



**BADEL AND NORUNG WATER SUPPLY PROJECT
AISELUKHARKA RURAL MUNICIPALITY
KHOTANG, KOSHI PROVINCE
NEPAL**



**A
Project
for
“BADEL AND NORUNG COMMUNITY”
AISELUKHARKA RURAL MUNICIPALITY-03 BADEL & 07 NORUNG**



**Project Funded By:
Quality Education Nepal, Australia
Aiselukharka Rural Municipality
Badel and Norung Community**

Report – II

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Contents

Executive Summary	3
Project Goal.....	3
Project Outcome.....	3
Outcome 1: Household Access to Safe Drinking Water	3
Outcome 2: Reduced Health Risks Associated with Unsafe Water	3
Outcome 3: Reduced Time and Labor Burden for Water Collection	4
Outcome 4: Strengthened Community Ownership and Sustainability	4
Project Output.....	4
Output 1: Household Water Supply Infrastructure Established	4
Output 2: Water Source Protection and Storage Systems Constructed	4
Output 3: Transmission and Distribution Network Completed.....	4
Output 4: Community Engagement and Capacity Strengthening.....	4
Project Details	5
Progress Summary	5
Construction Progress at Norung Drinking Water Supply Project	5
Construction of Intake -Norung.....	5
Construction of Collection Chamber-Norung.....	6
Construction Of Gi Crossing in The Transmission Line-Norung	7
Pipeline Excavation Works-Norung	8
Maintenance of Reservoir Tanks – 8,000 and 10,000 liters.....	9
Construction of Tap post-Meter Box-Norung	10
Meeting with Norung Community.....	11
Construction Progress at Badel Drinking Water Supply Project.....	12
Construction of Intake – Not Started - Badel.....	12
Fixing of Interruption Chamber and Brake Pressure Chamber - Badel.....	13
Pipeline Excavation- Badel	13
Construction of Distribution Chambers- Badel	15
Construction of Reservoir Tanks- Badel (8000, 14000, 18000 and 20000 liters)	16
Demonstration of Tap post Construction- Badel.....	18
Transportation of Materials- Badel	19
Meeting with Community- Badel	20

Executive Summary

The Badel and Norung Drinking Water Supply Project will be successfully implemented to improve equitable access to safe and reliable drinking water for rural households in Aiselukharka Rural Municipality, Khotang District. The project will directly benefit 246 households, comprising 200 households in Badel (Ward No. 3) and 46 households in Norung (Ward No. 7), communities that previously faced persistent challenges related to water scarcity, poor water quality, and long collection times.

The project being managed and implemented by Action for Nepal, with financial and institutional support from Quality Education Nepal, Aiselukharka Rural Municipality, and meaningful community contributions from Badel and Norung. The intervention adopted a One Tap per Household (1T/HH) service model, ensuring inclusive, dignified, and household-level access to potable water in alignment with national standards.

Project activities included water source protection, construction of intake and storage structures, installation of transmission and distribution pipelines, and household tap connections. Community engagement was integral throughout the project cycle, strengthening ownership, local accountability, and long-term sustainability.

Upon completion, the project will significantly reduce the time and physical burden associated with water collection, improved hygiene practices, and contributed to better health outcomes, particularly for women, children, and elderly community members. The project demonstrates effective collaboration between civil society, local government, donors, and communities, and aligns closely with Quality Education Nepal's commitment to enabling foundational services that support education, health, and human dignity.

Project Goal

- To ensure sustainable, equitable, and safe access to drinking water for all households in Badel and Norung, thereby improving health outcomes, reducing time poverty, and contributing to inclusive rural development in line with Sustainable Development Goal 6 (Clean Water and Sanitation).

Project Outcome

Outcome 1: Household Access to Safe Drinking Water

Indicator: Percentage of households with functional household tap connections

Baseline: 0%

Expected Endline: 100% (246 out of 246 households)

Outcome 2: Reduced Health Risks Associated with Unsafe Water

Indicator: Proportion of households accessing improved water sources at household level

Expected Endline: 100% of beneficiary households

Qualitative Result: Reduced exposure to water-borne diseases and improved hygiene practices

Outcome 3: Reduced Time and Labor Burden for Water Collection

Indicator: Average time spent per household per day for water collection

Baseline: Long-distance collection from unsafe or seasonal sources

Expected Endline: Less than 5 minutes per day (on-premises access)

Outcome 4: Strengthened Community Ownership and Sustainability

Indicator: Community contribution and participation in implementation and O&M

Expected Endline: 100% community participation during construction and system handover

Project Output

Output 1: Household Water Supply Infrastructure Established

- 246 household tap connections installed and operational
 - Badel: 200 households
 - Norung: 46 households
- Service Level: One Tap per Household (1T/HH)

Output 2: Water Source Protection and Storage Systems Constructed

- Improved and protected water sources developed to ensure water quality and reliability
- Storage structures constructed to meet daily household demand

Output 3: Transmission and Distribution Network Completed

- Transmission pipelines installed from source to reservoirs
- Distribution pipelines extended to all beneficiary households with equitable coverage

Output 4: Community Engagement and Capacity Strengthening

- Beneficiary households actively involved in planning, construction, and monitoring
- Community capacity enhanced for basic operation and maintenance of the system

The Badel and Norung Drinking Water Supply Project will successfully achieve its intended goal and outcomes, delivering 100% household-level access to safe drinking water in the target communities. The project stands as a model of effective partnership between Quality Education Nepal, Action for Nepal, local government, and beneficiary communities, demonstrating how targeted infrastructure investments can generate long-term social, health, and development benefits.

Project Details

- ❖ Project Title: Badel and Norung Water Supply Project
- ❖ Report Submitted to: Quality Education Nepal and Aiselukharka Rural Municipality
- ❖ Report Submitted by: Action for Nepal
- ❖ Reporting Period: May 2025 to April 2026 – Needs to be Extended till August 2026
- ❖ Project Start Date: May 2025
- ❖ Project Duration: 12 Months (Up to April 2026)

Progress Summary

Construction Progress at Norung Drinking Water Supply Project

Construction of Intake -Norung

Progress

The structural assembly of the Intake has reached an impressive milestone and is largely complete, featuring successfully installed reinforced concrete chambers, manhole covers, and perimeter fencing posts alongside completed gabion and stone masonry for robust slope stabilization. To prepare the main intake unit for operational testing and guarantee absolute watertight integrity, the user's committee is proactively reinforcing the junction between the PCC base and masonry wall using high-strength, non-shrink grout and a rich cement-sand mortar integrated with chicken wire mesh. As the project approaches its final walkthrough, the team is executing the ultimate premium finishing touches—including comprehensive site detailing, meticulously clearing remaining materials, stabilizing the soil around the base, and finalizing the tensioning of the barbed wire—to deliver a pristine, highly durable, and fully operational facility.



Construction of Collection Chamber-Norung

Progress

Construction of the Collection Chamber has successfully advanced to the finishing stage, featuring structurally sound external walls, completed PCC flooring, and installed perimeter fencing. The initial plastering of the gate pillars and base has clearly established the facility's final footprint, paving the way for our final refinement and quality assurance phase. To ensure a completely watertight and seamless finish for a commission-ready site, the User's Committee is proactively reinforcing the junction between the base and walls with chicken wire mesh, followed by the application of high-quality cement plaster and a smooth, neat cement punning. As we complete these premium finishing touches, the team is also precisely aligning and securing all internal and external pipe fittings to perfectly match the technical drawings, guaranteeing the long-term durability and operational excellence of the facility.



Construction Of GI Crossing in The Transmission Line-Norung

Progress

The installation of the GI pipe crossing across the ravine is advancing exceptionally well, with the main span successfully suspended and robust stone masonry structures built to the required elevation to provide a highly stable foundation. To optimize the system for long-term operational efficiency and seamless future maintenance, the User's Committee is proactively enhancing the configuration by integrating GI unions near both support blocks and utilizing a single, continuous long pipe section in the middle. As part of this premium finishing phase, the team is meticulously threading and sealing all joints to guarantee a completely leak-proof system, while also completing the final protective plastering of the support blocks to ensure the entire crossing remains highly durable and resilient against weathering.



Pipeline Excavation Works-Norung

Progress

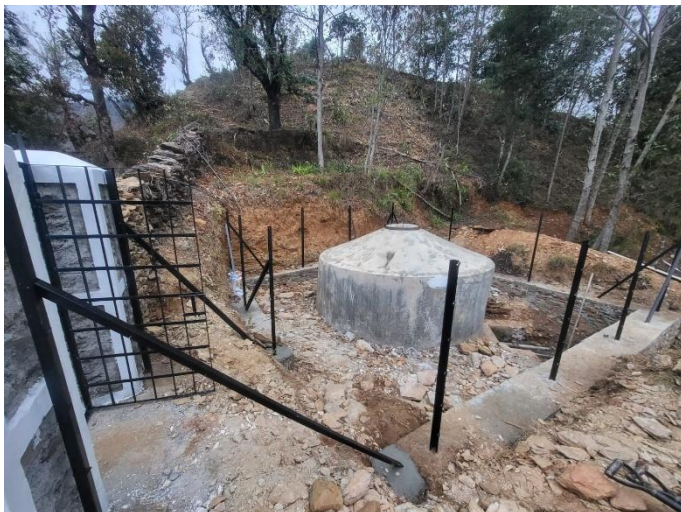
Excavation for the transmission and distribution pipeline is progressing exceptionally well, with trenching successfully reaching the required depths across varied terrains and a significant portion of the line already meticulously laid. The User's Committee is highly commended for their proactive and exemplary work in challenging rock-outcrop sections, where they have effectively utilized concrete encasement to perfectly stabilize and protect the pipeline—a best practice they are actively maintaining for all remaining exposed rock areas. To guarantee the maximum longevity and structural integrity of the entire system, the team is carefully preparing optimal sand or soft-soil bedding free of sharp fragments before laying the pipes. The project continues to advance smoothly as the team executes systematic backfilling and precise soil compaction, ensuring the pipeline remains fully supported, seamlessly secured, and highly resilient for years to come.



Maintenance of Reservoir Tanks – 8,000 and 10,000 liters

Progress

The structural work for the Ferro-cement Reservoir Tank (RVT) has reached an impressive state of near-completion, featuring a fully intact conical top, an installed manhole rim, and a robust, brand-new perimeter security system complete with a gated entrance, reinforced pillars, and barbed wire on concrete-set MS angle posts. Expertly constructed stone masonry retaining walls successfully stabilize the excavated slope and perfectly define the site boundary. To guarantee optimal performance and longevity, the Users Committee is proactively upgrading the external plumbing with permanent, high-pressure rated galvanized iron or HDPE fittings, while also constructing a secure, lockable valve box to perfectly protect the regulation valves. As the project enters its premium finishing phase, the team is diligently executing final site detailing by clearing the perimeter for safe access, applying high-quality internal and external plaster to protect exposed masonry, and meticulously tensioning the fence posts. To complete this excellent facility, a neat layer of stone soling is being added around the tank's base to ensure ideal drainage and a pristine, erosion-free environment, culminating in a highly secure, durable, and fully optimized water storage system.



Construction of Tap post-Meter Box-Norung

Progress

The construction of both individual and organizational tap stands has successfully reached an impressive final structural stage, featuring beautifully cast designs and fully installed primary plumbing with high-quality brass faucets. The individual units boast a sleek single-pillar design with an integrated concrete basin and secondary drainage trough, while the robust organizational stand provides a wide-profile concrete backboard supporting multiple faucets and elevated wash basins. To perfectly finish the site and guarantee long-term structural resilience against rainwater, the User's Committee is proactively executing systematic backfilling around the foundations using well-compacted soil and stone spawls. As a premium final touch to optimize user accessibility, the team is diligently clearing loose boulders, leveling the approach paths, and constructing a pristine stone-soling platform. This meticulous site detailing ensures a beautifully clean, non-slip environment, providing incredibly smooth, safe, and comfortable water access for everyone within the community, including children, the elderly, and individuals carrying heavy vessels.



Meeting with Norung Community

The recent meeting with the Norung community demonstrated an exceptional level of active participation and collective ownership, which is rarely witnessed in the typical rural development landscape of Nepal. The community's deep-seated commitment to the project implementation is evident through their consistent labor contribution and proactive decision-making. If this current momentum and high degree of engagement are maintained, the project is on a clear trajectory for successful completion by May 15, 2026. This community stands as a model for decentralized project management, showing that local empowerment is the most effective driver for sustainable infrastructure.

Beyond the immediate scope of the drinking water supply, the Norung residents have displayed a forward-thinking vision for long-term economic resilience. They have formally requested specialized agricultural training in drip irrigation and the provision of necessary equipment, expressing a strong desire to transition into commercial vegetable farming. Their message to the project team was clear: with the right tools and technical knowledge, they are fully prepared to take the initiative to "learn and grow" independently. This level of self-reliance and eagerness to adopt modern water-management technologies highlights the community's potential to transform the available water resources into a sustainable source of livelihood.



Construction Progress at Badel Drinking Water Supply Project

Construction of Intake – Not Started – Badel

Progress

Preparations for the Spring Intake (Type I) at the Badel site are advancing with excellent momentum, as the team has successfully established a highly effective mule-based transportation system to smoothly navigate the surrounding terrain. This innovative logistics solution is now seamlessly delivering essential construction materials—including cement, aggregates, and reinforcement bars—perfectly setting the stage for immediate site clearing and foundation excavation. To guarantee the pristine quality of the water source and robustly protect it well ahead of the upcoming monsoon season, the Users Committee is proactively mobilizing additional local labor while maintaining an uninterrupted, continuous flow of materials. By strategically accelerating the construction phase and strictly adhering to the premium Type I technical specifications for optimal secure catchment and superior filtration, the dedicated team is seamlessly on track to rapidly deliver a highly secure, expertly constructed, and exceptionally clean water source for the entire Badel distribution network.



Fixing of Interruption Chamber and Brake Pressure Chamber - Badel

The User's Committee is instructed to ensure that all Interruption and Brake Pressure Chambers (BPCs) along the transmission and distribution lines are properly fixed and stabilized to manage hydraulic pressure effectively. The potential locations were measured and located for two Interruption chamber and 3 Brake pressure chamber. The chambers must be anchored on firm, non-erodible ground to prevent settlement or structural shifting. Within the chambers, the committee must ensure that high-pressure rated float valves and fittings are precisely aligned and securely tightened to prevent bypass or leakage. It is mandatory to finish the internal surfaces with neat cement punning to ensure watertightness and to install lockable covers on every chamber to protect the regulation mechanisms from environmental damage or unauthorized interference.

Pipeline Excavation- Badel

Progress

The pipeline excavation for the transmission and distribution lines has achieved excellent momentum, driven by the impressive and highly organized mobilization of four separate community labor groups—featuring the active and commendable participation of both men and women—working simultaneously across strategic locations to deliver rapid, multi-front trenching. To expertly optimize this fantastic progress and perfectly safeguard the excavated terrains against weather-related soil movement, the User's Committee, in seamless coordination with the Action for Nepal team, is proactively engaging local government technicians to expedite official depth measurements. As these essential verifications are efficiently recorded, the highly motivated community teams are meticulously executing systematic, section-by-section backfilling and precision compaction, ensuring the pipeline remains flawlessly secured, maximizing labor efficiency, and guaranteeing the continuous, high-quality advancement of the entire water network.



Construction of Distribution Chambers- Badel

Progress

Significant structural milestones have been successfully achieved in the construction of the project's two distribution chambers, highlighted by the fully completed excavation and foundational stone soling for the first chamber, which now boasts an exceptionally stable and level base. Excavation for the second chamber is also completely finished, perfectly preparing the site for the immediate commencement of soling activities. To expertly navigate the rugged terrain and proactively safeguard the pristine foundation pits against surface runoff, the dedicated User's Committee is seamlessly maintaining a robust drainage perimeter while swiftly advancing the stone soling for the second site. By meticulously ensuring all stones are well-compacted and perfectly interlocking, the highly motivated team is moving rapidly to cast the PCC base for both chambers, guaranteeing maximum structural support, fully mitigating weather-related risks, and keeping the development beautifully on track for a highly durable and optimized distribution system.



Construction of Reservoir Tanks- Badel (8000, 14000, 18000 and 20000 liters)

Progress

The excavation phase for all Ferro-Cement Tanks (FCT) across the project has been completed with resounding success, marking a significant milestone in the water infrastructure development. We are thrilled to report that two of these tanks are already advancing rapidly into the final stages of construction, showcasing near-complete structural mesh and exceptionally high-quality plastering. The craftsmanship displayed by the team is truly outstanding, featuring perfectly positioned internal and external fittings—including inlet, outlet, and washout pipes—that align flawlessly with strict design specifications. This meticulous adherence to ferro-cement technical requirements ensures a robust and highly efficient storage system right from the foundation.

As the project progresses, the team continues to demonstrate remarkable adaptability and engineering excellence in optimizing site-specific conditions to maximize structural longevity. At the 20,000-liter FCT site, the natural presence of hard rock strata has provided an excellent opportunity to further fortify the installation. To expertly complement this natural foundation, the Users Committee is proactively constructing a robust stone masonry retaining wall, completely guaranteeing ultimate long-term stability and expertly protecting the tank shell. Similarly, at the 8,000-liter FCT location, the team is taking full advantage of a generously excavated foundational footprint. By meticulously backfilling the space with a premium, well-graded mixture of soil and stone spawls, and thoroughly compacting it in precise 150mm layers, they are creating a phenomenally solid and resilient base that will perfectly support the structure for decades.

As these premium facilities approach their final polishing phase, the dedicated teams are executing a rigorous quality assurance protocol to guarantee perfection. To ensure the absolute highest standards of operational excellence, all fittings are being diligently verified for complete watertightness right before the final, seamless internal cement punning is applied. Furthermore, the committee is putting the finishing touches on the surrounding landscape by meticulously clearing the perimeter of any loose boulders or construction remnants. This thoughtful site detailing not only ensures a pristine and beautiful environment but also guarantees completely safe, unhindered access for seamless future routine maintenance, delivering a world-class water storage solution for the community.



18000 Liter Tank



8000 Liter Tank



14000 Liter Tank



14000 Liter Tank



20000 Liter Tank



20000 Liter Tank

Demonstration of Tap post Construction- Badel

A dedicated demonstration session was held for the Badel community to provide a clear understanding of the standardized tap post design and its spatial requirements. The primary goal was to familiarize households with the exact dimensions and footprint of the structure, enabling them to make informed decisions when allocating land near their homes. This proactive engagement has empowered the community to begin identifying suitable locations that ensure both technical feasibility for plumbing and convenient daily access. The User's Committee is instructed to guide each household in marking out the required area for their individual tap posts based on the demonstrated model. The community is directed to begin the self-transportation of local materials, including stone for soling and clean sand, to their respective household sites to avoid construction delays. Furthermore, the committee must verify that each chosen location allows for a proper drainage outfall and does not interfere with existing footpaths or structural foundations of the houses.



Transportation of Materials- Badel

Progress

Material transportation for the project has taken a fantastic leap forward with the strategic implementation of a highly efficient and sustainable animal-based transit system. After witnessing the incredible dedication and enthusiastic effort of the Badel community during their initial voluntary manual hauling, the Users Committee proactively upgraded the logistics to protect the community's well-being across the extreme terrain. By successfully hiring and mobilizing a dedicated team of mules to expertly handle the heavy hauling, the project now enjoys a steady, consistent, and rapid flow of essential materials—such as cement, sand, and reinforcement bars—directly to the construction sites, keeping the timeline beautifully on schedule.

This brilliant logistical shift has perfectly safeguarded the high morale of the community, allowing their valuable energy to be optimally redirected toward high-impact activities. The highly motivated community members are now seamlessly re-mobilized, enthusiastically focusing their efforts on crucial on-site construction tasks like excavation and expert masonry, which is drastically accelerating the build process. To support this exceptional momentum, the Users Committee is diligently maintaining clear delivery paths and preparing highly secure, dry storage areas at all delivery points to perfectly protect the cement and materials from moisture. This harmonious balance of efficient animal transport and energized community participation ensures the project continues to advance with maximum efficiency and outstanding success.



Meeting with Community- Badel

Progress

A highly collaborative and inspiring community alignment meeting was successfully convened, bringing together local households, the Ward Chairperson, and the Action for Nepal (AF Nepal) technical team. This empowering session served to strengthen community bonds and provided a fantastic opportunity for the AF Nepal team to comprehensively highlight the profound value of local participation. By emphasizing how in-kind contributions—such as shared labor and local material transport—are vital pillars of the project's sustainability, the meeting successfully revitalized the community's shared vision and deep sense of ownership over their new infrastructure.

To seamlessly optimize this incredible community spirit and ensure that everyone's valuable efforts are equally celebrated, the team engaged in a proactive discussion on streamlining their collaborative workflow. With the enthusiastic support of the Ward Chairperson, the Users Committee is implementing an innovative and transparent labor tracking ledger. This excellent initiative perfectly guarantees that every household's contribution is fairly recognized and accurately recorded, significantly boosting overall motivation. This equitable approach is already fostering a highly unified, energized, and harmonious workforce that is eager to tackle the remaining project milestones together.

Capitalizing on this renewed momentum, the highly motivated community has proactively developed an accelerated, goal-oriented schedule to expertly manage the final construction phases. By dividing the upcoming tasks into highly achievable, intensive weekly targets, the community is fully mobilized and the project is advancing at an exceptional pace. This brilliant strategic alignment ensures that everyone moves forward with a clear, shared purpose, guaranteeing the water system will be fully operational and beautifully completed well ahead of the upcoming monsoon season.

