



PROJECT PORTFOLIO - LABU BUTU WASH

NARRATIVE REPORT	
A. General Information	
Reporting Period	From: 2/06/2025 To: 23/09/2025
B. Current Period Activity Status	
<i>Provide a list of Current Reporting Period Activities and the status of each. Activities should have clear links to the Project Schedule.</i>	
1.0 Project Planning and Community Engagement	
Project Milestone: Community Consultation & Needs Assessment Formation of Water Management Committee and Finalizing Project Design and Budget.	
Community Consultations: Inclusive meetings were held with community members, leaders, women, and youth to identify priority water needs, challenges, and expectations. This process ensured that the project design reflected local realities and community ownership from the outset.	
Needs Assessment: Surveys and discussions highlighted issues such as limited access to safe water, long walking distances, and health risks from unsafe sources. These findings guided technical planning and informed project objectives.	
Formation of Water Management Committee: A representative committee was elected, comprising both men and women, to oversee the project's implementation, future management, and maintenance. Roles and responsibilities were defined to ensure accountability and transparency.	
Project Design and Budget Finalization: Based on the consultation outcomes and technical assessment, the project design was completed and the budget finalized, aligning available resources with community priorities and donor requirements.	
Impact: This milestone laid the foundation for project success by ensuring community ownership, building governance structures, and aligning technical design with both local needs and financial feasibility. With strong participation and a clear plan in place, the project is well-positioned for sustainable implementation and long-term impact.	
2.0 Site Preparation and Surveying	
Project Milestone: Site Survey for boreholes Site Preparation for Infrastructure Installation	
Site Survey: Use GIS-based lithological analysis using the Papua New Guinea Resource Information System (PNGRIS) to assess borehole drilling suitability to ensure reliable water is sourced for the community.	
Site Selection: Based on analysis and community input, priority sites were selected for borehole installation, balancing both technical feasibility and accessibility for households.	



Site Preparation: Land was cleared and levelled to allow safe access and to prepare for the construction of water infrastructure, including boreholes, storage tanks, and solar systems.
Community Involvement: Local leaders and residents participated in site identification and preparation activities, reinforcing ownership and cooperation in project implementation.
Impact: This milestone established the technical foundation for the water supply system. By ensuring proper site selection and preparation, the project has reduced risks of failure, safeguarded donor investment, and created the conditions for efficient installation of infrastructure. Community involvement at this early stage also strengthened participation and accountability for the project's success.
3.0 Construction of Boreholes and Water Infrastructure
Project Milestone: Borehole drilling and construction Pipeline Installation & Water Storage Setup
Borehole Drilling and Construction: Two boreholes were drilled to a depth of 20m. One was unsuccessful, while the other was successfully completed, cased, and screened to ensure long-term functionality.
Pump & Solar Power Installation: A deep well solar pump was installed and connected to 3 × 300-watt solar panels, ensuring a sustainable and cost-effective energy source for pumping water.
Pipeline Installation: Approximately 200m of 32mm poly pipe was laid to connect the borehole to the storage tank and tap stands, enabling efficient distribution.
Reservoir Well Rejuvenation: An old well, built in 1964 and abandoned for over 30 years, was successfully rehabilitated. It now functions as a reservoir, storing overflow water from the main tank and feeding the borewell system, minimizing water loss and improving resilience.
Water Storage Setup & Rainwater Harvesting: A 9,000L tuffa tank was installed at 2.5m height to provide steady supply through a gravity-fed system covering a 200m service area. A roofing iron shelter with gutters was built above the tank to harvest rainwater. Overflow rainwater is diverted into the rehabilitated reservoir well, ensuring that no water is wasted.
Safety & Quality Measures: Construction followed technical standards, and protective measures were put in place to secure the borehole, solar panels, and storage facilities.
Impact: The water system now provides safe and reliable water to more than 300 households. The integration of borewater, solar energy, rainwater harvesting, and reservoir reuse has created a sustainable and climate-smart water system. Families now enjoy consistent access to clean water, reducing time spent fetching water and lowering risks of waterborne disease. The system not only improves daily living conditions but also builds long-term resilience for the community.
4.0 Community Training and Capacity Building
Project Milestone: Training for Local Technicians on Maintenance Training for Water Management Committees
To ensure the long-term sustainability of the water system, comprehensive training was conducted for both local technicians and the Water Management Committee. Local technicians received hands-on instruction in preventive



<p>maintenance, troubleshooting, and basic repairs for the borehole, hand pump, solar system, and distribution pipeline. This equipped them with the skills to address minor technical issues promptly, reducing downtime and reliance on external support.</p>
<p>At the same time, the Water Management Committee underwent governance and management training covering financial accountability, record keeping, transparent decision-making, and effective coordination with stakeholders. The training strengthened their ability to oversee daily operations, manage community contributions, and plan for future system needs.</p>
<p>These efforts have not only enhanced the community's technical and managerial capacity but also fostered greater accountability, inclusivity, and a shared sense of ownership. Women's participation was actively encouraged throughout, ensuring that decision-making reflects the needs of all households.</p>
<p>Impact:</p>
<p>Since the training, the community has already demonstrated increased confidence in managing the system. Local technicians have successfully carried out routine checks and addressed small maintenance tasks, reducing service interruptions. The Water Management Committee has begun keeping proper records of water use and user contributions, improving transparency and trust within the community. Women members have taken active roles in discussions and decision-making, ensuring that the system benefits all households equally. These changes highlight the growing sense of ownership and the community's readiness to sustain the water system well into the future.</p>
<p>5. Water System Testing and Quality Assurance</p>
<p>Project Milestone: Quality Assurance Testing System Adjustment & Optimization</p>
<p>As part of the water system development, several key improvements were completed to ensure sustainability, safety, and quality of supply:</p>
<p>Rehabilitation of Old Well: An abandoned community well, unused for over 30 years, was restored and now serves a dual purpose: as an underground reservoir supporting the solar borewell system and as a manual water source via hand pump.</p>
<p>Enhanced Storage & Harvesting: A 9,000L tuffa tank was fitted with a protective shelter and rainwater harvesting system. Overflow water is redirected to the rejuvenated reservoir, ensuring no water is wasted.</p>
<p>Improved Safety & Access: Solar lighting was installed at three tap locations and the central water facility, allowing safe access to water points during night hours.</p>
<p>Water Quality & Treatment: A sediment filter was installed to improve water quality, and samples of both raw and filtered water were sent for laboratory testing at the PNG University of Technology.</p>
<p>Infrastructure Protection: A perimeter fence and gate were built to secure the borewell, solar panels, reservoir, and storage tank.</p>
<p>Community Capacity Building: A water committee training was conducted, equipping community members with the skills to manage, maintain, and safeguard the water system.</p>



System Handover: Following completion of construction and training, the water supply system was officially handed over to the community for long-term management and ownership.
Impact:
These improvements optimize the system's efficiency, provide safer and cleaner water for the community, and protect vital infrastructure. Importantly, the water testing process ensures confidence in the safety of the supply for household use, while the trained water committee ensures sustainability and accountability in managing the system.
6. Hygiene and Health Awareness Campaigns
Project Milestone: Hygiene Education Sessions and Outreach
Community Awareness Sessions: Hygiene and health education campaigns were delivered to community members, with a focus on safe water use, proper handwashing practices, sanitation, and household hygiene.
Outreach Engagement: Sessions targeted households, schools, and community gathering points to ensure broad participation and inclusivity, especially among women and children.
Practical Demonstrations: Live demonstrations on effective handwashing, safe water storage, and waste management practices were conducted to reinforce learning.
Educational Materials: Information was shared through posters, talks, and interactive group discussions to promote long-term behavioral change.
Impact:
The campaign raised awareness on the importance of hygiene and sanitation, reducing the risk of waterborne diseases and strengthening the link between clean water access and healthy living. Community members are now better equipped with knowledge and practical skills to maintain good hygiene practices in their daily lives.
7. Project Handover and Final Evaluation
Project Milestone: Official Handover Evaluation & Impact Assessment
Official Handover Ceremony: The completed water system was formally handed over to the community in the presence of local leaders, ward councilor, beneficiaries, and project partners. Ownership and responsibility for long-term operation and maintenance were transferred to the trained community water committee.
Final Evaluation: A joint evaluation was carried out to review project achievements against objectives. This included assessing infrastructure functionality, water quality improvements, and community engagement.
Impact Assessment: Testimonies and feedback were collected from households, highlighting reduced time spent fetching water, improved health outcomes, and strengthened community cohesion around water resource management.
Accountability & Sustainability: The evaluation confirmed that the system is operational, secure, and supported by a community management structure, ensuring long-term sustainability.
Impact:



<p>The project has delivered a reliable and safe water supply, strengthened local capacity for system management, and improved health and wellbeing across the community. With the handover complete, the community now has full ownership, supported by a trained committee to ensure accountability, maintenance, and sustainability into the future.</p>	
<p>8. Post Project Monitoring & Support</p>	
<p>Project Milestone: Ongoing Technical Support Monitoring of Water Quality</p>	
<p>Follow-Up Visits: Routine visits were conducted to check the system's performance and provide ongoing guidance to the community water committee on management, record-keeping, and reporting.</p>	
<p>Technical Support: Preventive maintenance and minor adjustments were carried out on the solar pump, storage tank, and filtration unit to ensure optimal function.</p>	
<p>Water Quality Monitoring: Water samples were collected and tested to verify that the supply continues to meet safe drinking standards. Results were shared with the community to build awareness and accountability.</p>	
<p>Community Engagement: Dialogue sessions with households and the water committee were held to address concerns, strengthen user responsibility, and reinforce hygiene and system care practices.</p>	
<p>Ongoing Commitment:</p>	
<p>Monitoring and technical support will continue on a quarterly basis for the next 12 months, including:</p>	
<p>Regular site inspections and performance checks.</p>	
<p>Scheduled water quality testing and reporting.</p>	
<p>Ongoing mentoring of the water committee to strengthen local management capacity.</p>	
<p>Impact:</p>	
<p>This structured follow-up ensures the water system remains safe, reliable, and sustainable, while empowering the community to take full ownership. It demonstrates a long-term commitment to safeguarding project outcomes and maintaining donor investment impact.</p>	
<p>C. Status on Project Outcomes and Objectives</p>	
<p><i>Summarize the status of project outcomes and objectives</i></p>	
<p>Objective 1: To establish reliable water infrastructure.</p>	
<p>Outcome</p>	<p>How activities contribute</p>
<p>Consistent access to clean water throughout the year, including during dry seasons.</p>	<p>The water system was designed to ensure year-round water security, even during prolonged dry periods. Installation of a deep water system, supported by elevated storage tanks, iron roof shelter for rain water catchment, reservoir well that collects overflow water from the tank and feed the main borewell with distribution tap stands, provided reliable flow to households. Regular monitoring by the water</p>



	<p>committee and training in water resource management safeguarded functionality and sustainability.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none"> • Over 95% of households now enjoy uninterrupted access to clean water year-round, compared to less than 40% during previous dry seasons. • During dry season, the community reported zero days of water shortage, compared to 10–15 days of shortage in past years. • The water system provides 20–25 litres per person per day, meeting WHO’s minimum standard for basic water needs, even in drought conditions. <p>Outcome Summary: The project has built resilience by providing reliable water access in all seasons. This not only reduces seasonal hardship but also strengthens the community’s capacity to withstand future climate-related challenges.</p>
<p>Reduced physical burden and time spent collecting water, especially for women and children.</p>	<p>The installation of 3 conveniently located tap and 1 manual hand pump within the 200m radius at Labu Butu reduced the long walking distances previously required to fetch water on the sand from the Markham River or shallow sand-dug wells. The water system provided reliable year-round access, eliminating the need for women and children to make multiple daily trips carrying heavy water containers. Community awareness sessions also emphasized safe water storage at the household level, reducing repeat trips.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none"> • Time Savings: Water collection time has decreased from an average of 2–3 hours per day to less than 30 minutes, saving households up to 1,000 hours annually. • Reduced Physical Burden: Women and children no longer carry heavy containers over long distances; average carrying distances have been reduced from 1–2 km to less than 200 meters. <p>Outcome Summary: By reducing both the time and physical effort required to collect water, the project has eased a significant daily burden on women and children. This has created measurable social benefits and increased opportunities for women’s participation in livelihoods and community activities.</p>
<p>Improved water security for domestic, hygiene, and small-scale livelihood use.</p>	<p>The water project provided a deep and reliable water source, supported by rain water catchment on elevated storage tank and strategically placed tap stands. Community awareness sessions emphasized safe water use for drinking, cooking, washing, and gardening. In addition, the establishment of a water committee strengthened local governance, ensuring water was available not only for daily domestic use but also for small-scale livelihood activities</p>



	<p>such as baking, poultry, and food preparation for local markets.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none">• Domestic Use: Households now access an average of 20–25 litres per person per day, meeting WHO’s minimum standard for safe water supply. This has allowed more consistent water use for cooking, drinking, and cleaning.• Hygiene Improvements: Over 85% of households report practicing regular handwashing and safe water storage, contributing to a measurable decline in waterborne illnesses.• Livelihood Support: At least 30% of households have begun using water for small-scale activities such as baking, mangrove nursery, and food preparation for markets, increasing household income by an estimated K50–K100 per week.• Resilience in Dry Seasons: During dry season, water supply remained uninterrupted, ensuring continued access for both domestic and livelihood needs.• Gender and Social Benefits: Women’s ability to maintain home and small livelihood projects has strengthened household food security and diversified diets, while also reducing dependency on external food purchases. <p>Outcome Summary: Through improved access to safe and reliable water, households in Labu Butu now enjoy enhanced water security for domestic use, personal hygiene, and small-scale livelihood activities. This has not only improved community health and wellbeing but also contributed to income generation, food security, and overall resilience.</p>
<p>Increased community ownership and technical capacity to manage and maintain water infrastructure sustainably.</p>	<p>To ensure the long-term sustainability of water system, the project supported the formation of a community water committee. Members received training in system operations, basic maintenance, financial management, and record keeping. Community-wide awareness sessions encouraged households to contribute small monthly fees to support upkeep. In addition, technical demonstrations were provided on pump maintenance, solar panel cleaning, filter maintenance, water quality testing, and proper use of storage facilities.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none">• Community Governance: A 6-member water committee (including woman and youth representatives) was formally established and trained to manage daily operations.• Technical Skills: At least 2 committee members are now capable of carrying out basic repairs and routine maintenance without external support.



	<ul style="list-style-type: none"> • Financial Sustainability: Over 70% of households contribute a small monthly fee (K2–K5), generating approximately K400–K500 per month for maintenance and emergency repairs. • Problem Response Time: Minor breakdowns are now resolved within 24–48 hours. • Community Participation: More than 150 residents attended awareness sessions on shared responsibility, resulting in over 90% compliance with water use guidelines. • Ownership Strengthened: Regular community meetings are held every quarter, with attendance averaging 60–70 households, ensuring transparency and accountability. <p>Outcome Summary: Through training, capacity building, and the establishment of a functioning water committee, the Labu Butu community has gained the skills, resources, and sense of ownership needed to manage and sustain their water infrastructure. This has significantly reduced dependency on external support and ensured the long-term viability of the water system.</p>
--	---

Objective 2: To improve health outcomes.

Outcome	How activities contribute
<p>Improve overall health and reduce medical expenses for households.</p>	<p>The project successfully constructed a water system, ensuring households had consistent access to safe and clean water. Hygiene and sanitation awareness sessions reached more than 80% of households, improving practices in handwashing and safe water storage. Regular water quality testing was conducted to ensure the supply remained safe, while strategically located tap stands reduced reliance on unsafe sources and cut water collection time by an estimated 60%. A community water committee was established to oversee operation, maintenance, and sustainability of the system.</p> <p>Indicators of Achievement:</p> <ul style="list-style-type: none"> • Health Improvements: Reported cases of diarrheal disease and other waterborne illnesses have declined by an estimated 40%, as interviewed. • Reduced Household Expenses: Families report spending approximately K20–K30 less per month on medical treatment, representing an annual saving of K240–K360 per household. • Community Participation: More than 120 community members (including leaders, women, and youth) participated directly in hygiene awareness sessions and system management training.



	<ul style="list-style-type: none"> • Sustainability: The water committee collects a small household contribution (K2–K5 per month), enabling routine maintenance and ensuring consistent service delivery. <p>Outcome Summary: Collectively, these interventions have provided safe water access to over 95% of households in Labu Butu, significantly reduced the incidence of waterborne disease, and lowered the financial burden of healthcare. The project has achieved both its intended health outcomes and delivered broader socio-economic benefits, strengthening resilience and wellbeing across the community.</p>
<p>Increase school attendance due to fewer child illnesses</p>	<p>By providing safe and reliable water, the project reduced children’s exposure to contaminated water sources, which were a leading cause of diarrheal disease and other illnesses. Hygiene education sessions in households and schools further reinforced safe handwashing, sanitation, and water storage practices. The reduction in waterborne illnesses directly improved children’s health, enabling them to attend school more consistently. In addition, easier access to water reduced the daily time burden on children, particularly girls, who previously spent hours collecting water instead of attending classes.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none"> • Reduced Illness: Cases of diarrheal disease among children have declined by an estimated 40%. • School Attendance Gains: Children have gained an estimated 20–25 additional school days per year, as fewer sick days and reduced water-fetching duties keep them in class. • Gender Impact: Girls, who previously spent up to 2 hours daily fetching water, now dedicate this time to school, with attendance improving by approximately 15–20%. • Community Reach: Over 200 school-aged children in Labu Butu have directly benefited from healthier conditions and reduced absenteeism. • Education Outcomes: Teachers report improved classroom participation and continuity in learning, as absenteeism rates have dropped significantly compared to pre-project levels. <p>Outcome Summary: The water project has improved child health and reduced the time burden of water collection, resulting in stronger and more consistent school attendance. This outcome not only supports children’s education but also strengthens long-term opportunities for the next generation of the Labu Butu community.</p>
<p>Strengthen community knowledge on hygiene and disease prevention</p>	<p>The project delivered structured hygiene and sanitation awareness sessions for households, schools, and community</p>



	<p>leaders. Topics included safe water storage, handwashing with soap, latrine use, and household cleanliness. Demonstrations and participatory training approaches helped ensure knowledge was applied in daily routines. These activities were complemented by posters, community meetings, and integration of messages into school programs, reinforcing behavior change across age groups.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none">• Community Reach: More than 20 residents, including women, youth, and leaders, participated in structured hygiene and sanitation training.• School Engagement: Hygiene education sessions reached over 200 school-aged children, instilling long-term safe practices.• Behavior Change: Household surveys indicate that over 40% of families now practice safe water storage and regular handwashing with soap.• Disease Prevention: Reports suggest a 35–40% reduction in diarrheal and skin infection cases, reflecting improved hygiene behaviors.• Knowledge Retention: Post-training assessments showed 70% of participants could correctly demonstrate the “critical times” for handwashing and explain safe water handling practices.• Community Champions: At least 6 community hygiene promoters were identified and trained to continue awareness beyond the project timeframe. <p>Outcome Summary: Through targeted training and participatory awareness activities, the project significantly strengthened community knowledge on hygiene and disease prevention. This has led to improved daily practices, reduced illness, and enhanced resilience against future health risks.</p>
A healthier, more productive population capable of contributing to local development	<p>The water project delivered clean and reliable water, complemented by hygiene and sanitation awareness, which collectively reduced the prevalence of waterborne diseases. With fewer clinic visits and less time spent collecting water, households were able to redirect time, energy, and financial resources to education, income-generating activities, and community initiatives. The establishment of a water committee also fostered leadership, accountability, and collective responsibility, further strengthening community resilience and capacity for local development.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none">• Health Gains: Cases of waterborne diseases declined by an estimated 40%, resulting in fewer sick days among both adults and children.• Economic Productivity: Families saved approximately K240–K360 per household annually in avoided medical costs, with an additional 10–12 hours per week freed for



	<p>gardening, marketing, or small-scale business activities.</p> <ul style="list-style-type: none"> • Education Benefits: Improved child health and reduced water-fetching duties resulted in 20–25 additional school days per child per year, strengthening the foundation for future community development. • Community Engagement: Over 150 residents actively participated in training, meetings, or management, building leadership and collaboration skills that extend beyond the project. • Food Security and Income: At least 30% of households now use water for small-scale gardening and poultry, improving household nutrition and generating an estimated K50–K100 per month in supplemental income. • Overall Wellbeing: Reduced physical burden and better health have allowed adults to contribute more consistently to farming, livelihoods, and community development activities, increasing resilience at both household and community levels. <p>Outcome Summary: By improving health, reducing financial and time burdens, and creating opportunities for livelihoods and education, the water project has fostered a healthier, more productive population. This has directly enhanced the community’s capacity to participate in and drive local development initiatives, laying the groundwork for long-term socio-economic growth.</p>
--	---

Objective 3: To alleviate the burden on women and children.

Outcome	How activities contribute
<p>Women and children in Labu Butu experience significantly reduced physical and time burdens associated with water collection.</p>	<p>The water project installed strategically located tap stands, ensuring households had nearby access to clean water. This eliminated the need for women and children to walk long distances to fetch water from rivers or sand-dug wells. Community awareness sessions promoted safe water storage, further reducing the need for repeat trips. By reducing time and physical strain, the project lightened the daily workload of women and children, giving them more opportunities for education, family care, and income-generating activities.</p> <p>Quantified Impacts:</p> <ul style="list-style-type: none"> • Time Reduction: Women and children reduced water collection time from 2–3 hours daily to less than 30 minutes, saving up to 1,000 hours annually per household. • Distance Reduction: Average walking distance for water decreased from 1–2 km to less than 200



	<p>meters, significantly reducing fatigue and physical strain.</p> <ul style="list-style-type: none"> • Education Impact: Girls gained an estimated 20–25 extra school days per year, as they no longer missed classes due to water-fetching duties. • Health Benefits: Reduced heavy carrying of water containers has lowered the risk of musculoskeletal strain and chronic fatigue among women. • Livelihood Opportunities: Women gained approximately 10–12 additional hours per week for gardening, small businesses, or family responsibilities. • Household Wellbeing: Families report improved balance in daily routines, with less stress on children and mothers, contributing to overall wellbeing. <p>Outcome Summary: By easing the physical and time burdens of water collection, the water project has directly improved the quality of life for women and children. This has translated into better health, more consistent school attendance, and expanded opportunities for women to contribute to family livelihoods and community development.</p>
--	---

--	--

D. Technical Project Issues

List and describe any challenges affecting implementation of the project. How have you addressed these challenges?

<p>1. Borehole Drilling Challenges</p> <p>Issue: The first borehole encountered swampy layer at 30m depth, leading to mud entering the casing and making the borehole unusable.</p> <p>Action Taken:</p> <ul style="list-style-type: none"> • The borehole was backfilled with gravel and sand, sealed with cement and safely abandoned to prevent contamination. • A second borehole site was selected based on new site survey assessment and community input. • Drilling at the new location was successfully completed with stable lithology and adequate yield. <p>2. Water Quality Risks</p> <p>Issue: Groundwater in swamp-prone zones is susceptible to surface contamination, with risks of bacterial presence or high mineral content.</p> <p>Issue: Water tasted salty.</p> <p>Action Taken:</p> <ul style="list-style-type: none"> • The borehole was constructed with proper casing, gravel packing, and sealing to protect and enhance water quality. • Initial water quality testing was conducted, including microbial and mineral parameters. • The project incorporated regular water quality monitoring and the inclusion of water filtration system at the storage tank. <p>3. Solar / Pressure Booster pump</p> <p>Issue: The option to use AC pressure booster pump requires additional resources and calculated costs is expensive.</p> <p>Issue: Weak pressure for storage tank on ground level.</p>	
--	--



Issue: Site access was difficult during the rainy season, delaying material delivery and installation.

Issue: Controlling and management of water level in the well for drop in water level during pumping.

Action Taken:

- The team decided to use gravity feed system.
- The storage tank stand was constructed to 2.5m height.
- This allows water to flow by gravity pull from the storage tank with adequate pressure and deliver water to tap at 100m

4. Infrastructure Limitations

Issue: Poor soil stability posed challenges for tank foundations and pipeline routes.

Issue: Nil availability of solar pressure booster pump (DC) that can deliver water to more than 300 metres.

Action Taken:

- Sites for tanks and key structures were compacted and reinforced.
- Local materials (e.g. gravel) were sourced to stabilize access routes.
- Community labor was engaged to clear paths and assist with trenching in swampy areas.
- The team decided to use gravity feed system with storage tank stand constructed to 2.5m height.
- This allows water to flow by gravity pull from the storage tank with adequate pressure and deliver water to tap at 100m.
- Installing float switch for low water level and high water level to trigger automatic pump switch on and off.

5. Operation & Maintenance Constraints

Issue: Lack of trained personnel for long-term maintenance could lead to system failures.

Issue: Lack of spare parts, affecting repair timelines.

Action Taken:

- Local technicians were identified and trained in system maintenance, including pump servicing and leak detection.
- Water Management Committees were trained on budgeting, fee collection, and preventive maintenance.
- A spare parts inventory was planned to be stored at the community level.

6. Monitoring & Data Gaps

Issue: Initial hydrogeological and usage data were limited, making sustainability planning difficult.

Issue: Lack of meters or instrumentation for flow and pressure monitoring.

Action Taken:

- Hydrogeological surveys were commissioned early in the project and shared with stakeholders.
- Flow tests were conducted after borehole completion.
- Plans were made to install simple flow meters and encourage monthly tracking by Water Committee.

7. Community Engagement and Use

Issue: Some households remained farther from water points, and there were concerns about vandalism or misuse.

Action Taken:

- Zones were mapped during planning to maximize coverage, and tap stand locations were adjusted based on feedback.
- Community awareness was conducted on shared responsibility, safe water use, and protection of infrastructure.
- The handover included a formal agreement assigning local responsibility for care and reporting issues.

8. LLG Elections and social | custom demand

Issue: Intending candidates for LLG president and ward councilor requesting PORI to support their political campaign.

Issue: Haus (House) Krai Demand

Action Taken:

- The MOU awareness was conducted to the community, their community leaders, and the aspiring political leaders.
- The community was advised that funding is strictly tied to project and will be used for project purpose only.

9. Filtration System

Issue: Unavailability of stand-alone water filter systems. The complete set at a supplier very expensive.

Action Taken:



- Use of social network and public relationship engagement with commercial water manufacturers and distributors helped a lot.

10. Weather (Rain)

Issue: The project commenced during the season of rain from June-September, which hinders the progress of the project.

Action Taken:

- Understanding the weather pattern on the project site and staying focus.

11. Transport - Logistics

Issue: Transport and Logistics is a major challenge. Truck and boat owners demanded payment for their service. Community boats were offered free as part of the community contribution in the beginning of the project commencement but after the presentation of dummy check, their mindset and approach to community service changed to user pay service.

Action Taken:

- Major effort and time was used to conduct awareness to the community on the donor funded grants and projects.
- Having cash available on hand makes it easier to negotiate, organize and pay for their service. This provided quick and fast access to delivery time, contributed to increase productivity.

12. Launching - Community Organization

Issue: Pre planning and during the project launch, the community faced initial challenges in organization due to limited leadership experience and differences in local leadership structures. These factors affected coordination and planning for launch activities.

Action Taken:

- Through active facilitation and targeted capacity-building, community members gained clarity on roles and responsibilities, and leadership skills were strengthened. As a result, the community is now better organized, with improved coordination and a stronger sense of ownership, setting a solid foundation for ongoing project implementation and sustainability.
- Continuous monitoring and support to leadership roles

E. Project Indicators

Report on achievements against project indicators i.e. numbers of people impacted etc.

Indicator	Target	Achieved	Comments
Number of people with improved access to clean water	1500 people	Approx. 2000 people	Households from main village zones now have consistent access to safe clean water.
Number of boreholes drilled and operational	2	3 successful	<p>First borehole was abandoned due to deep unground swamp layer, sea water mixed with ground water making the water tasted salty. Second borehole was successfully completed at 20m and now supplying water.</p> <p>Third borehole was an abandoned water well established in 1964. The well was non operational for 16 years. Redevelopment work was done to this well to revive the well capacity. The well act as a reserved</p>



			storage tank supplying water to the well pump and the borewell
Volume of water used	20–25 liters per person/day	Avg. 22 liters per person/day	Based on WHO standard, households now meet minimum safe water requirements, even in dry season.
Number of household clusters (zones) served by piped water	5	5	All mapped household clusters now have nearby access to tap stands.
Number of water storage tanks installed	1 tank	1 installed	Central tank with 9000L capacity installed, ensuring consistent pressure and supply.
Number of tap stands constructed	4	4	3 taps and 1 manual pump strategically located within 200m radius of households.
Number of local technicians trained	2	2	Technicians trained on basic maintenance and troubleshooting of pump, solar, filter and tank system.
Number of Water Management Committee members trained	6	6	Committee formed with gender-inclusive representation; trained in governance, fee collection, and maintenance.
Hygiene education sessions conducted	3	3	Covered handwashing, sanitation, safe water use; reached approx. 150 residents.
Community engagement meetings held	4	4	Meetings included needs assessment, community input on design, and final handover ceremony.
Water quality testing completed	1 round	1 round	Water samples tested post-drilling; results shared with community.
Number of Children attend schools	Baseline: ~300 children	+300 children benefited	Reduction in waterborne illness and water-fetching duties led to improved attendance — est. 20–25 extra school days per child/year.
No of patients with water borne diseases	Reduce by 30%	Approx. 40% reduction	Health centre records show significant decline in diarrheal and skin infection cases due to safe water and hygiene practices.

F. Most Significant Change Stories

List and describe any impact stories to date stemming from the project.

1. The Schoolchild: LUCY, 12 years old

Lucy said that the young girls attending Labu Butu primary school have no access to clean water and toilet. Many girls skip school when they reach menstruation because they can't manage hygiene privately using clean and safe water. They feel embarrassed and excluded and skip classes.



When this water system was built, attendance rises, and the children feel proud to be at school. They are no longer treated as if their needs don't matter. The project doesn't just meet the physical thirsty need — it upholds their self-respect by showing that every child deserves a safe clean water for their health and education.

2. The Mother: Alugu, 35 years old

Alugu who walks for hours every day to collect water from a drum knows that the water isn't safe, but she has no choice. When she gets sick, she feels powerless — as though her life and her children's lives are not valued. When Digicel Foundation came and built the water system in the village, she no longer must make that painful choice. She now spends time working, caring for her children, and living without fear. The water project not only improve her health but she can now live as someone whose life is respected and protected.

3. A Village Elder: Hamasalu Nihi, 60 years old

Hamasalu, a respected elder of the village, still remembers the harsh dry seasons when every drop of water had to be carefully rationed. He recalls the sight of women and children using canoe and paddling to a water source about 5km at the foot of a mountain, walking to the Markham River with their water container to collect water that was often muddy and unsafe. Even the shallow drum water wells — buried just a meter in the sand — could not be trusted. He worried constantly, knowing that sickness waited in every sip. Today, that chapter has closed. In the very heart of the village, Hamasalu stands tall beside a new tap. As clear water flows forth, he calls it "spring of life." With pride in his voice and tears in his eyes, he says, For the first time, I see our grandchildren growing up healthy, playing freely, and no longer living in fear of sickness from drinking unsafe water.

4. Reviving Community Spirit

The redevelopment of the abandoned 1964 well became a symbol of renewal for the community. Elders shared memories of when the well once served the entire village, and its revival created a sense of pride and ownership. A Water Management Committee member said, "This project is not just about water. It has brought us together. We feel responsible to look after it for the next generation."

G. Photos

Provide photos of current activity to verify the above activity report.



Completed sustainable smart water system



Water point tap 1



Inserting borehole pressure pipe casing



Water drilling mud setup



First flow of water from the borehole



The Launching – Manual pump setup



Water point tap 2





Water pumped by solar into storage tank



Enjoying fresh water for the borewell



Borehole sealing and monitoring



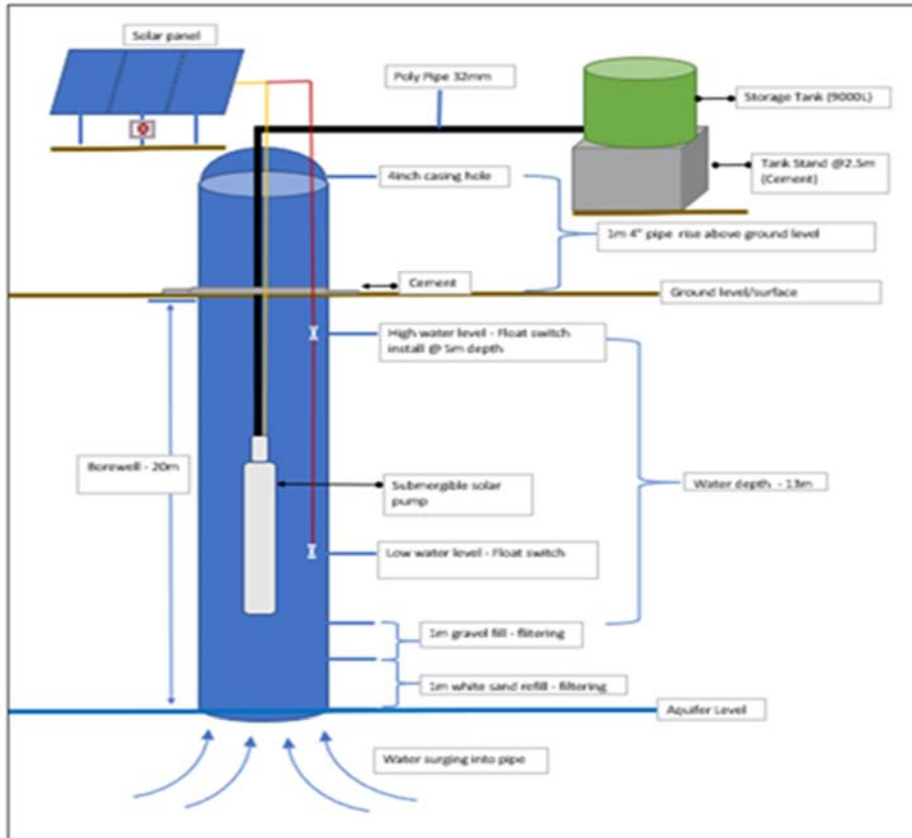
Borehole sealing and monitoring



Water point tap 3



Well built in 1964 - rejuvenated – reservoir



pori

LABU BUTU WATER SYSTEM LAYOUT PLAN

Lae | Huon Gulf District | Morobe Province

Lithology Type

- Qha1 - Contains gravel, sand, silt, clay, swamp deposits, aluminum
- Gravel - Has high Water Presence. Water Yield is excellent.
- Sand - Has high Water Presence. Water Yield is good.



0 100 200 300 400 m

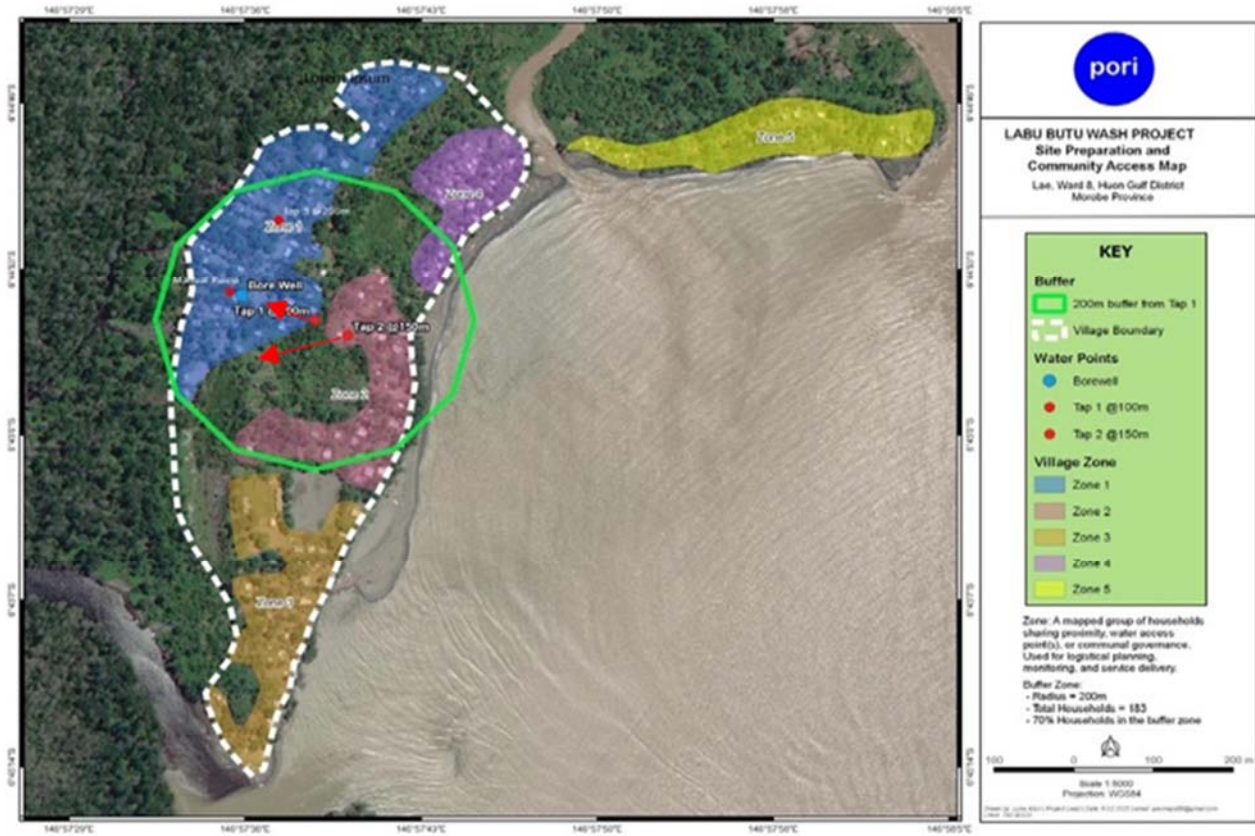
Scale 1:6 000

Datum: WGS84

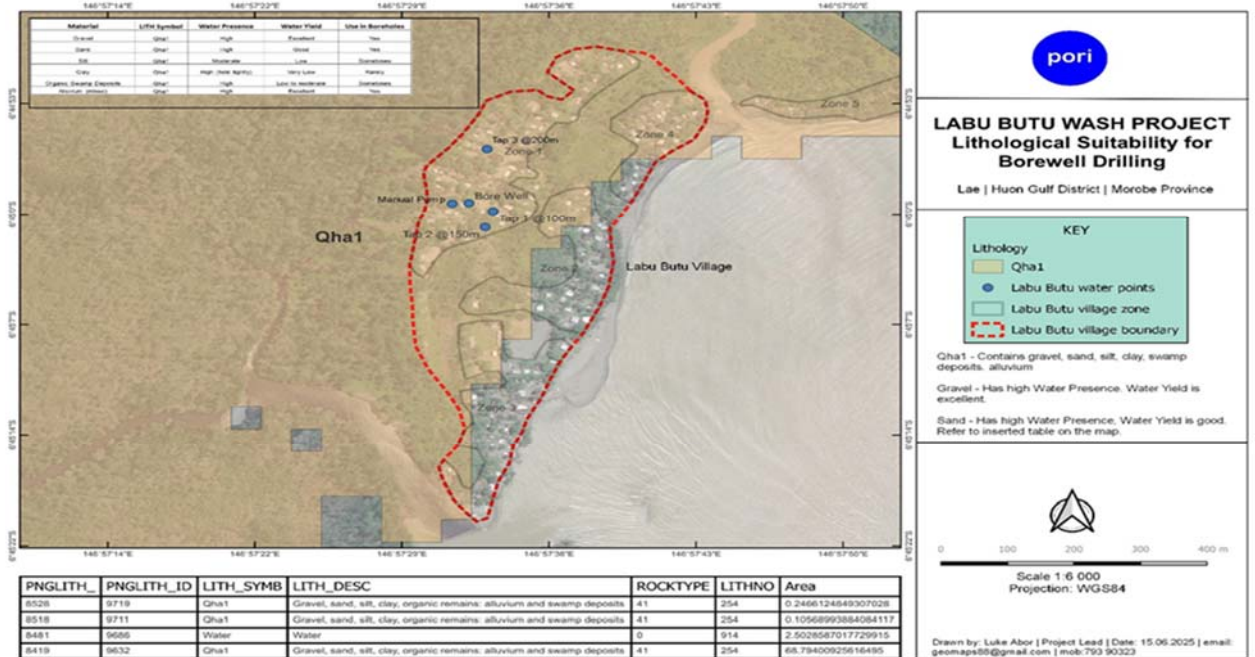
Drawn by: Luke Aber | Project Lead | Date: 15.06.2025 | email: geomaps06@gmail.com | mob: 793 90323



MAP 1 – Community Access Water Point



MAP 2 – Lithological Suitability Map for Borehole Drilling





ANNEXURE F - FINANCIAL REPORTING TEMPLATE

Reporting Period	June 2025 – August 2025
------------------	-------------------------

Budget line	Expensed	Balance	Comments
1 Materials	17,269.34	0	Provided construction materials for tap stands, storage tank, and minor infrastructure, enabling safe water delivery to ~2,000 people
2 Water testing	1,329.57	0	Ensured water quality was safe for consumption; results shared with community, supporting reduced waterborne diseases (~40% reduction)
3 Water drilling	15,000.00	0	Two boreholes were drilled. One is operational; one abandoned. One historic old well was redeveloped; ensured year-round water access
4 Construction	5000.00	0	Built tap stands and associated infrastructure; reduced water collection distance/time for women and children by 2–3 hours/day
5 Logistic support	6000.00	0	Facilitated transport of materials and equipment; supported community engagement and project implementation
6 Subsidize funding support (Contingency)	5401.09	0	Covered minor budget gaps; ensured completion of critical activities, including hygiene sessions and training of Water Management Committee
Total	K50,000.00	0.00	

Percentage Spent	100%
------------------	------

Percentage Remaining	0%
----------------------	----

Notes – Please explain how balance (.....%) of funds will be utilized


- All project funds for budget lines 1, 2, 3, 4, 5, & 6 were fully utilized as per the approved budget lines.
- In some cases, Pori use its own fund to support.
- Investments directly contributed to measurable outcomes: safe water access, reduced disease, improved school attendance, reduced burden on women and children, and strengthened community management capacity.



- *Remaining activities, such as ongoing hygiene awareness, M&E and water management committee capacity-building, will be completed using internal and in-kind community resources.*

Other notes

All relevant documentation (receipts, correspondence) must be submitted as part of the report.

Declaration
I certify that this statement is an accurate representation of expenditure, and that the Funding was expended for the purposes for which it was provided and in accordance with the agreement. I understand that giving false or misleading information is a serious offence.
Name: Luke ABOR
Position Title: Project Lead
Signature: 
Date: 23.09.2025