreciation and commitment to continued collaboration with WEFTA to support vulnerable communities in Tanzania.

Lituhi women celebrated the end of the water crisis by performing traditional dances, expressing joy and gratitude to WEFTA for the water supply and hospital improvements. Beyond entertainment, these performances conveyed heartfelt messages of appreciation.

The project has significantly improved quality of life at St. Elizabeth Hospital – Lituhi, particularly for pregnant women and children under five years. Improved water availability is expected to reduce water-related diseases by promoting regular handwashing. Community members were encouraged to protect the water source and conserve the catchment area for future generations, guided by the Swahili slogan: "Ukihifadhi Maji, Unahifadhi Maisha" *(If you save water, you save life)*

Bishop J.C. Ndimbo and Eng. Charles Zacharia (SAWA Director) inaugurating the Infrastructures

Bishop J.C. Ndimbo blessing a BH

People filled with joyful faces after witnessing the project inauguration and handing over

People filled with happy faces after inauguration

4.0 OBSERVATIONS, LESSONS LEARNT, CHALLENGES, RECOMMENDATIONS AND CONCLUSION

4.1 Observations and Lessons Learnt

The implementation of this project generated several important observations and valuable lessons, which collectively explain the successful completion of the work and provide guidance for future interventions of a similar nature.

One of the most significant observations is the exceptionally strong cooperation and commitment demonstrated by key leadership figures and the community at large. The Bishop of the Diocese, Bishop J.C. Ndimbo, the Parish Priest Fr. Timothy Ndunguru, the Hospital Administrator Fr.

Deogratius Nditi, and members of the surrounding community worked closely with the project team throughout the implementation period. Their unity of purpose, openness to collaboration, and readiness to provide guidance and support greatly contributed to the smooth execution of activities. This strong partnership created an enabling environment for decision-making, problem-solving, and timely completion of work, and it stands as a clear example of how stakeholder ownership enhances project success.

Another important observation relates to the sisters at the convent, who continue to express sincere gratitude and appreciation for the improvements made to their living environment. Appreciation has been directed toward the upgraded toilet and bathroom facilities, which have significantly improved hygiene standards, privacy, and overall comfort. The construction of a dedicated toilet and bathroom for the sisters' workers has also had a notable positive impact. Workers now have access to dignified, safe, and hygienic sanitation facilities, which has greatly boosted their morale and sense of wellbeing. The Sisters noted that this improvement has created a more respectful and humane working environment for their staff.

Furthermore, the availability of reliable water has transformed the convent compound into a greener and more attractive environment. With sufficient water now available, the sisters have established vegetable gardens and increased the planting of flowers and ornamental plants. This has not only improved the aesthetic appearance of the compound but has also contributed to food production and environmental sustainability. These changes clearly demonstrate how improved water access can have far-reaching benefits beyond immediate domestic use.

The project also benefited from excellent cooperation with Lituhi Primary School and surrounding households through whose land the pumping main passes. Lituhi Primary School has a total of 890 pupils, comprising 417 boys and 473 girls, supported by 11 teachers (7 male and 4 female). Together with nearby households, these stakeholders provided full cooperation during construction and subsequently benefited from water connections.

Both the school community and individual households have expressed deep appreciation for the project, emphasizing that they had previously struggled for a long time to obtain water for daily use. Prior to the intervention, pupils were required to walk long distances to fetch water, which consumed a significant amount of time that should have been spent in classrooms. This situation negatively affected learning outcomes and overall school performance. In addition, sanitation conditions at the school were very poor. Although the school had flush toilets, these facilities were in a deteriorated state due to the persistent shortage of water. The project has therefore played a critical role in improving both educational conditions and sanitation standards at the school.

Continued support from the Hospital Administrator, Fr. Deogratius Nditi, was another key factor that simplified and strengthened project implementation. His willingness to contribute whatever resources were available greatly assisted the execution of activities. For instance, during the

rehabilitation of the CTC toilet block, he provided a window frame (120 x 160 cm), four door frames for the sisters' toilet block, a sitting toilet pan for the sisters' toilet block, and several other essential materials. In addition to these contributions, the parish provided two doors for the newly constructed toilet block for the sisters' workers. These in-kind contributions reduced costs and helped ensure timely completion of work.

A major lesson learned from the project is the importance of close collaboration among all stakeholders. The strong partnership between the project team, church leadership, hospital management, artisans, and the local community ensured that activities were implemented quickly, efficiently, and in a manner suited to the local context. Stakeholders consistently offered practical advice based on their knowledge of the environment and were flexible in allowing artisans to work beyond normal working hours when necessary. This flexibility significantly contributed to completing construction activities within the planned timeframe.

Another important lesson relates to the value of engaging local labor. The involvement of a **75-year-old community member, Mr. Paulin Lwena**, was particularly noteworthy. Despite the presence of very hard and rocky ground, he successfully excavated all five sewage pits, consisting of three septic tanks and two soak-away pits. His contribution helped reduce project costs and saved valuable time that would otherwise have been spent sourcing external labor. At the same time, Mr. Lwena expressed gratitude to the project for providing him with employment, which enabled him to earn a livelihood and sustain himself. This demonstrates the mutual benefits of community participation in project implementation.

4.2 Challenges

Although the project was successfully completed, several challenges were encountered during implementation.

One major challenge was the presence of hard and rocky ground conditions in many construction areas. Excavation of sewage pits under such conditions was technically demanding and labor-intensive. Despite these difficulties, all sewage pits were eventually excavated and completed successfully through persistence, skill, and dedication.

Renovation works also presented considerable challenges. In many cases, renovating one section of a building necessitated additional renovations in adjacent areas to ensure consistency and acceptable standards. Moreover, several buildings were found to be highly dilapidated. For example, activities initially planned as simple painting works became more complex when skimming revealed that the existing plaster was made of clay and was beyond repair. This required complete removal of the old plaster and application of new plaster, leading to increased material requirements, higher costs, and extended construction timelines.

Another challenge emerged after the long-standing water crisis was resolved. With improved water availability, water usage increased significantly, resulting in some of the existing waste pits becoming full. In some cases, wastewater began to overflow and run outside the pits, posing a serious risk of disease outbreaks such as cholera. The affected areas include 3 staff houses and the maternity ward. It was also observed that many sewage systems in the hospital and workers' residences consisted of only one type of pit, mainly septic pits. Due to the rocky nature of the ground, wastewater percolation and drainage into the soil is slow, further exacerbating this problem. It is proposed to include budget to address this challenge under phase II implementation.

4.3 Recommendations

Now that the long-term water challenges have been addressed, it is essential to continuously remind all water users of the importance of proper operation, care, and maintenance of water supply and sanitation infrastructure. Sustained functionality of these facilities depends on responsible use and regular maintenance by all beneficiaries.

In order to control water misuse and promote efficient water consumption, it is recommended that the water committee consider installing water meters for all users. A metering system would encourage responsible water use by ensuring that users pay according to their level of consumption, following the principle of **"pay as you use."** This approach would help reduce water wastage and contribute to the financial sustainability of the system.

4.4 Conclusion

In general, the project was executed successfully and in accordance with the planned objectives, scope, and implementation schedule. All activities under Phase I were carried out with a high level of commitment, professionalism, and teamwork by all parties involved. The project teams demonstrated strong dedication, technical competence, and a collaborative spirit, which ensured that the planned activities were completed within the agreed timelines and to acceptable technical standards.

The close collaboration between Sanitation and Water Action (SAWA), Water Engineers for the Americas and Africa (WEFTA), church leadership, hospital management, local artisans, and the wider community created an enabling environment for smooth project implementation. This partnership approach not only facilitated timely completion of works but also enhanced community ownership and accountability, which are critical for long-term sustainability.

The project has significantly improved access to safe and reliable water, sanitation, and hygiene services for the Lituhi community, St. Elizabeth Hospital–Lituhi, the parish, and surrounding institutions and households. These improvements have directly contributed to better health outcomes, improved working and living conditions, enhanced dignity, and increased productivity for beneficiaries.

Looking ahead, the long-term success and productivity of the project will largely depend on the collective responsibility of all users and stakeholders. Proper care, routine maintenance, and effective management of the installed WASH facilities are essential to ensure that the benefits achieved are sustained over time. With continued commitment from the WASH Management Committee, institutional leaders, and the community, the project is well positioned to remain functional, impactful, and sustainable for current and future generations.

5.0 QUOTED QUOTES (BENEFICIARY TESTIMONIES)

The following direct quotations from beneficiaries and key stakeholders provide powerful testimonies of the project's impact on daily life, health, dignity, and overall wellbeing. These voices reflect the real and transformative change brought about by the improved water and sanitation services.

1. **Mr. Ndomba, Resident of Kihuru Village**, expressed his deep relief and sense of liberation after gaining access to reliable water:

"Now I am sure of getting water. I was struggling to find water and wasting a lot of time looking for water. For me, this is a great liberation. I will make sure I take good care of this water so that it will be more useful."

This statement highlights how access to water has reduced time poverty and improved daily living conditions, while also emphasizing the beneficiary's commitment to protecting the water infrastructure.

2. **Mr. Omega Mahundi**, the resident living closest to the water source, shared his emotional response to the project:

"Indeed, finding this water for me has been a miracle. It is something I did not expect at all. I am very grateful to you for this great support."

His testimony reflects the unexpected, yet life-changing nature of the intervention and the profound gratitude felt by community members.

3. **Stephano's Wife**, a household beneficiary, expressed her joy and spiritual appreciation:

"I lack good words to say to you. Truly today water is flowing at my house!! Truly, here you have saved me a lot. God bless you greatly."

This quote captures the emotional relief and spiritual significance associated with having water directly available at home.

4. **Sr. Hyasinta, Hospital Pharmacist at St. Elizabeth Hospital–Lituhi**, described the drastic change in working and living conditions:

"When I first arrived here at St. Elizabeth Hospital – Lituhi, I felt like I was being punished. On the very first day, I took a bucket and had to go to the river to find water for cooking and bathing. But now we get water 24 hours a day. This is truly a miracle for me."

Her testimony clearly demonstrates how improved water access has transformed staff welfare, morale, and retention within the hospital.

5. **Fr. Deogratias Nditi, Hospital Administrator**, reflected on the long-standing water challenges and the broader development opportunities now made possible:

"When I first arrived, the situation was very bad. I was very worried about how to solve the water challenge here. We have spent a lot of money to repair the old well, but there was still not enough water. In my mind, I had many plans to start projects such as agriculture and animal husbandry, but all of them were difficult to implement because the water was completely insufficient. But now I have enough water, and it is guaranteed to be available all the time. If you come here after some time, you yourself will be surprised to see the big changes that have happened here."

This statement highlights not only the resolution of the water crisis but also the potential for future institutional and livelihood development enabled by reliable water supply.

6. **Sr. Fidia Mwali**, one of the Sisters at the convent, shared her observation on environmental transformation:

"In fact, now that we are people in the midst of many people, our environment has become very pleasant and attractive."

Her words reflect the visible environmental improvements and enhanced quality of life resulting from improved water and sanitation services.

Open the following link to See the Impact through: WASH Project Videos & Speeches from Lituhi Community