

**Scaling-Up Water Supply, Sanitation, and Hygiene Project**

**IDA Project No.: SWSSHP (P-164901)**

**Contract Package: C1/W/27**

**Contractor's Environmental and Social Management Plan  
(C-ESMP)**

**for**

**Water Supply Systems (Nam Papa) in Muangna Cluster of Kouan  
District and Phanxam Cluster of Xamtay District**

**Prepared by**

**Viengoudomxap Construction, Agriculture and Tourist sole Co., Ltd**

**June 2025**

## GENERAL INFORMATION

Contract Package	Contract Package: C1/W/27 Water Supply Systems (Nam Papa) in Muangna Cluster of Kouan District and Phanxam Cluster of Xamtay District.
Contractor	Contractor: Viengoudomxap Construction, Agriculture and Tourist sole Co., ltd Address: Chommany Village, Saysettha District, Vientiane Capital, Lao PDR. Representative: Mr. Oudomsinh PHETXAYSY. Position: Managing Director. Mobile Phone: (+856) 20 55649789. Email: Sinh kph@yahoo.com.
Contract Duration	Contract signing date: 22 October 2024 Start Date: 22 October 2024; End Date: 22 August 2025 Total days: 370 days (12 months and 5 days).
Contractor's reviewer	Mrs. Viengsawan PHINITH
Issuance Date	June 9, 2025
PMU/CSC Reviewer:	Mr. Chanthepha Khattiyavong, Project Manager Dr. Kulwant Singh, International Project Management and Monitoring Consultant Mr. Vilaysack, Construction Supervisor Ms. Sengdavanh Phongpaseuth, Environmental Safeguard Consultant Mr. Sysouvanh Boubpha, Social Safeguard Consultant
Date of Approval	-
Distributed to	-PMU, PIU

## CONTRACTOR'S COMMITMENT

We are Viengoudomxap Construction, Agriculture and Tourist sole Co., ltd the entity that will execute the contract No. C1/W/27 Construction of Water Supply System for Muangna Cluster of Kouan District and Phanxam Cluster of Xamtay District of Scaling-Up Water Supply, Sanitation, and Hygiene Project IDA Project No.: SWSSHP (P-164901).

At required by the Project, herewith we submit the **Contractor's Environmental and Social Management Plan (C-ESMP)** for the above-mentioned contract package for consideration and approval by the CSC/PMU.

We know that there are potential environmental, health and safety risks and negative impacts at the constructions sites and at places disturbed by the construction activities. There are also the risks of social impacts and disturbances to the local communities and the public caused by construction activities and the labor influx. We are committed to complying with the Project's ESMP and ARAP requirements, the Environmental, Social, Health and Safety provisions stated in the bidding documents and construction contract. We also commit to fully implement measures to mitigate impacts and manage environmental, social, health and safety risks as highlighted in this C-ESMP throughout the implementation of this package.

### CONTRACTOR'S REPRESENTATIVE



Mr. Oudomsinh PHETXAYSY.

Director

Viengoudomxap Construction, Agriculture and Tourist sole Co., ltd

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## 1. Legal Basis

The Contractor's Environmental and Social Management Plan (C-ESMP) of the Contract package C1/W/27 has been prepared based on Lao's laws and legal regulations as listed in the Project's Environmental and Social Management Framework and the approved Environmental and Social Management Plan (ESMP) prepared for Muangna Cluster, Kouan District and Phanxam Cluster Xamtay District, Huaphan Province. This plan will also comply with the Environmental, Social, Health and Safety (ESHS) requirements specified in the bidding document.

## 2. Contractor's Policies on ESHS

Viengoudomxap Construction, Agriculture and Tourist sole Co., Ltd aims to create a safety, secure, healthy and environmentally-conscience workplace for all employees, subcontractors, suppliers and visitors.

Key objective of these policies.

- Use modern and environmentally friendly technologies to avoid and reduce negative impacts on the environment and society
- Implement the project with a clear goal that lead towards the best environmental management model which is in accordance with the policies, laws, and regulations related to environmental protection in Lao PDR and prevailing International Standards.
- Be responsible for any negative impacts that cause damage to the health of the society and environment due to construction activities.
- The environmental objectives of the project are to identify ways to mitigate and reduce negative environmental impacts that may arise, while ensuring compliance with International Environmental Standards and the guidelines set by the Government of Lao PDR.
- The economic and social objectives of the project are mainly to contribute to the sustainable development activities in the area. In order to achieve this, the project will be developed in a way that maximizes positive impacts and minimizes negative impacts.
- Comply with all the regulations, apply strict health and safety policies and Standards, and ensure the active participation of local governments and communities in contributing to the implementation of socio-economic development plans in the villages, districts, and provinces where the project is located.
- Avoid creating noise, vibrations, and ensure that water and air quality are not impacted beyond the National Standards of Lao PDR.
- Monitor and report environmental, social, and other issues related to the project to the relevant government authorities to ensure that they are in accordance with the National laws and regulations of Lao PDR.
- Collaborate with village, district, and provincial governments, as well as relevant ministries, to create sustainable socio-economic benefits and to prevent any negative environmental and social impacts

### 3. Environmental, Social, Health and Safety Structure and Responsibilities

#### 3.1 Organizational Chart:

The project management structure for the Water Supply System (WSS) construction within the Muangna and Phanxam Clusters by Viengoudomxap Construction, Agriculture and Tourist Sole Co., Ltd. will comprise: a Site Manager who will provide oversight for both WSS clusters. Each WSS construction site will be assigned a dedicated Site Engineer responsible for the supervision of civil works and overall site management. Furthermore, an Environment Health and Safety Officer (EHSO) will be designated for each construction site to manage and monitor the implementation of the Environmental and Social Management Plan (ESMP).

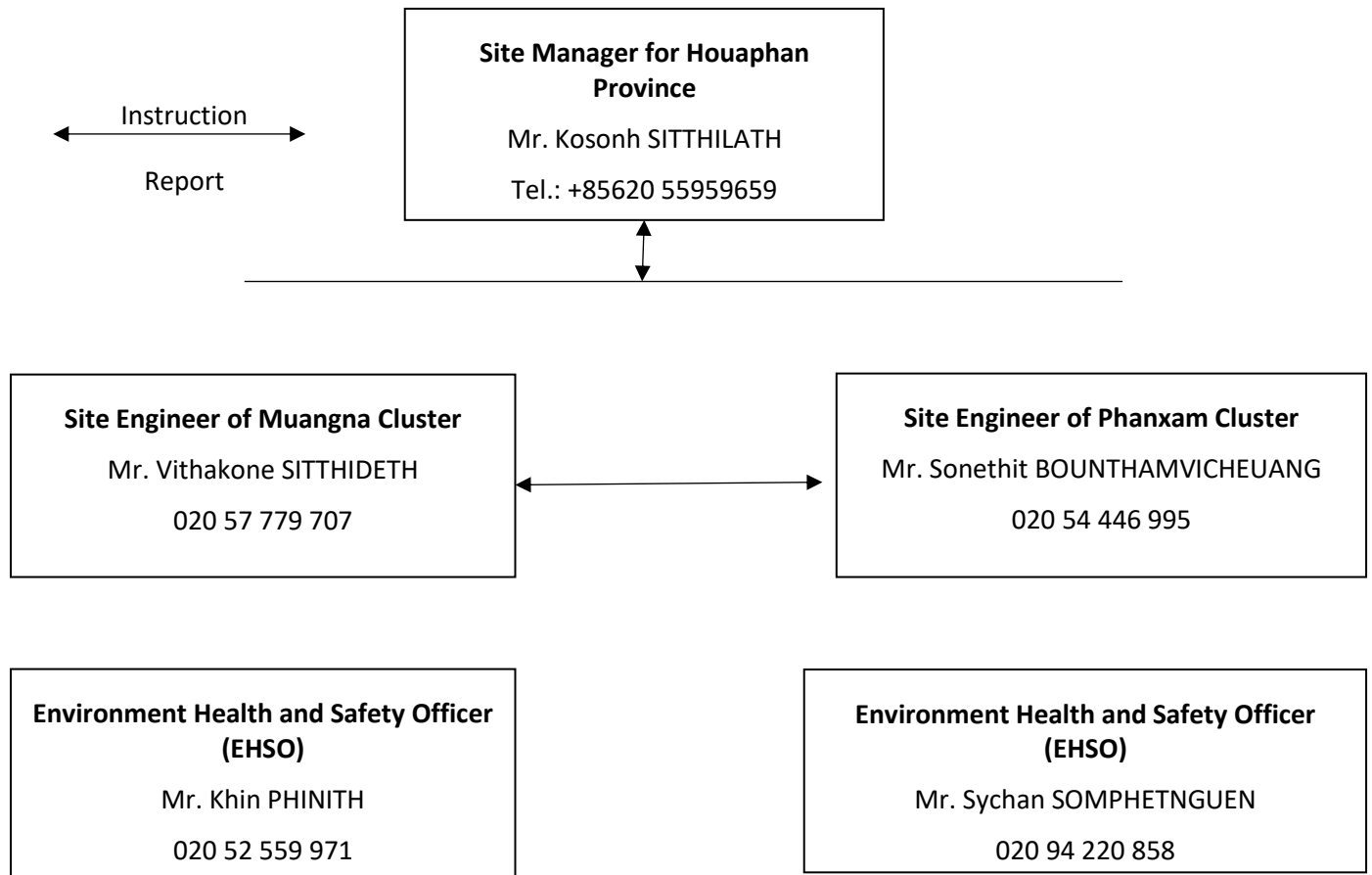


FIGURE 3-1 THE CONSTRUCTION PACKAGE C/W/27 ORGANIZATION CHART

### **3.2 Roles and Responsibilities:**

#### **a) Site Manager**

- Responsible for the project's adherence to the Environmental and Social Management Plan (ESMP), Contractor's Environmental and Social Management Plan (C-ESMP), applicable national laws, and the World Bank safeguard policies. (.
- Provides leadership and ensures that ESHS is a priority throughout all phases of construction..
- Ensures adequate financial, human (including qualified ESHS personnel like the EHSO), and material resources are available for the effective implementation of ESHS measures..
- Makes critical decisions regarding ESHS issues, ensuring that corrective actions are promptly identified, implemented, and monitored.
- .
- Ensures that all contractors and subcontractors understand and comply with their ESHS obligations as per their contracts and the C-ESMP.
- Serves as the primary point of contact for ESHS matters with the CSC, PIU and PMU and affected communities, as required..
- Reviews and approves the C-ESMP and ESHS Monthly reports from EHS Officers, ensuring timely submission to the PIU and PMU.
- Oversees the investigation of significant ESHS incidents or grievances, ensuring proper reporting, root cause analysis, and implementation of preventive measures.
- Manages the budget allocated for ESHS activities and mitigation measures.

#### **b) Site Engineer**

- 
- The Site Engineer is responsible for the day-to-day operational implementation and supervision of environmental and social mitigation measures with their assigned cluster/ construction site with ESHO.
- Ensure that all construction activities with their cluster are carried out in strict accordance with the ESMP and C-ESMP and all relevant ESH procedures.
- Directly supervises construction teams and subcontractors to ensure they understand and apply required ESHS measures on the ground.

- Conduct daily site inspection to identify and address potential ESHS risks, non-compliances and opportunities for improvement.
- Conduct daily toolbox talks and regular ESHS briefings for the workforce to reinforce ESHS awareness and procedures.
- Identifies immediate ESHS issues on site and takes prompt corrective action, escalating significant issues to the Site Manager or EHSO as appropriate.
- Works collaboratively with the assigned Environment Health and Safety Officer (EHSO) to implement ESHS plans, resolve issues, and ensure compliance.
- Ensures that necessary ESHS equipment (e.g., PPE, spill kits, waste bins, warning signs) is available and properly utilized by the workforce.

**c) Environmental, Health, & Safety Officer (EHSO)**

The Environment Health and Safety Officer (EHSO) is the dedicated technical specialist responsible for the day-to-day implementation, monitoring, and reporting of all environmental, social, health, and safety (ESHS) aspects at their assigned construction site/cluster. They work under the direct supervision of the Site Engineer and report to the Site Manager on overall ESHS performance:

- Prepare the C-ESMP;
- Day-to-day implementation and supervision of CEMP.
- Works collaboratively with the Site Engineer and CSC to implement ESHS plans, resolve issues, and ensure compliance and conducting regular site inspections and internal environmental audits.
- Ensures the site-specific Contractor's Environmental and Social Management Plan (C-ESMP) is fully implemented by all site personnel, including subcontractors.
- Conduct regular ESHS briefings for all workers to cover ESCOPs, Codes of Conduct, and specific mitigation measures.
- Ensures that appropriate Personal Protective Equipment (PPE) is available, used correctly, and maintained by all workers;
- Oversees the proper segregation, storage, and disposal of all waste generated on site as per the C-ESMP;
- Provides regular updates on ESHS performance and any incidents or non-compliances to the Site Manager and EHSO.
- Addresses immediate, minor community concerns related to construction activities, escalating more complex grievances to the Site Manager.
- Preparing monthly environmental, social, health and safety monitoring reports.
- Responding to environmental incidents and complaints.
- Ensuring environmental permits and licenses are obtained and maintained

**d) All Staff and Worker**

all employees/workers is responsible for their own safety and for contributing to a safe and environmentally sound working environment. . All employees are required to:

- Strictly follow all established ESHS rules, regulations, procedures and instructions provided by the Site Manager, Site Engineer and ESHO.;
- Immediately report any unsafe conditions, hazardous situations, equipment defects, accidents, incidents, or near-misses to the Site Engineer or the EHSO. Properly segregate and dispose of waste materials in the designated bins and area;
- Comply with the requirement C-ESMP and ESMP..
- Properly use and maintain all provided Personal Protective Equipment (PPE).
- Be mindful of their impact on the environment and surrounding communities.
- Show respect for local communities, their customs, traditions, and property.
- Comply to codes of conduct related to behavior, interaction with local people, and prevention of sensitive issues like gender-based violence (GBV) or child labor.

## 4. Work Contents of Contract Package C1/W/27

The Construction of Water Supply Systems (WSS) in Muangna Cluster in Kouan District and Phanxam Cluster in Xamtay District, Huaphan Province, the WSS cluster location are shown in Figure 4-1 to Figure 4-3. Each WSS will be constructed of the water supply system’s facilities are summarized in Table 4-1 below.

TABLE 4-1 THE WSSs FACILITIES AND THEIR KEY FEATURES

Element (from source to taps)	Phanxam WSS, Xamtay District	Muangna WSS, Kouan District
<b>1. Water Sources</b>	Houay Sanong Brook	Houay Na Noy Brook
<b>2. Water Intakes</b>	Elevation: 455m X= 451870, Y = 2213769	Elevation: 755m X= 446804, Y = 2200107
<b>3. Raw transmission pipes (HDPE) from intake to WTP</b>	4.550km HDPE-DN160mm	8.500km HDPE-DN125mm
<b>4. Water Treatment Plan (WTP)</b>	Elevation: 426m X= 453908, Y = 2216328 Area= 3,822 m <sup>2</sup>	Elevation: 715m X= 445287, Y = 2194193 Area= 2,500 m <sup>2</sup>
Capacity (m <sup>3</sup> /d)	630	270
Construction of the foundation for WTP	Yes, ground levelling required	Yes, ground levelling required
Treatment Units (static mixer, steel clarifier tank, steel filter tank, steel reservoir, valve, pipe, and fitting)	Yes	Yes

Element (from source to taps)	Phanxam WSS, Xamtay District	Muangna WSS, Kouan District
Chemical dosing system (tanks, dosing pumps, mixers, valves, check valves, pipes, and fittings)	Yes	Yes
clear water reservoir	210	90
a power supply system, and a control cabinet	Yes	Yes
Drainage system	Yes	Yes
Inlet and outlet pipes and fittings	Yes	Yes
Back wash water tank	No	No
<b>5. Distribution pipes (HDPE)</b>	L= 19.220 km DN225 DN160 DN110 DN90 DN63 DN50	L= 8.565 km DN180 DN160 DN110 DN90 DN63 DN50
<b>6. Household Connection Pipes</b>	<b>455</b>	<b>200</b>
<b>7. Office with separate rooms for storage, chemicals and operators</b>	Yes	Yes
<b>8. Basic laboratory equipment</b>	Yes	Yes
<b>Access Road</b>	New access road, long: 48m and wide: 5m	New access road, long:120m and wide: 5m
<b>Power Supply</b>	Yes, 50kVA transformer	Yes, 50kVA transformer
<b>Serviced Areas and Serviced Population</b>	1.Phiangthin 2.Muangkhan 3.Phiangmai 4.Sopkaem 5. Phiangday <b>Total of Population: 2,774</b>	1.Muangna 2.Houana 3. Nathong <b>Total of Population: 1,148</b>

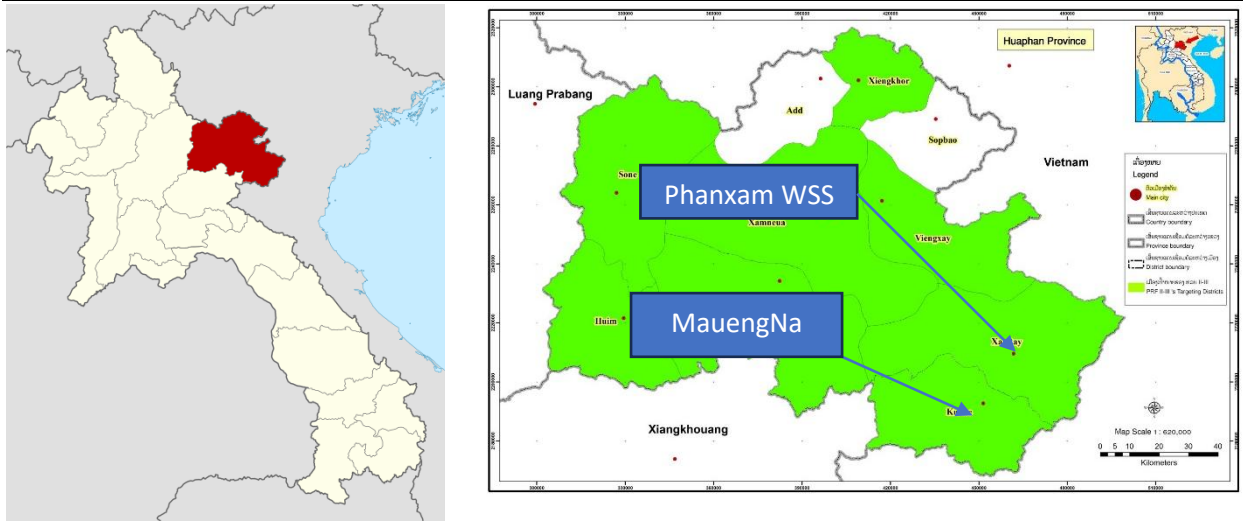


FIGURE 4-1 MAP OF THE WSS CLUSTERS LOCATION IN HUAPHAN PROVINCE

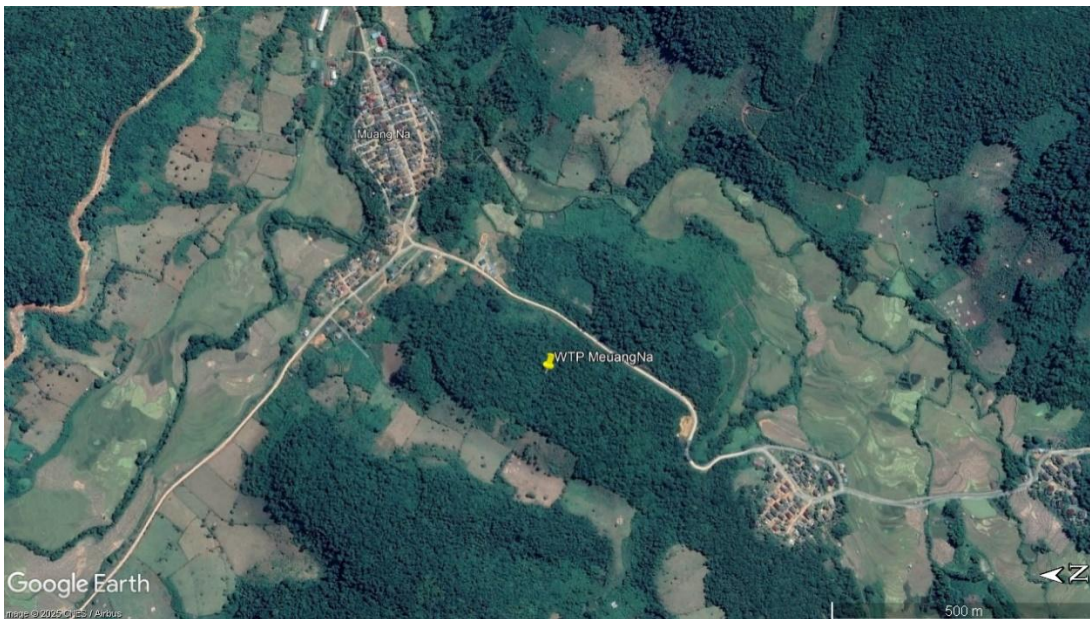


FIGURE 4-2 AERIAL PICTURE OF WSS MUANGNA CLUSTER IN KOUAN DISTRICT HUAPHAN PROVINCE

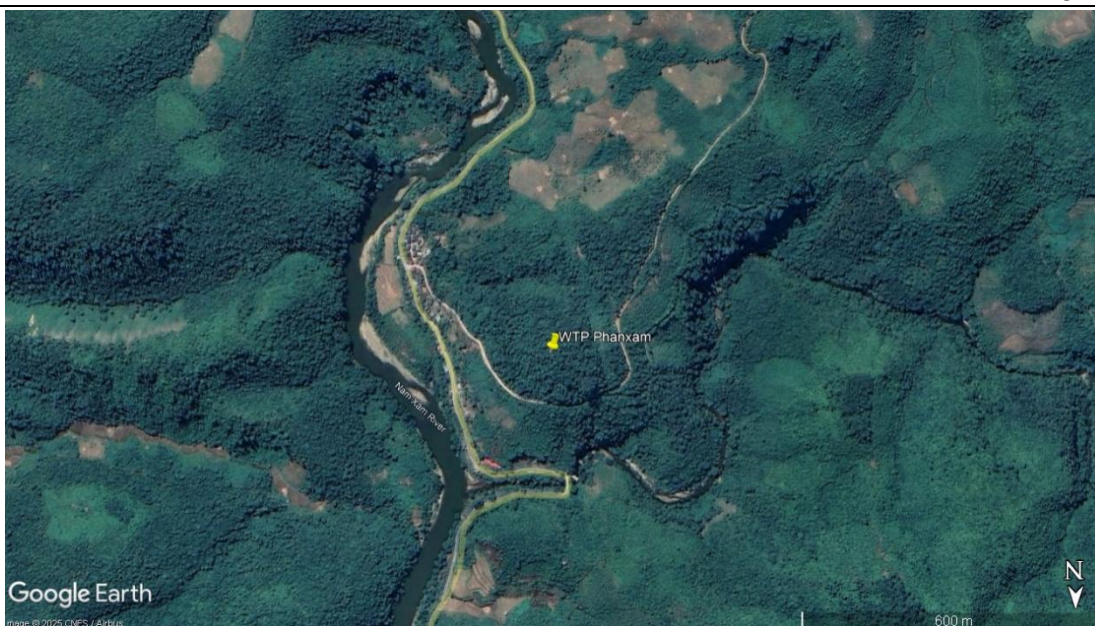


FIGURE 4-3 AERIAL PICTURE OF WSS PHANXAM CLUSTER IN XAMTAY DISTRICT HUAPHAN PROVINCE.

## 5. Resource Mobilization

### 5.1 Machinery and equipment

The construction machineries and equipment will be mobilization to the construction site upon the notice to process issued by the PMU. The appropriate and good condition of the construction machine and equipment for the WSS construction are listed in Table 5-5-1 below.

TABLE 5-5-1 MACHINERY AND EQUIPMENT

Items	MueangNa Cluster in Kouan District		Phanxam Cluster in Xamtay District	
	Quantity	Condition <sup>1</sup>	Quantity	Condition
Excavator (big size 18 tons)	1	90%	1	85%
Excavator (small size 3.5 tons)	2	80%	2	80%
Concrete mixing machine (big size 18 tons)	2	80%	3	80%
Concrete mixing truck (6-8 m <sup>3</sup> )	3	80%	5	80%
Concrete pump truck (25 m)	1	80%	1	80%
Bulldozer	1	80%	1	80%
Dump truck (10wheels)	4	90%	4	90%
Dump truck (6wheels)	2	80%	2	80%

<sup>1</sup> Condition of machineries

Items	MueangNa Cluster in Kouan District		Phanxam Cluster in Xamtay District	
	Quantity	Condition <sup>1</sup>	Quantity	Condition
Generator	2	100%	2	100%
Concrete Vibrator	3	100%	3	100%
HDPE jointing machine	1	80%	2	80%
Pipe pressure test machine	1	85%	1	85%
Ford tractor	1	80%	2	80%

## 5.2 Worker Mobilization

Approximately 38 workers will be mobilized for the construction of both WSS facilities.

- **WSS Muangna Cluster:** Approximately 19 workers will be employed. Of these, approximately 16 will be local male unskilled workers and 3 technical engineers. No female unskilled workers will be employed..
- **WSS Phanxam Cluster:** Approximately 19 workers will be employed with 1 female acting as the cook. Of these, 15 local workers are male unskilled workers and 3 technical engineers and 1 female working as cook.

## 5.3 Worker Accommodation and Temporary Storage Area Arrangement

Each worker camp will be constructed to ensure compliance with the requirements of the Environmental Codes of Practice (ECOPs), the ESCOP is provided in the appendix 1.

- First aid kits will be readily available in each worker accommodation
- Firefighting equipment and portable fire extinguishers will be provided and installed in all buildings.
- A perimeter security fence, at least 2 meters high, will be erected using suitable materials for site security.
- Sufficient natural light will be provided during the day, and adequate artificial lighting will be provided at night.
- Worker accommodations will have sufficient ventilation to ensure proper air circulation in all weather conditions;
- An adequate supply of safe, potable water will be provided which can be used for the drinking as well as for the cooking and other purposes;
- Separate shower and toilet facilities for men and women will be provided, adjacent to the accommodation units.
- Adequate soap and hygienic paper will be provided.
- Garbage receptacles will be provided and periodically emptied to prevent disease outbreaks and maintain hygiene. In the Phanxam Cluster and Muangna Cluster Water Supply System (WSS) project, food waste and other decomposable materials will collect and transport to dispose at district solid waste disposal site. While recyclable waste will be collected and will be sold to the shop that buy the solid waste recycling.

### 5.3.1 WSS Muangna Cluster

The contractor will utilize a rented villa-style house, owned by Ms. Maythong and located in Meuangna Village, to function as both the site office and accommodation for the Site Engineer, Site Manager, and EHSO. This property is equipped with an existing electricity supply and comprises a bedroom, a toilet, a kitchen, a living room, and a balcony. The house is located along the main road within Meuangna village, the rental agreement can be found in Appendix 8, while the camp's location map, accompanying pictures, and layout are detailed in Figure 5-1.



FIGURE 5-1 MAP AND LAYOUT OF THE SITE OFFICE IN MUANGNA CLUSTER

A temporary material storage area will be located at the WTP construction site area, the storage area is shown in Figure 5-2.

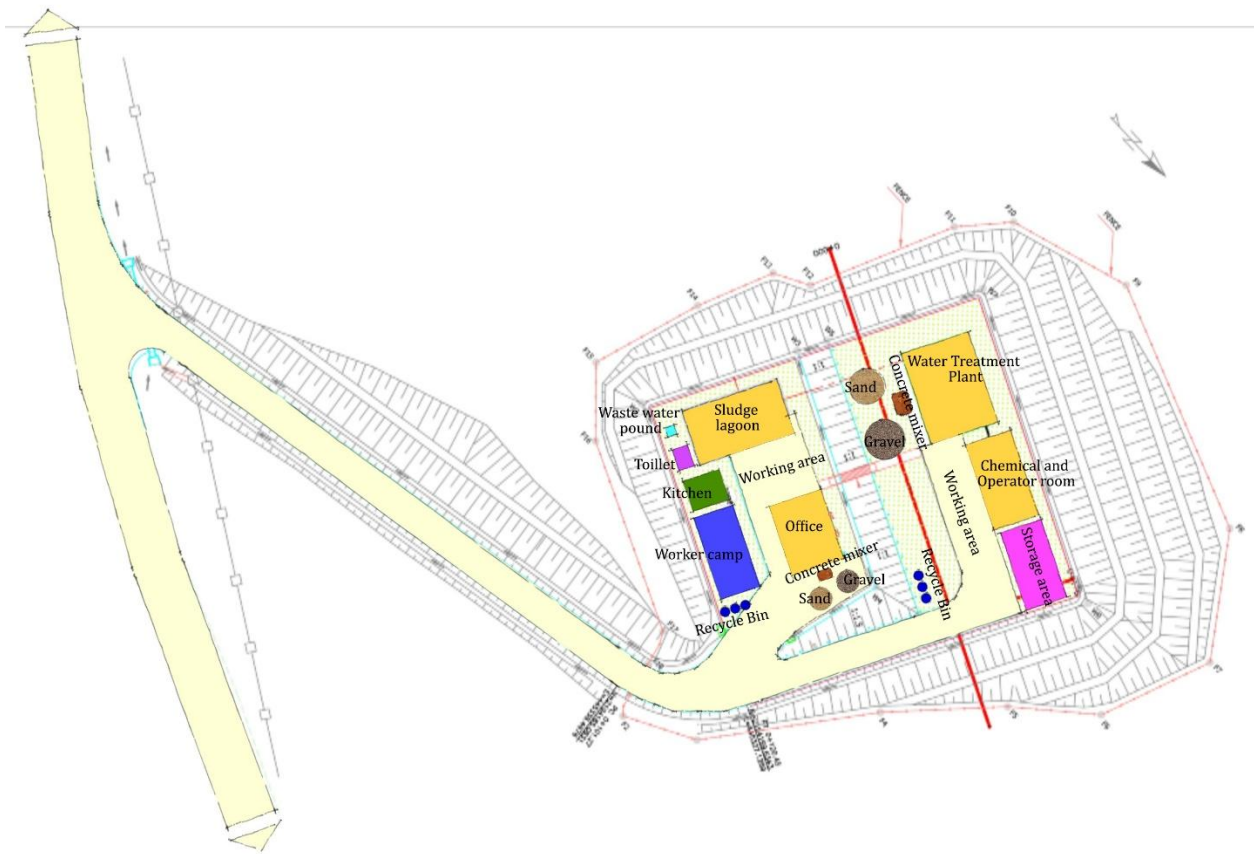


FIGURE 5-2 TEMPORARY MATERIAL STORAGE AREA IN THE WPT OF WSS MUANGNA

CLUSTER

5.3.2 WSS Phanxam cluster

The contractor will utilize a rented villa-style house, owned by Mr. Vanhphone and located in Phiengthin Village, to function as both the site office and accommodation for the Site Engineer, Site Manager, and EHSO. This property is equipped with an existing electricity supply and comprises a bedroom, two toilets, a kitchen, a living room (office), and a balcony. The house is located along the village road within Phiengthin village, the rental agreement can be found in Appendix 8, while the camp's location map, accompanying pictures, and layout are detailed in. (Please find the Agreement in APPENDIX 9)



Figure 5-3 site office of the WSS Phanxam Cluster

A temporary worker camp and material storage area will be located at the WTP construction site area, the storage area is shown in Figure 5-3..

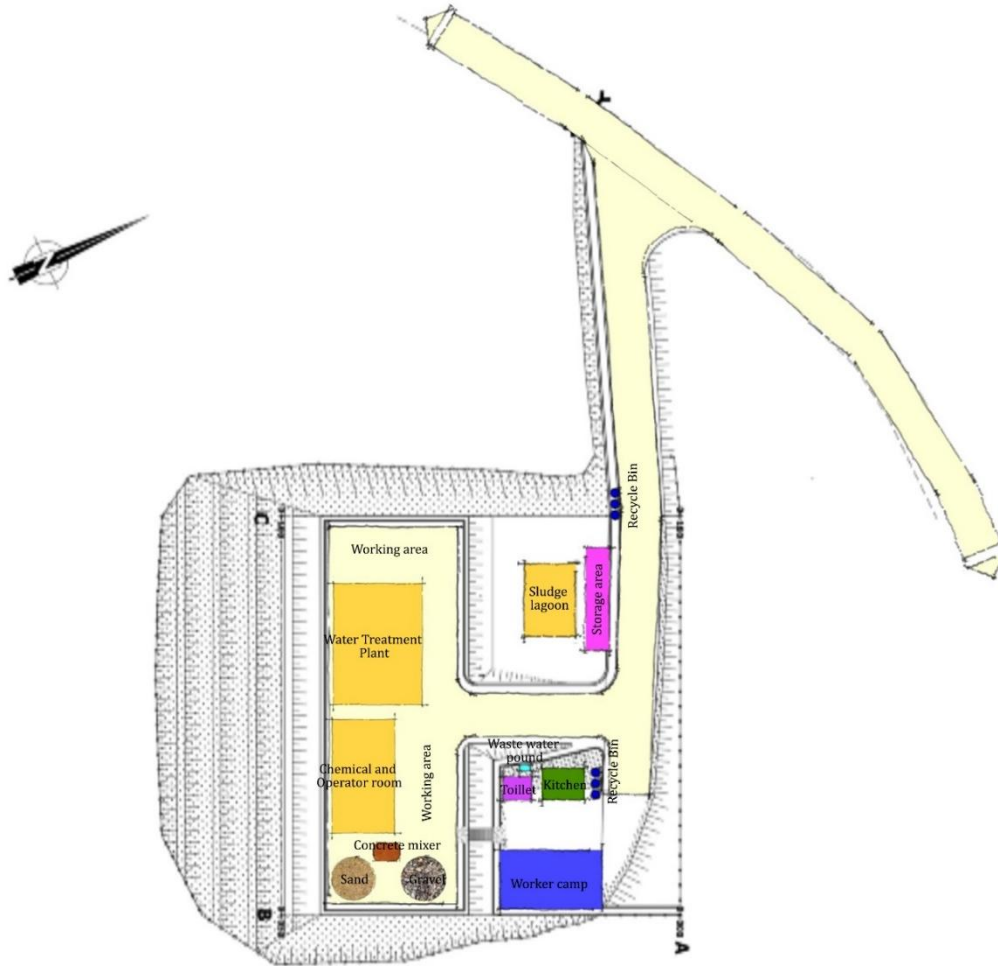


FIGURE 5-4 TEMPORARY MATERIAL STORAGE AREA IN THE WTP IN PHANXAM CLUSTER

## 5.4 Earth Work

The Water Treatment Plants (WTPs) for both WSS Clusters are situated on elevated terrain, necessitating soil excavation for access road construction and land leveling to accommodate the WTPs, offices, operational facilities, and chemical storage. A significant volume of excavated material will result primarily from land leveling activities for the WTPs and associated infrastructure.

- WSS Muangna Cluster: Approximately 45,914 m<sup>3</sup> of soil will be excavated, with approximately 5,006 m<sup>3</sup> utilized for backfilling and access road.
- WSS Phanxam Cluster: The excavate soil approximately around 31,837 m<sup>3</sup>, with approximately 11,000 m<sup>3</sup> utilized for the base of access road and backfilling near the site area.
- The majority of soil excavated from water pipe trenching will be used as backfilling material.

## **5.5 Sand and Gravel**

Sand and gravel will be used as aggregate materials and for trench bedding during pipe installation. Over a thousand cubic meters of sand will be required for each WSS cluster. Sand and gravel will be procured from Kheanghuaphan company, Phansawanh Village, Xamtay District, Huanphan Province. (Please find the business license in APPENDIX 7).

## **5.6 Proposed Spoil Disposal Site**

### **5.6.1 WSS Muangna Cluster**

For the disposal of excavated soil from the Water Treatment Plant (WTP) construction, the Nathong Village Authority has generously provided village land to the Project Implementation Unit (PIU). This disposal site is conveniently located very near the WTP construction area. Its current low-lying nature means that once filled, the land will be leveled and ready for future infrastructure development. The formal agreement is attached as APPENDIX 5. Figure 5-5 shown the location and pictures of the proposed disposal site.



FIGURE 5-5 PROPOSED OF THE SPOIL DISPOSAL SITES FOR WSS MUANGNA CLUSTER IN KOUAN DISTRICT

### 5.6.2 WSS Phanxam Cluster

For the disposal of excavated soil from the Water Treatment Plant (WTP) construction, the Sopkem Village Authority has generously provided village land to the Project Implementation Unit (PIU). This disposal site is conveniently located very near the WTP construction area. Its current low-lying nature means that once filled, the land will be leveled and ready for future infrastructure development. The

formal agreement is attached as APPENDIX 6. Figure 5-6 shown the location and pictures of the proposed disposal site.



FIGURE 5-6 PROPOSED OF THE SPOIL DISPOSAL SITES FOR WSS PHANXAM CLUSTER IN XAMTAY DISTRICT

## 6. Environmental and Social Impacts and Risks, and Mitigation Measures.

Referring to the ESMP, the Contractor has identified the socio-environmental impacts and risks of the package as below:

- Generation of dust, exhaust gases, odors, noise, vibration Generation of solid waste from excavated soil, dredged sludge, construction waste and domestic waste from camps.
- Risks of pollution due to increased turbidity from stormwater runoff and wastewater emission.
- Soil erosion and sedimentation.
- Impacts and risks at quarries and borrowed land mines such as loss of vegetation and vegetation cover, soil slippage, erosion, safety risks, etc.

- Disturbance, damage to vegetation and greenery cover.
- Disturbances and increased traffic safety risks.
- Damage existing infrastructure and/or disrupt related services.
- Social disturbances, local insecurity and order related to worker concentration Risks to community and workers.
- The clear water distribution pipelines will temporarily affect the concrete floors in front of 14 households along the roadside, Phanxam Cluster, Xamtay District
- Raw water for the WSS Muangna cluster will temporarily affect the agricultural land of about 11 households in Nathong village and 11 households in Huana village. While the clear water distribution pipelines will temporarily affect the concrete floors in front of 22 households along the roadside in Muangna village, Muangna Cluster, Kouan District
- There may be cultural, historical, archaeological artifacts revealed during earthworks.

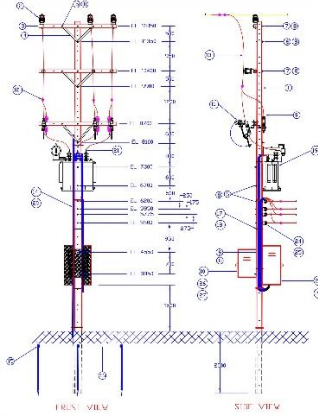
For the general impacts of construction activities listed above, the construction unit will organize the implementation of measures to reduce environmental, social, health and safety impacts and risks in accordance with the Environmental and Social Codes of Practice (ESCOPs). and require workers to comply with the Code of Conduct presented in Appendix 2.


### **6.1 Site specific-Environmental and Social management Plan for WSS Muangna Cluster in Kouan District.**




Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<p>Avoid the cutting of trees as much as possible and minimize damage to native vegetation;</p> <ul style="list-style-type: none"> <li>▪ The width of roads will be kept to a minimum, only to accommodate the construction;</li> <li>▪ Develop a revegetation plan that includes the use of native plant species.</li> <li>▪ Prohibitions of cutting wood and tree for cooking</li> </ul>
			<p>Dust generation and increased level of Noise and Vibration</p>	<ul style="list-style-type: none"> <li>▪ Excavation work will be avoided in periods of high wind.</li> <li>▪ Spray water on transportation road particularly roads near residences and through the town core area and construction site during dry weather conditions to control dust emission</li> <li>▪ Impose speed limits on construction vehicles;</li> <li>▪ Transport of materials that may generate dust shall be covered with canvass or similar.</li> <li>▪ The burning of site clearance debris (trees, undergrowth) or construction waste material is prohibited.</li> <li>▪ Keep the stockpile of aggregate material covered to avoid suspension or dispersal of fine soil particles during windy days or disturbance from stray animals.</li> <li>▪ Limit construction activities, particularly operation of noise/vibration generating equipment at night.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Position any stationary equipment that produces high noise levels such as diesel generators as far as practical from sensitive receptors.</li> <li>▪ Avoid using equipment that may result in high levels of vibrations.</li> <li>▪ Provide information to community on schedule of construction activities through billboard/signs.</li> </ul>
			<p>Disruption to the traffic and risk of road safety at main road junctions</p>	<ul style="list-style-type: none"> <li>▪ Place signs about Construction Site, speed limit and warning signs at the junction with main road.</li> <li>▪ Arrange flag man to guide traffic when project vehicle density is high or trucks carrying bulky items enter the project sites to ensure safety</li> <li>▪ Provide lighting at night at this spot</li> <li>▪ Impose speed limits on construction vehicles</li> <li>▪ Provide personnel with appropriate safety equipment and communication devices.</li> <li>▪ Gather feedback from the community regarding the effectiveness of the traffic management plan.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<p>2. Power Supply for the WTP</p>		<p>The power supply will connect from the grid network about 105 m, the alignment of the power line will be installed along the access road on the communal land of Muangna village. A 50 KVA hanging transformer will be installed.</p>	<p>Safety risks for the workers</p>	<ul style="list-style-type: none"> <li>▪ Only certified and experienced electricians and linemen familiar with high-voltage installations shall undertake the work.</li> <li>▪ Provide mandatory and comprehensive safety training to all workers involved in power line installation, covering electrical hazards, safe work practices, use of Personal Protective Equipment (PPE), and emergency procedures.</li> <li>▪ Testing structures for integrity prior to undertaking work;</li> <li>▪ Safety belts and Rope shall be used</li> <li>▪ Implement fall protection measures in climbing protection measures.</li> <li>▪ Provide adequate work-positioning device system for workers.</li> <li>▪ When operating power tools at height, workers should use a backup safety strap;</li> <li>▪ Signs and other obstructions should be removed from poles or structures prior to undertaking work;</li> <li>▪ An approved tool bag should be used for raising or lowering tools or materials to workers on structures.</li> </ul>
			<p>Risk of electrocution for community members, particularly children, if lines are improperly installed, damaged, or if proper safety clearances and</p>	<ul style="list-style-type: none"> <li>▪ Specifically inform communal leaders, the primary school, nearby households about the power line routing and installation schedule, highlighting safety measures.</li> <li>▪ Ensure adequate vertical and horizontal clearances are maintained for power lines from buildings, trees, and ground level, especially where</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
			<p>warnings are not maintained.            Risk from falling tools or equipment during pole erection and line stringing</p>	<p>public access is common (e.g., near the school and houses).</p> <ul style="list-style-type: none"> <li>▪ The hanging transformer must be installed with appropriate security measures to prevent unauthorized access. This includes ensuring it is out of reach, and if necessary, installing fencing or protective barriers around the pole base if it's accessible.</li> <li>▪ Install clear and permanent warning signs on transformer poles and at regular intervals along the power line route, indicating "Danger: High Voltage."</li> <li>▪ Ensure proper grounding (earthing) of all electrical equipment and structures as per standards to prevent electrical shock.</li> <li>▪ Conduct a community awareness program (especially targeting the school and nearby houses) on the dangers of high-voltage lines and the importance of not tampering with electrical infrastructure</li> </ul>
<p>3. WTP site            Land area = 2,500 m<sup>2</sup>            The Water Treatment Plant (WTP) will be located in fallow land of communal land.</p> <p>Construction work:            - Temporary camp construction</p>		<p>The Water Treatment Plant (WTP) will be located in mountain area surround by small tree and wood, do not have a lot of big animal , no have big trees, there just only have some snakes, bees, ants, insects, small birds etc.). No invasive plant species identified.</p>	<p>Potential for soil erosion on sloped areas.</p>	<ul style="list-style-type: none"> <li>▪ Provide information to community on schedule of construction activities through billboard/signs</li> <li>▪ Ensure stable cut and fill slopes are maintained, and minimize disturbance to areas beyond the designated work boundaries.</li> <li>▪ Shape cut and fill slopes to mitigate landslide risks.</li> <li>▪ Construct silt traps, deviation channels, mounting barriers or</li> </ul>

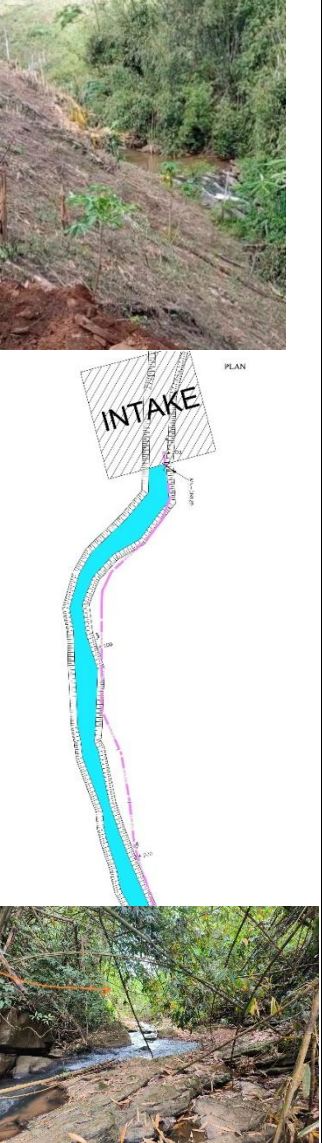
Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<ul style="list-style-type: none"> <li>- Land clearing and levelling (soil excavation volumes: 45.914 m<sup>3</sup>)</li> <li>- Foundation construction</li> <li>- Office and operation house construction</li> <li>- WTP installation.</li> </ul>		<p>The existing ground elevation is from 710 amsl to 733 amsl. The slope gradient is approximately 29%.</p>	<p>Removal of existing vegetation.</p>	<ul style="list-style-type: none"> <li>trenches around the stockpiles of materials</li> <li>▪ Initiate soil stabilization measures immediately following disturbance.</li> <li>▪ Grade and shape disturbed slopes before installing geotextiles and/or erosion control matting</li> <li>▪ Apply erosion control matting to disturbed soils and areas where vegetation has been removed.</li> <li>▪ Heavy machinery and proper excavation techniques are used to excavate the hill, the slope will plant the vetiver grass along the roadway to stabilize the hillside.</li> <li>▪ Drainage systems such as culverts or ditches will be installed to divert water away from the road and prevent erosion.</li> <li>▪ Construct silt traps, deviation channels, mounting barriers or trenches around the stockpiles of materials</li> <li>▪ Load materials and wastes within the WTP boundary, prevent spills to garden land.</li> <li>▪ Implement landscaping and planting of trees/vegetation, using native plant species for greening at the WTP site.</li> <li>▪ Conduct a thorough survey to identify the types, density, and ecological value of existing vegetation;</li> <li>▪ Clearly delineate the areas requiring vegetation removal;</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Cutting of trees will be undertaken as per approved design and only upon approval of relevant authorities. Avoid the cutting of trees as much as possible and minimize damage to native vegetation;</li> <li>▪ The width of roads will be kept to a minimum, only to accommodate the construction;</li> <li>▪ Develop a revegetation plan that includes the use of native plant species.</li> <li>▪ Prohibitions of cutting wood and tree for cooking</li> </ul>
			Dust generation and increased level of Noise and Vibration	<ul style="list-style-type: none"> <li>▪ Excavation work will be avoided in periods of high wind.</li> <li>▪ Spray water on transportation road particularly roads near residences and through the town core area and construction site during dry weather conditions to control dust emission</li> <li>▪ Impose speed limits on construction vehicles;</li> <li>▪ Transport of materials that may generate dust shall be covered with canvass or similar.</li> <li>▪ The burning of site clearance debris (trees, undergrowth) or construction waste material is prohibited.</li> <li>▪ Keep the stockpile of aggregate material covered to avoid suspension or dispersal of fine soil particles during windy days or disturbance from stray animals.</li> <li>▪ Limit construction activities, particularly operation of</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<p>noise/vibration generating equipment at night.</p> <ul style="list-style-type: none"> <li>▪ Position any stationary equipment that produces high noise levels such as diesel generators as far as practical from sensitive receptors.</li> <li>▪ Avoid using equipment that may result in high levels of vibrations.</li> <li>▪ Provide information to community on schedule of construction activities through billboard/signs.</li> </ul>
			<p>Generation the solid waste and spoil</p>	<ul style="list-style-type: none"> <li>▪ Excavated materials will be prioritized for reuse as backfill in trenches and for ground leveling at all construction sites, including the WTP, access roads, and pipe trenches.</li> <li>▪ Excess excavated soil from the WTP construction will be utilized to backfill low-lying areas identified by the village authorities.</li> <li>▪ Non-hazardous construction waste will be disposed of at the village landfill, as agreed upon with District Authorities.</li> <li>▪ A daily waste segregation system will be implemented to separate solid waste into hazardous and non-hazardous categories, and then further into recyclable (e.g., plastic bottles, cans, metal) and non-recyclable (e.g., wrappings, packaging, construction debris) fractions. Segregated waste will be temporarily stored in designated bins or secure, covered enclosures.</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Recyclable waste will be transported to local recycling dealers or shops. If local recycling is unavailable, recyclables will be transported to the district-designated waste disposal site for potential recycling or disposal with non-recyclable waste.</li> <li>▪ All non-recycled waste will be disposed of solely at the solid waste disposal site designated by District Authorities.</li> <li>▪ Open burning or burial of any form of waste or materials is strictly prohibited both onsite and offsite.</li> <li>▪ Littering of waste is strictly prohibited.</li> </ul>
			Occupational and community health and safety	<ul style="list-style-type: none"> <li>▪ Erect construction billboards, which include construction contents, schedule, responsible person and complaint phone number, at the entry to each construction site and construction staging area.</li> <li>▪ Install the physical barrier to limit access to the construction site</li> <li>▪ Install signs at construction sites warning people of potential dangers.</li> <li>▪ Fence off the construction site with gates.</li> <li>▪ Restriction of un-authorized persons to work areas.</li> <li>▪ Install barricades/barriers and sturdy plate covers in open excavations during non-working time.</li> <li>▪ Install temporary fences or barriers around the subproject facility construction site especially near</li> </ul>

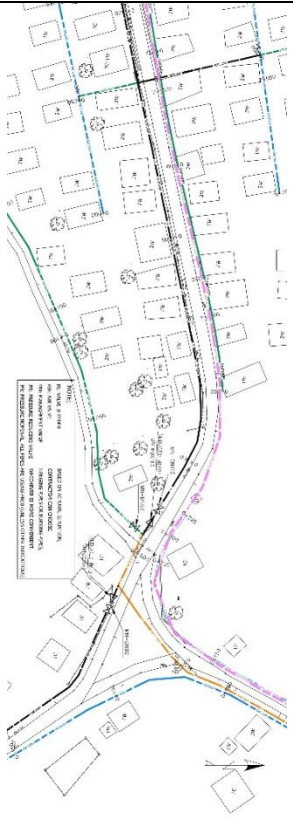
Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<p>schools, healthcare stations and houses.</p> <ul style="list-style-type: none"> <li>▪ Provision of first-aid facilities readily accessible by workers.</li> <li>▪ Develop the emergency management plan in case of an accident, and safety drills. Workers must be made aware of the emergency management plan</li> <li>▪ Provisions of personal protection equipment (PPE), such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection, in accordance with relevant health and safety regulations for workers. All workers must be trained in the use of the required equipment.</li> <li>▪ Wearing of PPEs while working on-site will be a mandatory requirement for workers.</li> <li>▪ Posting of safety signs/reminders in strategic areas within the construction area.</li> <li>▪ Installation of sufficient lighting at night.</li> <li>▪ Regular attendance and a controlled time keeping of all employees.</li> </ul>
<p>4.Raws Transmission Pipelines            The length L =8.5 km of HDPE DN 125 mm, raw water transmission pipe from the intake to the water treatment plant will be laid along the downstream of Houay nanoy brook which pass</p>		<p>The length L = 8.5 Km Raw water pipelines will be laid along the left hand-side of the brook, through the valley, crossing fallow land, agriculture land or running along the road</p>	<p>Construction activities may damage trees, crops and disrupt planting schedules.</p>	<ul style="list-style-type: none"> <li>▪ Contractors work with the PIA and supervising consultants as well as local authority to refine and confirm the pipeline alignment to avoid cutting trees when possible;</li> <li>▪ Disturbance to the ground will be kept minimal. Establish the boundary of construction materials;</li> <li>▪ Use suitable size transportation means and apply manual excavation</li> </ul>



Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<p>the fallow land and along the roadsides</p>		<p>side. Some sections are well covered with vines, bushes, banana and other trees etc.</p> <p>The raw water pipeline will be laid underground at a depth of 0.7 to 1.2 meters and the width of 0.5-1 meters.</p>	<p>Obstructions to cultivation activities</p> <p>The installation of this raw water pipeline may temporarily affect the agricultural land of 11 households in Nathong village and 11 households in Huana village.</p>	<p>method to avoid or minimize mass cutting of big trees along alignment during pipeline installation;</p> <ul style="list-style-type: none"> <li>▪ Carry out manual excavation and pipe installation, if necessary, in order to avoid cutting or damage to the trees.</li> <li>▪</li> </ul> <ul style="list-style-type: none"> <li>▪ Inform work schedule to communities of 2 villages prior construction for 7 days</li> <li>▪ Avoid, minimize ground disturbance during peak cultivation period;</li> <li>▪ Support farmers to transport materials and products if construction affect accessibility to agricultural land;</li> <li>▪ Disturbance to the ground will be kept minimal.</li> <li>▪ Establish the boundary of construction materials</li> <li>▪ Carry out manual excavation and pipe installation, if necessary, in order to avoid or minimize cutting or damages to the trees.</li> <li>▪ Coordinate with farmers to schedule pipeline work during off-peak agricultural seasons and compensate for crop damage.</li> <li>▪ Use erosion control measures such as silt fences, temporary vegetation, and mulching.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Conduct thorough subsurface investigations and plan routes to avoid obstacles.</li> <li>▪ Restore the pipeline trench to original condition within 7 days</li> <li>▪ Minute of meeting with affected households for restoring the pipeline trenches</li> </ul>
			<p>Safety risks for the workers and the farmers</p>	<ul style="list-style-type: none"> <li>▪ Install the physical barrier to limit access to the construction site</li> <li>▪ Install signs at construction sites warning people of potential dangers.</li> <li>▪ Remove the waste from the site in parallel with excavation/pipe installation; Top soil will be reserved and loaded in separate areas for reuse at the end of the disposal operation as cover material for the rehabilitation of the disposal site.</li> <li>▪ Create safe temporary path if access is disrupted.</li> <li>▪ Backfill as soon as the pipe installation is completed.</li> <li>▪ Install barricades/barriers and sturdy plate covers in open excavations during non-working time.</li> <li>▪ Provisions of personal protection equipment (PPE), such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection, in accordance with relevant health and safety regulations for workers. All workers must be trained in the use of the required equipment.</li> </ul>

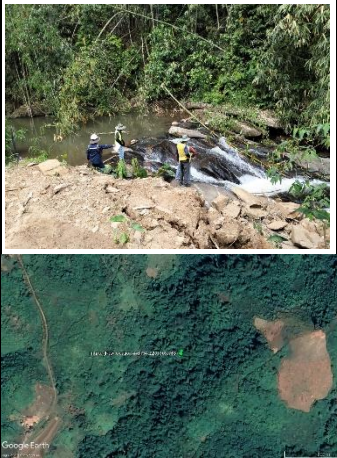
Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<p>5. Distribution Pipelines            The length L = 8,565 Km.            Use HDPE pipe DN 180, DN160, DN110, DN90, DN63 and DN50</p>		<p>The main pipeline will be laid along roadsides. The depth of the pipe trench is 0.7-1.2m and the width is 0.5-1.0m.</p> <p>Along the roadside, there are 20 cement slabs of the front houses, and 2 shops which will be impacted from water distribution pipeline. The pipeline will pass primarily in front of these buildings. Additionally, the water connection pipelines may be temporarily affected during the construction phase and will benefit from the water supply system (WSS) during the operational phase</p> <p>The households who have a house along the roadsides have been consulted, all of them agreed to allow the pipeline passing in front of their houses</p>	<p>Block or disrupt access to house            Health impacts due to dust and noise            Traffic disruptions, traffic safety risks            Damages to private properties and crops, Safety risks for the workers and villagers</p> <p>This installation may temporarily affect the concrete floors in front of 22 households along the roadside in Muangna village</p>	<ul style="list-style-type: none"> <li>▪ Wearing of PPEs while working on-site will be a mandatory requirement for workers</li> <li>▪ Inform community about construction schedules 7 days in advance; Request families to keep their children away from construction sites;</li> <li>▪ Carry out construction in stages to minimize community exposure to open pipe trenches</li> <li>▪ Provide temporary access to the roadside house where access are disturbed</li> <li>▪ Install support in the pipe trenches at sections near the house foundation</li> <li>▪ Back fill the pipe trenches as soon as possible within 3 days;</li> <li>▪ Avoid loading construction materials and waste within 20m from school gate and health centers, markets or any popular public accessible locations;</li> <li>▪ Remove the waste from the site in parallel with excavation/pipe installation; Top soil will be reserved and loaded in separate areas for reuse at the end of the disposal operation as cover material for the rehabilitation of the disposal site.</li> <li>▪ Place warning signs and speed limit at 10 km/h along road sections where construction is on-going</li> <li>▪ Create safe temporary path if access is disrupted</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Clean up the road, watering dusty areas during working shifts</li> <li>▪ water the road section passing the school and health care center if the weather is hot and dry, windy</li> <li>▪ Avoid parking trucks, loading and unloading materials and wastes during peak traffic hours</li> <li>▪ Inform the public in advance if construction takes place at night time</li> <li>▪ Requires the workers strictly follow the Codes of Conducts</li> <li>▪ Protect temporary materials and waste loads to prevent spills;</li> <li>▪ place warning signs and reflective bands to restrict unauthorized access to construction areas;</li> <li>▪ Transport the excavated materials away within 24 hours since excavation;</li> <li>▪ Fully reinstate the excavated road as soon as possible.</li> <li>▪ Do not park vehicles or temporarily load materials in front of the market and shops unless construction is on-going at these sites.</li> <li>▪ Minute of meeting with affected households for restoring the clean water pipeline trenches</li> </ul>
		Construction at road crossing	Traffic disruptions, traffic safety risks	<ul style="list-style-type: none"> <li>▪ Carry out construction at night time, if possible, ensure adequate lighting</li> <li>▪ Coordinate with local authorities to divert traffic flow if necessary</li> <li>▪ Inform the public in advance if construction takes place at night time</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
		<p>Construction takes place along roadside</p>	<p>Traffic disruptions, traffic safety risks</p>	<ul style="list-style-type: none"> <li>▪ Backfill, reinstate the affected roads fully before traffic is resumed in day time.</li> </ul>
		<p>Construction takes place along roadside</p>	<p>Traffic disruptions, traffic safety risks</p>	<ul style="list-style-type: none"> <li>▪ Avoid construction activities at peak hours</li> <li>▪ Install speed limit signs at 10km/h at the two ends of construction section</li> <li>▪ Minimize the volumes of materials and wastes loaded along roadside at each time</li> <li>▪ Backfill, reinstate the affected roads fully as soon as possible (related costs have been included in the BOQ)</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
		<p>Construction take place on or passing private land</p>	<ul style="list-style-type: none"> <li>▪ Disturbance to owner’s daily activities</li> <li>▪ Safety risks</li> <li>▪ Dust, nuisance</li> <li>▪ Damages to private properties and crops</li> </ul>	<ul style="list-style-type: none"> <li>▪ Contractor must install speed limit sign, provision all safety insures before start of construction by the contractor as per the provision of the ESMP</li> <li>▪ Inform land owner and get agreement on construction schedule in advance 7 days</li> <li>▪ Treat land owner with respects</li> <li>▪ No construction at lunch and nighttime</li> <li>▪ Minimize disturbed areas</li> <li>▪ Do not load materials and wastes on vegetated areas, load on barren land</li> <li>▪ Create safe temporary path if access if disrupted</li> <li>▪ Clean up, reinstate the site completely before departure.</li> </ul>
<p>6. The proposed disposal Site.          The proposed disposal site will be located at the communal land of Nathong village</p>		<p>The Nathong Village Authority has agreed to provide a plot of village land to serve as the proposed spoil disposal site for the Water Supply System (WSS) project. This designated area is currently undeveloped and characterized by its low-lying topography agreement in Appendix 5</p> <p>Approximately 40,9008 m<sup>3</sup> of excavated material will be disposal in this site.</p>	<p>Dust, noise and erosion, local risks</p>	<ul style="list-style-type: none"> <li>▪ Inform the Nathong Village authorities before commencement disposal works.</li> <li>▪ Post a speed limit sign at the entrance of the disposal site;</li> <li>▪ Provide a notice stating “Only authorized persons are allowed”, limiting access by unauthorized persons to the disposal site;</li> <li>▪ Top soil will be reserved and loaded in separate areas for reuse at the end of the disposal operation.</li> <li>▪ Dispose of soil in layers, compacting each layer to ensure stability and reduce erosion.</li> <li>▪ Shape the disposed soil into stable slopes (not too steep) to minimize</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<p>the risk of erosion and mass movement. Follow engineering design specifications for final contours.</p> <ul style="list-style-type: none"> <li>▪ A drainage ditch shall be built around the disposal site to control surface runoff to prevent flooding surrounding the disposal sites; Sediments in runoff passing the excavated materials will be trapped before the flow enter any water bodies.</li> <li>▪ Install sediment fences, straw bales, or other barriers downhill from the disposal area to prevent soil runoff into water bodies or adjacent land.</li> <li>▪ Minimize or suspend disposal operations during heavy rainfall to prevent severe erosion and runoff.</li> <li>▪ After being tipped down, disposal waste piles must be levelled and rolled out to mitigate dust emission, erosion, and washing off by wind and water as well as to limit safety risks;</li> <li>▪ Disposal sites close to patches of agricultural land will be limited in size to avoid damages to crops.</li> <li>▪ As soon as a section of the disposal site is filled to its final contour, promptly revegetate it with appropriate native plant species (grasses, shrubs, trees) to stabilize the soil, prevent erosion, and integrate the site back into the landscape.</li> </ul>

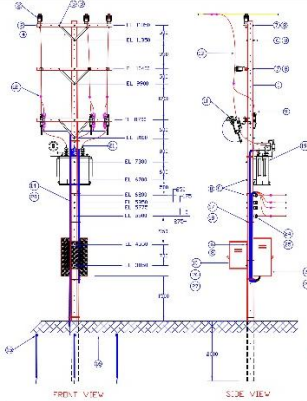
Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<p>7. Water Intake site.            It is located at Huaynanoy brook            The site lies on the communal land of Korhai village in Kouan district and covers a catchment area of approximately 13.10 km<sup>2</sup>.</p>		<p>Elevation: 755m            X= 446804            Y = 2200107</p> <p>There are stone along the intake sites</p> <p>Shrubs along the stream</p> <p>Water fairly clear</p> <p>Shrubs and barren soil along the stream</p>	<p>Temporary disrupt stream flow;</p> <p>Over disturbance to stream bed</p> <p>Water pollution risks</p> <p>Unnecessary disturbance to stream side vegetation</p> <p>Fish, wildlife caught by the workers</p>	<ul style="list-style-type: none"> <li>▪ Inform the local community at the nearby downstream prior construction</li> <li>▪ install a temporary culvert to maintain stream flow during intake construction;</li> <li>▪ Do not exploit construction materials (gravels from stream bed) on-site;</li> <li>▪ Carry out construction with care to minimize dropping of mortars into the stream to avoid water pollution</li> <li>▪ Load materials and equipment on barren soil, not on vegetated areas</li> <li>▪ No fish/wildlife catching, keeping allowed</li> </ul>

### 6.2 Site specific-Environmental and Social management Plan for WSS Phanxam Cluster in Xamtay District


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<p>1. Access Road to the WTP from village road.                      Access road will be 48m long and 5m wide.</p> <p>The main construction activities include land clearing, soil excavation, land leveling, compaction, concrete road surface construction, and roadside drainage construction.</p> <p>This road will be built on village communal land of Sopkaem village, No private properties are affected by its construction</p>	 <p>The topographic map shows the road layout with contour lines and elevation markers. The aerial photos show the terrain and the location of the road relative to the village and WTP.</p>	<p>Currently the existing road is unsealed and narrow, dusty in the dry season and muddy in the wet season. There are mostly shrubs along road side.</p> <p>The access road to WTP will be upgraded on the existing village road which is starting from main road.</p> <p>The elevation at the highest point is 429 m.s.l and 417 m.s.l is lowest point. The slope from the highest to the lowest point is approximately 13,04%.</p> <p>The average vehicle density in a day is low, as no vehicles travel on this road due to it being used for travel to the agricultural farm, there are only the villager travel on this road.</p>	<p>Potential for soil erosion on sloped areas.</p>	<ul style="list-style-type: none"> <li>▪ Inform households about construction schedule at least two weeks in advance.</li> <li>▪ Ensure stable cut and fill slopes are maintained, and minimize disturbance to areas beyond the designated work boundaries.</li> <li>▪ Shape cut and fill slopes to mitigate landslide risks.</li> <li>▪ Construct silt traps, deviation channels, mounting barriers or trenches around the stockpiles of materials</li> <li>▪ Initiate soil stabilization measures immediately following disturbance.</li> <li>▪ Grade and shape disturbed slopes before installing geotextiles and/or erosion control matting. (see detail in Appendix 3 Slope Erosion protection).</li> <li>▪ Apply erosion control matting to disturbed soils and areas where vegetation has been removed.</li> <li>▪ Heavy machinery and proper excavation techniques are used to excavate the hill, the slope will plant the vetiver grass along the roadway to stabilize the hillside.</li> <li>▪ Drainage systems such as culverts or ditches will be installed to divert water away from the road and prevent erosion.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
			<p>Dust generation and increased level of Noise and Vibration</p>	<ul style="list-style-type: none"> <li>▪ Excavation work will be avoided in periods of high wind.</li> <li>▪ Spray water on transportation road particularly roads near residences and through the town core area and construction site during dry weather conditions to control dust emission</li> <li>▪ Impose speed limits on construction vehicles;</li> <li>▪ Transport of materials that may generate dust shall be covered with canvass or similar.</li> <li>▪ The burning of site clearance debris (trees, undergrowth) or construction waste material is prohibited.</li> <li>▪ Keep the stockpile of aggregate material covered to avoid suspension or dispersal of fine soil particles during windy days or disturbance from stray animals.</li> <li>▪ Limit construction activities, particularly operation of noise/vibration generating equipment at night.</li> <li>▪ Position any stationary equipment that produces high noise levels such as diesel generators as far as practical from sensitive receptors.</li> <li>▪ Avoid using equipment that may result in high levels of vibrations.</li> <li>▪ Provide information to community on schedule of construction activities through billboard/signs.</li> <li>▪ Impose speed limits at 20km/h on construction vehicles along this section.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
			<p>Disruption to the traffic and risk of road safety</p>	<ul style="list-style-type: none"> <li>▪ Inform households about construction schedule at least two weeks in advance.</li> <li>▪ Place signs about Construction Site, speed limit and warning signs at the junction with main road.</li> <li>▪ Arrange flag man to guide traffic when project vehicle density is high or trucks carrying bulky items enter the project sites to ensure safety</li> <li>▪ Provide lighting at night at this spot</li> <li>▪ Impose speed limits on construction vehicles</li> <li>▪ Provide personnel with appropriate safety equipment and communication devices.</li> <li>▪ Gather feedback from the community regarding the effectiveness of the traffic management plan.</li> <li>▪ Place warning signs on the main road and road access to the Water Treatment Plant (WTP).</li> <li>▪ Scheduling Truck Movement to avoid truck movement during school opening and closing times to ensure the safety of children.</li> <li>▪ Set and enforce speed limits on the access road to control vehicle speed.</li> <li>▪ Provide training for truck drivers to ensure they are aware of safety protocols and road regulations.</li> <li>▪ Arrange for flag men to direct traffic when trucks are coming in and out of the construction site.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Water the roads regularly to minimize dust.</li> <li>▪ Install flashing lights so that truck drivers can observe houses during dark hours, ensuring better visibility and safety.</li> </ul>
<p>2. Power Supply for the WTP</p> <p>The power line will be installed along the access road on communal land of Sopkaem village</p>		<p>The power supply will connect from the grid network about 100 m, the alignment of the power line will be installed along the access road on communal land of Sopkaem village . A 50 KVA hanging transformer will be installed.</p>	<p>Safety risks for the workers</p>	<ul style="list-style-type: none"> <li>▪ Only certified and experienced electricians and linemen familiar with high-voltage installations shall undertake the work.</li> <li>▪ Provide mandatory and comprehensive safety training to all workers involved in power line installation, covering electrical hazards, safe work practices, use of Personal Protective Equipment (PPE), and emergency procedures.</li> <li>▪ Testing structures for integrity prior to undertaking work;</li> <li>▪ Safety belts and Rope shall be used</li> <li>▪ Implement fall protection measures in climbing protection measures.</li> <li>▪ Provide adequate work-positioning device system for workers.</li> <li>▪ When operating power tools at height, workers should use a backup safety strap;</li> <li>▪ Signs and other obstructions should be removed from poles or structures prior to undertaking work;</li> <li>▪ An approved tool bag should be used for raising or lowering tools or materials to workers on structures.</li> </ul>
			<p>Risk of electrocution for community members,</p>	<ul style="list-style-type: none"> <li>▪ Specifically inform communal leaders, the primary school, nearby households about the power line</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
			<p>particularly children, if lines are improperly installed, damaged, or if proper safety clearances and warnings are not maintained. Risk from falling tools or equipment during pole erection and line stringing</p>	<p>routing and installation schedule, highlighting safety measures.</p> <ul style="list-style-type: none"> <li>▪ Ensure adequate vertical and horizontal clearances are maintained for power lines from buildings, trees, and ground level, especially where public access is common (e.g., near the school and houses).</li> <li>▪ The hanging transformer must be installed with appropriate security measures to prevent unauthorized access. This includes ensuring it is out of reach, and if necessary, installing fencing or protective barriers around the pole base if it's accessible.</li> <li>▪ Install clear and permanent warning signs on transformer poles and at regular intervals along the power line route, indicating "Danger: High Voltage."</li> <li>▪ Ensure proper grounding (earthing) of all electrical equipment and structures as per standards to prevent electrical shock.</li> <li>▪ Conduct a community awareness program (especially targeting the school and nearby houses) on the dangers of high-voltage lines and the importance of not tampering with electrical infrastructure</li> </ul>
<p>3. WTP site            Land area = 2500 m<sup>2</sup>            The Water Treatment Plant (WTP) will be located</p>		<p>The Water Treatment Plant (WTP) surroundings are well covered with small trees, vines and shrubs.</p>	<p>Potential for soil erosion on sloped areas.</p>	<ul style="list-style-type: none"> <li>▪ Provide information to community on schedule of construction activities through billboard/signs</li> <li>▪ Ensure stable cut and fill slopes are maintained, and minimize</li> </ul>

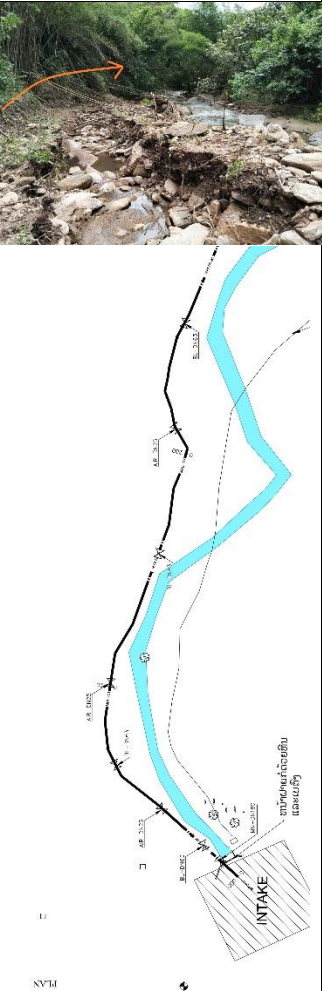
Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<p>in fallow land of communal land.</p> <p>Construction work:</p> <ul style="list-style-type: none"> <li>- Temporary camp construction</li> <li>- Land clearing and levelling (soil excavated volumes: 31,837 m<sup>3</sup>)</li> <li>- Foundation construction</li> <li>- Office and operation house construction</li> <li>- WTP installation.</li> </ul>		<p>Vegetation observed along the alignment includes grasses, vines, bushes, plants, and trees. Fauna observed includes ants, butterflies, birds, and mosquitoes.</p> <p>The elevation at the highest point is 450 m.s.l and 420 msl is lowest point.</p> <p>The steep slope from the highest to the lowest point is approximately 45%.</p>		<p>disturbance to areas beyond the designated work boundaries.</p> <ul style="list-style-type: none"> <li>▪ Shape cut and fill slopes to mitigate landslide risks.</li> <li>▪ Construct silt traps, deviation channels, mounting barriers or trenches around the stockpiles of materials</li> <li>▪ Initiate soil stabilization measures immediately following disturbance.</li> <li>▪ Grade and shape disturbed slopes before installing geotextiles (the geotextile installation is in Appendix 3) and/or erosion control matting.</li> <li>▪ Apply erosion control matting to disturbed soils and areas where vegetation has been removed.</li> <li>▪ Heavy machinery and proper excavation techniques are used to excavate the hill, the slope will plant the vetiver grass along the roadway to stabilize the hillside.</li> <li>▪ Drainage systems such as culverts or ditches will be installed to divert water away from the road and prevent erosion.</li> <li>▪ Construct silt traps, deviation channels, mounting barriers or trenches around the stockpiles of materials</li> <li>▪ Load materials and wastes within the WTP boundary, prevent spills to garden land.</li> <li>▪ Implement landscaping and planting of trees/vegetation, using native</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<p>plant species for greening at the WTP site.</p>
			<p>Removal of existing vegetation.</p>	<ul style="list-style-type: none"> <li>▪ Conduct a thorough survey to identify the types, density, and ecological value of existing vegetation;</li> <li>▪ Clearly delineate the areas requiring vegetation removal;</li> <li>▪ Cutting of trees will be undertaken as per approved design and only upon approval of relevant authorities. Avoid the cutting of trees as much as possible and minimize damage to native vegetation;</li> <li>▪ The width of roads will be kept to a minimum, only to accommodate the construction;</li> <li>▪ Develop a revegetation plan that includes the use of native plant species.</li> <li>▪ Prohibitions of cutting wood and tree for cooking.</li> </ul>
			<p>Dust generation and increased level of Noise and Vibration</p>	<ul style="list-style-type: none"> <li>▪ Excavation work will be avoided in periods of high wind.</li> <li>▪ Spray water on transportation road particularly roads near residences and through the town core area and construction site during dry weather conditions to control dust emission</li> <li>▪ Impose speed limits on construction vehicles;</li> <li>▪ Transport of materials that may generate dust shall be covered with canvass or similar.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ The burning of site clearance debris (trees, undergrowth) or construction waste material is prohibited.</li> <li>▪ Keep the stockpile of aggregate material covered to avoid suspension or dispersal of fine soil particles during windy days or disturbance from stray animals.</li> <li>▪ Limit construction activities, particularly operation of noise/vibration generating equipment at night.</li> <li>▪ Position any stationary equipment that produces high noise levels such as diesel generators as far as practical from sensitive receptors.</li> <li>▪ Avoid using equipment that may result in high levels of vibrations.</li> <li>▪ Provide information to community on schedule of construction activities through billboard/signs.</li> </ul>
			<p>Generation the solid waste and spoil</p>	<ul style="list-style-type: none"> <li>▪ Excavated materials will be prioritized for reuse as backfill in trenches and for ground leveling at all construction sites, including the WTP, access roads, and pipe trenches.</li> <li>▪ Excess excavated soil from the WTP construction will be utilized to backfill low-lying areas identified by the village authorities.</li> <li>▪ Non-hazardous construction waste will be disposed of at the village landfill, as agreed upon with District Authorities.</li> <li>▪ A daily waste segregation system will be implemented to separate solid</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<p>waste into hazardous and non-hazardous categories, and then further into recyclable (e.g., plastic bottles, cans, metal) and non-recyclable (e.g., wrappings, packaging, construction debris) fractions. Segregated waste will be temporarily stored in designated bins or secure, covered enclosures.</p> <ul style="list-style-type: none"> <li>▪ Recyclable waste will be transported to local recycling dealers or shops. If local recycling is unavailable, recyclables will be transported to the district-designated waste disposal site for potential recycling or disposal with non-recyclable waste.</li> <li>▪ All non-recycled waste will be disposed of solely at the solid waste disposal site designated by District Authorities.</li> <li>▪ Open burning or burial of any form of waste or materials is strictly prohibited both onsite and offsite.</li> <li>▪ Littering of waste is strictly prohibited at the construction site</li> </ul>
			Occupational and community health and safety	<ul style="list-style-type: none"> <li>▪ Erect construction billboards, which include construction contents, schedule, responsible person and complaint phone number, at the entry to each construction site and construction staging area.</li> <li>▪ Install the physical barrier to limit access to the construction site</li> <li>▪ Install signs at construction sites warning people of potential dangers.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Fence off the construction site with gates.</li> <li>▪ Restriction of un-authorized persons to work areas.</li> <li>▪ Install barricades/barriers and sturdy plate covers in open excavations during non-working time.</li> <li>▪ Install temporary fences or barriers around the subproject facility construction site especially near schools, healthcare stations and houses.</li> <li>▪ Provision of first-aid facilities readily accessible by workers.</li> <li>▪ Develop the emergency management plan in case of an accident, and safety drills. Workers must be made aware of the emergency management plan</li> <li>▪ Provisions of personal protection equipment (PPE), such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection, in accordance with relevant health and safety regulations for workers. All workers must be trained in the use of the required equipment.</li> <li>▪ Wearing of PPEs while working on-site will be a mandatory requirement for workers.</li> <li>▪ Posting of safety signs/reminders in strategic areas within the construction area.</li> <li>▪ Installation of sufficient lighting at night.</li> <li>▪ Regular attendance and a controlled time keeping of all employees.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
<p>4.Raws Transmission Pipelines</p>		<p>Raw water pipelines will be laid along Houay sanong brook, through the valley, crossing fallow land, agriculture land or running along the road side. Some sections are well covered with vines, bushes, banana and other trees etc.</p> <p>The raw water pipeline will be laid underground at a depth of 0.7 to 1.2 meters. The width of pipe trenches ranges from 0.5 to 0.8 meters</p> <p>Agricultural land of five HHs in Sopkaem village will be temporarily impacted by the installation of the raw water pipeline.</p>	<p>Construction activities may damage trees, crops and disrupt planting schedules.</p>	<ul style="list-style-type: none"> <li>▪ Contractors work with the PIA and supervising consultants as well as local authority to refine and confirm the pipeline alignment to avoid cutting trees when possible;</li> <li>▪ Disturbance to the ground will be kept minimal. Establish the boundary of construction materials;</li> <li>▪ Use suitable size transportation means and apply manual excavation method to avoid or minimize mass cutting of big trees along alignment during pipeline installation;</li> <li>▪ Carry out manual excavation and pipe installation, if necessary, in order to avoid cutting or damage to the trees.</li> <li>▪ Avoid, minimize ground disturbance during peak cultivation period;</li> <li>▪ Support farmers to transport materials and products if construction affect accessibility to agricultural land;</li> <li>▪ Disturbance to the ground will be kept minimal. Establish the boundary of construction materials</li> <li>▪ Carry out manual excavation and pipe installation, if necessary, in order to avoid or minimize cutting or damages to the trees.</li> <li>▪ Coordinate with farmers to schedule pipeline work during off-peak agricultural seasons and compensate for crop damage.</li> <li>▪ Use erosion control measures such as silt fences, temporary vegetation, and mulching.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Conduct thorough subsurface investigations and plan routes to avoid obstacles.</li> </ul>
			<p>Obstructions to cultivation activities</p> <p>The installation of this raw water pipeline may temporarily affect the agricultural land of about five HHs in Sopkaem village</p>	<ul style="list-style-type: none"> <li>▪ Inform work schedule to communities of 2 villages prior construction for 7 days</li> <li>▪ Avoid, minimize ground disturbance during peak cultivation period;</li> <li>▪ Support farmers to transport materials and products if construction affect accessibility to agricultural land;</li> <li>▪ Disturbance to the ground will be kept minimal. Establish the boundary of construction materials</li> <li>▪ Carry out manual excavation and pipe installation, if necessary, in order to avoid or minimize cutting or damages to the trees.</li> <li>▪ Coordinate with farmers to schedule pipeline work during off-peak agricultural seasons and compensate for crop damage.</li> <li>▪ Use erosion control measures such as silt fences, temporary vegetation, and mulching.</li> <li>▪ Conduct thorough subsurface investigations and plan routes to avoid obstacles.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Restore the pipeline trench to original condition within 7 days</li> <li>▪ Minute of meeting with affected households for restoring the pipeline trenches</li> </ul>
			<p>Safety risks for the workers and the farmers</p>	<ul style="list-style-type: none"> <li>▪ Install the physical barrier to limit access to the construction site</li> <li>▪ Install signs at construction sites warning people of potential dangers.</li> <li>▪ Remove the waste from the site in parallel with excavation/pipe installation; Top soil will be reserved and loaded in separate areas for reuse at the end of the disposal operation as cover material for the rehabilitation of the disposal site.</li> <li>▪ Create safe temporary path if access is disrupted.</li> <li>▪ Backfill as soon as the pipe installation is completed.</li> <li>▪ Install barricades/barriers and sturdy plate covers in open excavations during non-working time.</li> <li>▪ Provisions of personal protection equipment (PPE), such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection, in accordance with relevant health and safety regulations for workers. All workers must be trained in the use of the required equipment.</li> <li>▪ Wearing of PPEs while working on-site will be a mandatory requirement for workers</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
5. Distribution Pipelines	 <p>The top photograph shows a dirt road with trees and buildings on either side. The middle photograph shows a similar dirt road from a different angle. The bottom image is a site plan map with a green line indicating the pipeline route through a residential area.</p>	<p>The main pipeline will be laid along roadsides. The depth of the pipe trench is 0.7-1.2m and the width is 0.5-1.0m. The length L = 19.22 Km</p> <p>Along the planned distribution pipeline route, houses, shops, and a school are located adjacent to the roadside. Through consultation, all roadside households have provided their consent for pipeline installation in front of their properties. The pipelines will be laid along the road ROW.</p>	<p>Construction takes place near an existing house:</p> <ul style="list-style-type: none"> <li>- Block or disrupt access to house</li> </ul> <p>The concrete floors of 14 households (5 in Sopkaem, 1 in Phiengthin, 6 in Muangkhan, and 2 in Phiangday) may be temporarily affected due to their proximity to the pipeline path.</p> <p>-</p>	<ul style="list-style-type: none"> <li>▪ Inform community about construction schedules 7 days in advance; Request families to keep their children away from construction sites;</li> <li>▪ Carry out construction in stages to minimize community exposure to open pipe trenches</li> <li>▪ Provide temporary access to the roadside house where access is disturbed</li> <li>▪ Install support in the pipe trenches at sections near the house foundation</li> <li>▪ Back fill the pipe trenches as soon as possible within 3 days;</li> <li>▪ Avoid loading construction materials and waste within 20m from school gate and health centers, markets or any popular public accessible locations;</li> <li>▪ Remove the waste from the site in parallel with excavation/pipe installation; Top soil will be reserved and loaded in separate areas for reuse at the end of the disposal operation as cover material for the rehabilitation of the disposal site.</li> <li>▪ Place warning signs and speed limit at 10 km/h along road sections where construction is on-going</li> <li>▪ Create safe temporary path if access is disrupted</li> <li>▪ Clean up the road, watering dusty areas during working shifts</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ water the road section passing the school and health care center if the weather is hot and dry, windy</li> <li>▪ Avoid parking trucks, loading and unloading materials and wastes during peak traffic hours</li> <li>▪ Inform the public in advance if construction takes place at night time</li> <li>▪ Requires the workers strictly follow the Codes of Conducts</li> <li>▪ Protect temporary materials and waste loads to prevent spills;</li> <li>▪ place warning signs and reflective bands to restrict unauthorized access to construction areas;</li> <li>▪ Transport the excavated materials away within 24 hours since excavation;</li> <li>▪ Fully reinstate the excavated road as soon as possible.</li> <li>▪ Do not park vehicles or temporarily load materials in front of the market and shops unless construction is on-going at these sites.</li> <li>▪ Minute of meeting with affected households for restoring the clean water pipeline trenches</li> </ul>
		<p>Construction takes place within 50 m from a school fence and 20m from entrance of health centers.</p>	<p>Safety for the school students, patients and medical staff</p>	<ul style="list-style-type: none"> <li>▪ Avoid loading construction materials and waste within 50m from school gate and 20m from health centers;</li> <li>▪ Remove the waste from the site in parallel with excavation/pipe installation;</li> <li>▪ Place warning signs and speed limit at 10 km/h at this section</li> </ul>


Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<ul style="list-style-type: none"> <li>▪ Create safe temporary path if access if disrupted</li> <li>▪ Backfill as soon as the pipe installation is completed</li> <li>▪ Clean up the road at end of working shifts</li> <li>▪ water the road section passing the school and health care center if the weather is hot and dry, windy</li> <li>▪ Avoid parking trucks, loading and unloading materials and wastes during peak traffic hours.</li> </ul>
		Construction at road crossing	Traffic disruptions, traffic safety risks	<ul style="list-style-type: none"> <li>▪ Carry out construction at night time, if possible, ensure adequate lighting</li> <li>▪ Coordinate with local authorities to divert traffic flow if necessary</li> <li>▪ Inform the public in advance if construction takes place at night time</li> <li>▪ Backfill, reinstate the affected roads fully before traffic is resumed in day time.</li> </ul>
		Construction takes place along roadside	Traffic disruptions, traffic safety risks	<ul style="list-style-type: none"> <li>▪ Carry out construction at night time, if possible, ensure adequate lighting</li> <li>▪ Coordinate with local authorities to divert traffic flow if necessary</li> <li>▪ Inform the public in advance if construction takes place at night time</li> <li>▪ Backfill, reinstate the affected roads fully before traffic is resumed in day time</li> </ul>
		Construction takes place along roadside	Traffic disruptions, traffic safety risks	<ul style="list-style-type: none"> <li>▪ Avoid construction activities at peak hours</li> <li>▪ Install speed limit signs at 10km/h at the two ends of construction section</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
		<p>Construction take place on or passing private land the concrete floors of 14 households (5 in Sopkaem, 1 in Phiengthin, 6 in Muangkhan, and 2 in Phiangday) may be temporarily affected due to their proximity to the pipeline path.</p>	<ul style="list-style-type: none"> <li>▪ Disturbance to owner’s daily activities</li> <li>▪ Safety risks</li> <li>▪ Dust, nuisance</li> <li>▪ Damages to private properties and crops</li> </ul>	<ul style="list-style-type: none"> <li>▪ Minimize the volumes of materials and wastes loaded along roadside at each time</li> <li>▪ Backfill, reinstate the affected roads fully as soon as possible (related costs have been included in the BOQ)</li> <li>▪ Contractor must install speed limit sign, provision all safety insures before start of construction by the contractor as per the provision of the ESMP</li> <li>▪ Inform land owner and get agreement on construction schedule in advance at least 7 days</li> <li>▪ Treat land owner with respects</li> <li>▪ No construction at lunch and nighttime</li> <li>▪ Minimize disturbed areas</li> <li>▪ Do not load materials and wastes on vegetated areas, load on barren land</li> <li>▪ Create safe temporary path if access if disrupted</li> <li>▪ Clean up, reinstate the site completely before departure.</li> </ul>
6. The proposed disposal Site.		<p>The proposed disposal site will be located on communal land in Sopkeam Village. The Sopkeam village authority has agreed to contribute this land to the PIU for Water Supply and Sanitation (WSS) development the agreement is in the Appendix 6.</p>	<p>dust, noise and erosion, local risks</p>	<ul style="list-style-type: none"> <li>▪ Inform the village authorities prior commencement the disposal work.</li> <li>▪ Leveling or compensate the land owner as mentioned in the agreement.</li> <li>▪ Post a speed limit sign at the entrance of the disposal site;</li> <li>▪ Provide a notice stating “Only authorized persons are allowed”, limiting access by unauthorized persons to the disposal site;</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
		<p>A total of 20,837 m<sup>3</sup> of excavated soil will be disposed of in this communal land plot. The plot is currently undeveloped, characterized by its low-lying topography, and has no agricultural land or streams nearby..</p>		<ul style="list-style-type: none"> <li>▪ Top soil will be reserved and loaded in separate areas for reuse at the end of the disposal operation.</li> <li>▪ Dispose of soil in layers, compacting each layer to ensure stability and reduce erosion.</li> <li>▪ Shape the disposed soil into stable slopes (not too steep) to minimize the risk of erosion and mass movement. Follow engineering design specifications for final contours.</li> <li>▪ A drainage ditch shall be built around the disposal site to control surface runoff to prevent flooding surrounding the disposal sites; Sediments in runoff passing the excavated materials will be trapped before the flow enter any water bodies.</li> <li>▪ After being tipped down, disposal waste piles must be levelled and rolled out to mitigate dust emission, erosion, and washing off by wind and water as well as to limit safety risks;</li> <li>▪ Install sediment fences, straw bales, or other barriers downhill from the disposal area to prevent soil runoff into water bodies or adjacent land.</li> <li>▪ Minimize or suspend disposal operations during heavy rainfall to prevent severe erosion and runoff.</li> <li>▪</li> <li>▪ As soon as a section of the disposal site is filled to its final contour, promptly revegetate it with</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				<p>appropriate native plant species (grasses, shrubs, trees) to stabilize the soil, prevent erosion, and integrate the site back into the landscape</p>
<p>7. Water Supply office</p>		<p>The Water Supply Service Office will be constructed on a 390 m<sup>2</sup> plot of land donated by Sopkaem Village. This plot, bordered by communal land and adjacent to the primary school, is located within the village center along the village road. The site is currently cleared, with only sparse grasses present.</p>	<p>Dust generation and increased level of Noise and Vibration</p>	<ul style="list-style-type: none"> <li>▪ Excavation work will be avoided in periods of high wind.</li> <li>▪ Spray water on transportation road particularly roads near residences and through the town core area and construction site during dry weather conditions to control dust emission</li> <li>▪ Impose speed limits on construction vehicles;</li> <li>▪ Transport of materials that may generate dust shall be covered with canvass or similar.</li> <li>▪ The burning of site clearance debris (trees, undergrowth) or construction waste material is prohibited.</li> <li>▪ Keep the stockpile of aggregate material covered to avoid suspension or dispersal of fine soil particles during windy days or disturbance from stray animals.</li> <li>▪ Limit construction activities, particularly operation of noise/vibration generating equipment at night.</li> <li>▪ Position any stationary equipment that produces high noise levels such as diesel generators as far as practical from sensitive receptors.</li> <li>▪ Avoid using equipment that may result in high levels of vibrations during school hours.</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
			Occupational and community health and safety	<ul style="list-style-type: none"> <li>▪ Provide information to community on schedule of construction activities through billboard/signs.</li> <li>▪ Erect construction billboards, which include construction contents, schedule, responsible person and complaint phone number, at the entry to each construction site and construction staging area.</li> <li>▪ Install the physical barrier to limit access to the construction site</li> <li>▪ Install signs at construction sites warning people of potential dangers.</li> <li>▪ Fence off the construction site with gates.</li> <li>▪ Restriction of un-authorized persons to work areas.</li> <li>▪ Install barricades/barriers and sturdy plate covers in open excavations during non-working time.</li> <li>▪ Install temporary fences or barriers around the subproject facility construction site especially near schools, healthcare stations and houses.</li> <li>▪ Provision of first-aid facilities readily accessible by workers.</li> <li>▪ Develop the emergency management plan in case of an accident, and safety drills. Workers must be made aware of the emergency management plan</li> <li>▪ Provisions of personal protection equipment (PPE), such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection, in accordance with relevant health and</li> </ul>

Element and location	Photos, maps	Existing Condition.	Impacts, Risks	Specific Mitigation Measures
				safety regulations for workers. All workers must be trained in the use of the required equipment. <ul style="list-style-type: none"> <li>▪ Wearing of PPEs while working on-site will be a mandatory requirement for workers.</li> <li>▪ Posting of safety signs/reminders in strategic areas within the construction area.</li> <li>▪ Installation of sufficient lighting at night.</li> <li>▪ Regular attendance and a controlled time keeping of all employees.</li> </ul>
8. Water Intake site. Water intake is located on Houay Sanong (downstream of waterfall).		Intake is locate at the old weir of exiting water for the town, Elevation: 455m X= 451870, Y = 2213769 There are a stone along the downstream and small bushes, vines, shrubs, small trees with a diameter of about 3-20 cm, bamboo which contractor can use for construction materials.	Temporary disrupt stream flow; Over disturbance to stream bed Water pollution risks Unnecessary disturbance to stream side vegetation Fish, wildlife caught by the workers	<ul style="list-style-type: none"> <li>▪ install a temporary culvert to maintain stream flow during intake construction;</li> <li>▪ Do not exploit construction materials (gravels from stream bed) on-site;</li> <li>▪ Carry out construction with care to minimize dropping of mortars into the stream to avoid water pollution</li> <li>▪ Load materials and equipment on barren soil, not on vegetated areas</li> <li>▪ No fish/wildlife catching, keeping allowed</li> </ul>

## 8. Capacity Building and Awareness Rasing

To ensure effective implementation and supervision of the Contractor's Environmental and Social Management Plan (C-ESMP), the capacity of contractor staff will be strengthened. All personnel will receive training to ensure a comprehensive understanding of project environmental and social management goals, methods, and practices. Construction Supervision Engineer The contractor's Health, and Safety (EHS) officer will conduct training sessions covering environmental management, Environmental Control and Operating Procedures (ECOPs), occupational health and safety, emergency response procedures, and the Code of Conduct. Capacity building will be achieved through pre-construction training and daily safety briefings. The training program details are summarized in the Table 7-8-1.

TABLE 7-8-1 TRAINING PROGRAM

Training	Attendees	Contents	Times	Duration
<b>Understanding of C-ESMPs Implementation and monitoring</b>	employees and workers	Mitigation measures defined in C-ESMP, ECOPs, Code of Conduct, Roles and Responsibilities, Monitoring.	Once before construction starts, repeated as needed	1 day
<b>Occupation Health and Safety and Emergency response procedures</b>	employees and workers	Construction site safety, first aid, PPE usage, firefighting.	once before and , repeated as needed	0.5 day
<b>Safety talk</b>	Workers	Construction site safety awareness	Daily, before start of work	15 minutes
<b>Local custom and traditional awareness</b>	Workers	Local custom and traditional awareness	Once before construction starts, repeated as needed	1 hours
<b>SEA awareness</b>	employees and workers	Sexual exploitation and Sexual Abuse (SEA) awareness	Once before construction starts, repeated as needed	1 hours

## 9. Grievance Redress Mechanism

### 9.1 Worker Grievance Redress

The Grievance Redress Mechanism (GRM) for the workers has been established to provide a transparent, accessible, and efficient process for workers to raise concerns, complaints, or grievances related to their employment or working conditions. This mechanism aims to:

- Ensure that all workers are treated fairly and equitably, regardless of their position or background.

- Provide a structured process for resolving disputes between workers and management in a timely and amicable manner.
- Minimize the escalation of conflicts by addressing issues promptly and effectively.
- Foster positive and harmonious relationships between workers and management.
- By addressing grievances, the GRM can boost employee morale and productivity.
- Comply with National Labour Laws and Regulations and World Bank Safeguard Policy Ensure adherence to local Labour laws and international Labour standards.
- Use the feedback from grievances to identify areas for improvement in workplace practices and policies.

Any worker employed on the WSS Muangna and Phanxam Cluster construction such as workers directly employed by the main contractor and subcontractors are entitled to lodge complaints regarding any aspect of the working condition, well-being etc. these may include:

**Workplace Safety:**

- Unsafe working conditions
- Lack of safety equipment
- Inadequate safety training

**Fair Wages and Benefits:**

- Unpaid wages or delayed payments
- Incorrect calculation of wages or overtime
- Non-payment of benefits (e.g., social security, health insurance)

**Working Hours:**

- Excessive working hours
- Forced overtime
- Lack of rest breaks

**Discrimination and Harassment:**

- Discrimination based on race, gender, religion, or other factors
- Sexual harassment
- Bullying or intimidation

**Contractual Issues:**

- Breach of contract terms
- Unfair termination
- Non-compliance with Labour laws

**Other Issues:**

- Poor living conditions for workers

- Lack of access to clean water and sanitation
- Inadequate food provisions

### 9.1.1 Grievance Unit

The contractor will appoint a designated Grievance unit responsible for handling worker complaints. The grievance unit members are shown in table below

**TABLE 9-1 GRIEVANCE UNIT MEMBERS AND THEIR CONTACT**

<b>Name</b>	<b>Position</b>	<b>Contact Number</b>
Mr. Kosonh Sitthilath	Site Manager for Hoaphan Province	020 55 959 659
Ms. Soumontha Lorsavathdy	EHS Officer	020 97 935 017
Mr. Amphan Thongsy	CS	020 99 429 456

### 9.1.2 Grievance Redress Procedure.

- **Step 1: Informal Resolution:**
  - Encourage workers to discuss concerns directly with their supervisor or foreman. Their concerns shall be solved within 2 days.
- **Step 2: Formal Grievance:**
  - If the issue remains unresolved, workers can submit a written grievance to the Grievance Unit. The grievance should include:
    - Worker's name and contact information
    - Date of the incident
    - Clear description of the grievance
    - Names of any witnesses
- **Step 3: Investigation:**
  - The Grievance Unit conducts a thorough investigation, interviewing relevant parties and reviewing documentation.
  - Maintain confidentiality throughout the process.
- **Step 4: Resolution:**
  - Based on the investigation, the Grievance Unit proposes a resolution, which may include:
    - Mediation between the worker and the supervisor
    - Corrective action for the supervisor or other involved parties
    - Compensation or other remedies for the worker
- **Step 5: PIU and PMU level**

If the worker is dissatisfied with the resolution at the contractor level within 5 days, they can appeal to PIU and PMU level. The PIU and PMU GRM focal point is shown in table below.

**TABLE 9-2 PIU AND PMU GRM FOCAL POINT CONTACT INFORMATION**

<b>Name</b>	<b>Position</b>	<b>Contact Number</b>
Mrs. Sompathana Dethoudom	Deputy Project Manager	020 92 895 919
Mr. Sone Vongkhamthong	Head of PIU Huaphan Province	020 22 349 876
Mr. Touy Khamphondy	PIU of Kouan District	020 22 425 789
Mr. Touathor Lorneng	PIU of Xamtay district	020 99 519 669

## 9.2 Grievance Redress Mechanism for Project Affected Person

The Grievance Redress Mechanism (GRM) for project affected persons will adhere to the Scaling-Up Water Supply, Sanitation, and Hygiene Project (SWSHP) GRM, which was developed as part of the Environmental and Social Management Plan (ESMP) and Abbreviated Resettlement Plan (ARP) to meet the GRM requirements stipulated in the Environmental and Social Management Framework (ESMF) approved by the World Bank. This mechanism will address grievances related to environmental and social issues associated with the project, including issues related to land acquisition, and compensation.

All affected persons will be fully informed of their rights, and the detailed grievance redress procedures will be disseminated through a comprehensive public information campaign. An aggrieved affected person (AP) or affected household (AH) will be exempt from any fees associated with lodging and resolving complaints, as these costs will be borne by the Project Implementation Unit (PIU)/Project Management Unit (PMU) and contractor.

The grievance mechanism is based on key principles that will protect the rights and interest of project participants; ensure that their concerns are addressed in a prompt and timely manner, and that entitlements are provided in accordance with GoL and Bank safeguard policies. PIU/DPWT will ensure that communities directly affected by the Project have a full understanding of the GRM and ways to access it especially on (i) compensation for any involuntary acquisition of land and/or assets, and (ii) ensuring environmental and social mitigation measures in the ESMP's are implemented as planned. APs are entitled to lodge complaints regarding any aspect of the environmental and social impacts associated with the Project. The AP's complaints can be made verbally or in written form to the GRC or, alternatively, raise his/her voice in a public or individual meeting with project staff.

### 9.2.1 Type of GRM

Complainants are entitled to lodge complaints regarding any aspect of the project. Any affected person will be able to submit a grievance if they believe a practice is having a detrimental impact on the community, the environment, or on their quality of life. Eligible grievances or complaints include:

- Negative impacts on a person or a community (e.g. financial loss such as from loss of water, loss of roadside trees, health and safety issues, nuisances, etc.).
- Dangers to community health and safety or pollution of the environment.
- Hazards due to construction activities (e.g. noise, dust, disruption of access, etc.)
- Impacts on community infrastructure such as roads, road side drainage, etc.
- Failure to comply with standards or legal obligations.
- Improper conduct or unethical behaviors of contractor leading to nuisance of affected person(s).
- Misuse of funds and other irregularities.

- Grievances due to land acquisition, resettlement, compensation, relocation and unaddressed losses.
- Complaints related to gender issues including the GBV/SEA/SH refers to Gender-Based Violence, Sexual Exploitation and Abuse, and Sexual Harassment—key concerns related to gender inequality.

### 9.2.2 Grievance Resolution Process

Complaints can be made verbally or in written form. It is recognized that in many cases, complainants do not have the writing skills or ability to express their grievances verbally, however, complainants are encouraged to seek assistance from family members or village heads, to have their grievances recorded in writing and to ensure that where disputes do occur and all the details have been recorded accurately enabling all parties to be treated fairly. In the case of verbal complaints, a written record of the complaint will be made during the first meeting with the complainant. Complainants who present their complaints within the prescribed procedures will be exempt from all administrative fees incurred. In addition, complainants who lodge complaints and appeals to district courts will be provided with free legal representation. The procedures for the grievance resolution process for the subproject are detailed as below.

**Stage 1:** In the first instance, Aps will address complaints on any aspect of compensation, relocation or unaddressed losses to the Village Grievance Redress Committee (VGRC) or other designated village grievance officers. The VGRC will organize a meeting with the complainants to resolve the issue using its traditional methods of conciliation and negotiation; the meeting will be held in a public place and will be opened to other Aps and villagers to ensure transparency. The VGRC aims at clarification and amicable solution agreed with the subproject.

**Stage 2:** If after 10 days of lodging the complaint, no understanding or amicable solution can be reached or no response is received from the Village Grievance Redress Committee, the complainant can bring the complaint to the District/Provincial GRC. The District/Provincial GRC will be involved to meet with the complainant and VGRC to discuss the complaint and provide a decision at mutual arrangement within 15 days of receiving the appeal.

**Stage 3:** If the AP is still not satisfied with the decision of the PGRC, or in the absence of any response within the stipulated time, the complainant can submit his/her grievance to Department of Water Supply. The DWS will act on behalf of the MPWT. It may consider seeking external opinion on this matter and the appeal must be resolved within 20 days of receiving the appeal.

**Stage 4:** As a last resort, the AP may submit his/her case to the Court of Law. The complaint will be lodged with the Court of Law; the decision of the Court will be final.

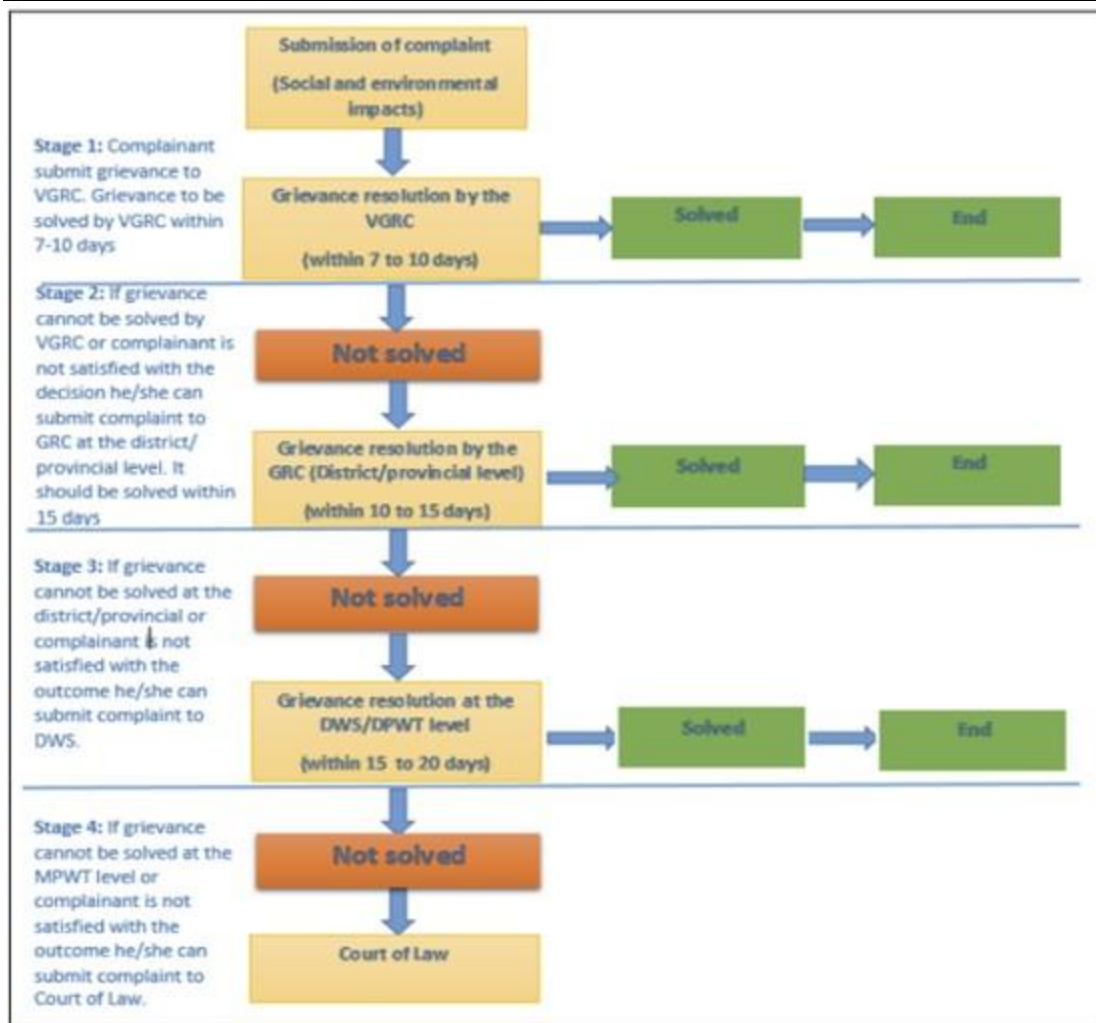


FIGURE 9-1 GRM PROCEDURE

The list of contact person for grievance procedures is summarized in the following Table 9-3

TABLE 9-3 GRIEVANCE REDRESS MECHANISM (GRM) COMMITTEE CONTACT INFORMATION

No.	Name	Position	Phone Number
<b>Contractor' staffs</b>			
1	Ms. Soumontha Lorsavathdy	Environment, Social, Health and Safety Officer	020 97 935 017
2	Mr. Kosonh Sitthilath	Site Manager for Hoaphan Province	020 55 959 659
3	Mr. Vithakone Sitthideth	Site engineer of of Muangna Cluster, Kouan District	020 57 779 707
4	Mr. Sonethit Bounthamvicheuang	Site engineer of Phanxam cluster, Xamtay district	020 54 446 995

<b>District and Provincial focal person</b>			
<b>1</b>	Mr. Touy Khamphondy	PIU of Kouan District	020 22 425 789
<b>2</b>	Mr. Tuathor	PIU of Xamtay district	020 99 519 669

## **10. Emergency Preparedness and Response**

### **10.1 Emergency Response team**

At each construction site, information on emergency response procedures and emergency contact numbers will be clearly displayed.

**TABLE 10-1 EMERGENCY RESPONSE TEAM INFORMATION**

<b>No.</b>	<b>Name</b>	<b>Position</b>	<b>Phone Number</b>
<b>1</b>	Ms. Soumontha Lorsavathdy	Environment, Social, Health and Safety Officer	020 97 935 017
<b>2</b>	Mr. Kosonh Sitthilath	Site Manager for Huaphan Province	020 55 959 659
<b>3</b>	Mr. Vithakone Sitthideth	Site engineer of of Muangna Cluster, Kouan District	020 57 779 707
<b>4</b>	Mr. Sonethit Bounthamvicheuang	Site engineer of Phanxam cluster, Xamtay district	020 54 446 995

### **10.2 Emergency incident Communication Process**

All construction personnel will be trained in basic emergency response procedures including communication and reporting procedures to be implemented in case of an emergency situation

In the event of an accidental release, worker injury and road accident the following communication protocol will be implemented:

#### **10.2.1 Ensure Safety**

- Prioritize the safety of all individuals involved.
- Secure the accident scene to prevent further incidents.
- If safe, provide immediate first aid to injured parties.

#### **10.2.2 Initial Notification:**

- Immediately notify Environmental, Health, and Safety (EHS) Officer
- Provide a brief overview of the incident, including location and severity.
- Written documentation of the incident and notifications will be provided as soon as possible after the initial verbal communication.

### 10.2.3 Internal Communication

#### (i) Notification to project manager/Site Manager

The Environmental, Health, and Safety (EHS) Officer will provide immediate verbal notification to the Project Manager/Site Manager.

- This notification will include:
  - Location of the incident.
  - Nature of the incident (road accident or worker injury).
  - Number of individuals involved.
  - Severity of injuries.
  - Any immediate actions taken
- (ii) Internal Incident Report
  - detailed incident report will be completed as soon as possible.
  - This report will include:
    - Date and time of the incident.
    - Exact location.
    - Names and contact information of individuals involved.
    - Detailed description of the incident.
    - Description of injuries sustained.
    - Witness statements.
    - Photographs (if applicable and safe to take).
    - Actions taken and proposed follow-up.

### 10.2.4 External Communication

- If injuries are severe or require immediate medical attention, emergency services (ambulance, police) will be contacted immediately.
- Report to PIU and PMU within 24 hours
- Provide accurate and concise information to emergency responders.

### 10.2.5 Regulatory Authorities Notification

- Within 48 hours of completion of the clearance, a report will be submitted to PIU and PMU. The report will be used to identify any required corrective or preventive actions and emergency response procedures and training programs will be modified accordingly
- Depending on the severity and nature of the incident, relevant regulatory authorities (e.g., DONRE, labor department,) will be notified as required by local regulations;

### 10.2.6 Communication with Family/Next of Kin.

- In the case of worker injuries, designated personnel will communicate with the injured worker's family or next of kin.
- Communication will be sensitive and respectful, providing accurate and timely information.

### 10.2.7 Post-Incident Actions

- **Investigation:**
  - A thorough investigation will be conducted to determine the root cause of the incident.

- The investigation will identify any contributing factors and recommend corrective actions.
- **Corrective Actions:**
  - Implement corrective actions to prevent similar incidents from occurring in the future.
  - This may include changes to safety procedures, equipment, or training.
- **Follow-up Communication:**
  - Provide regular updates to relevant stakeholders on the progress of the investigation and corrective actions.
  - Maintain records of all follow up actions.

## 11. Monitoring and Reporting

### 11.1 Monitoring

Throughout the WSS construction period, the contractor will ensure adherence to the mitigation measures specified in the Environmental and Social Management Plan (ESMP) and Environmental and Codes of Practices (ESCP) for the pre-construction and construction phases. Furthermore, the contractor will conduct continuous monitoring of the environmental consequences arising from the construction activities. The objective of the monitoring plan is to assess the efficacy of the prescribed mitigation measures and to identify any unanticipated environmental effects of the WSS project. The monitoring program encompasses the scope of monitoring and supervision, environmental media, monitoring parameters, monitoring frequency and schedule, and implementation roles.

The Contractor will be mobilized, full time, an Environmental Health and Safety Officer (EHSO) to follow up daily the construction activities, both the WSS construction sites.

TABLE 11-1 ENVIRONMENTAL AND SOCIAL MONITORING PLAN FOR CONSTRUCTION PHASE

Environmental and Social Issue	Location, Parameters Monitoring Technique	Responsibility and Frequency
Soil Erosion	<b>Method, Location:</b> Visual inspection of Access Roads, WTP, Water supply Office, Transmission Pipes <b>Parameters:</b> (i) adequacy of soil erosion prevention measures; (ii) adequacy of soil contamination prevention techniques; (iii) evidence of excessive soil erosion or soil contamination	EHSO -Daily CSC-Weekly
Vegetation/Trees	<b>Method, Location:</b> Visual inspection of all construction sites <b>Parameters:</b> adequacy of vegetation protection measures; evidence of damage to vegetation; compliance with approved tree removal and landscaping plan	EHSO -Daily CSC-Weekly
Dust, Noise and Vibration	<b>Method, Location:</b> Visual inspection of all construction sites <b>Parameters:</b> adequacy of dust, noise and vibration prevention and mitigation measures implantation.	EHSO -Daily CSC-Weekly

Construction site health and safety	<p><b>Method, Location:</b> Visual inspection and interviews with construction workers and contractors at all construction sites, check the record</p> <p><b>Parameters:</b> (i) adherence to the approved ESCOP and C-ESMP; and (ii) worker complaints and concerns and reported accidents/incidents</p>	EHSO -Daily CSC-Weekly
Community Health and Safety	<p><b>Method, Location:</b> Visual inspection of all construction sites, informal interviews with nearby residents</p> <p><b>Parameters:</b> (i) adherence to specific mitigation measure for traffic safety risk; (ii) adequacy of construction site signage and fencing; (iii) adequacy of temporary noise mitigation measures; (iv) accidents involving public and workers; (v) emergencies and responses; (v) public complaints about noise, air pollution, construction site safety etc.</p>	EHSO -Daily CSC-Monthly
Private and community property disturbance	<p><b>Method, Location:</b> Visual inspection of restoration of affected agriculture lands and concrete floor to original condition from raw water of the WSS Muangna cluster 11 households in Nathong village and 11 households in Huana village. The clear water distribution pipelines affect the concrete floors in front of 22 households along the roadside in Muangna village, Muangna Cluster, Kouan District.</p> <p><b>Parameter:</b> (i) evidence of restoration of affected areas;</p>	ESHO-Weekly
Induced traffic disturbance	<p><b>Method, Location:</b> Visual inspection along construction sites and transportation roads, informal interviews with affected people, consultation of local traffic police</p> <p><b>Parameters:</b> (i) adequacy of, and compliance with specific mitigation measures for traffic safety risk; (ii) satisfaction of affected people; (iii) warning and traffic signs were installed adequate and properly.</p>	ESHO-Weekly CSC-Monthly
GRM Monitoring	<p><b>Method, Location:</b> Recorded complaints and resolutions, availability of ant pending issues</p> <p><b>Parameters:</b> complaint register, number of received and resolved grievances</p>	EHSO -Daily CSC-Weekly

## 11.2 Reporting

Contractor's Environmental, Social, Health, and Safety (ESHS) performance at construction sites will be directly monitored and supervised by the Site Construction Supervision Engineer. This engineer will prepare a monthly ESHS monitoring report for submission to the Project Implementation Unit (PIU).

The Construction Supervision Engineer will submit a monthly progress report that includes an ESHS section (The template is provided in Appendix 4) . This section will summarize compliance with ESMP/C-ESMP requirements, implementation of mitigation measures, monitoring activities, received complaints and responses, and any Health, Safety, and Environment (HSE) accidents.

In the event of any accident, the Construction Supervision Engineer shall report to the PIU/Project Management Unit (PMU) within 24 hours. A detailed accident report shall be submitted to the PMU within one week.

## 12. Appendix

**APPENDIX 1 ENVIRONMENTAL AND SOCIAL CODES OF PRACTICE (ESCOP)**

Impacts/Risks	Mitigation Measure	Responsibility	
		Implementation	Supervisor/approval
<b>1. Soil Erosion and Sedimentation</b>	<ul style="list-style-type: none"> <li>Excavation works shall be scheduled during the dry season to the extent practical to avoid carrying out excavation works during heavy rainfall periods.</li> <li>Construction activities shall be carefully planned to minimize disturbed areas and to preserve existing vegetation, which minimizes the potential of removing existing trees that protect soil from erosion.</li> <li>Diversion structures, such as earth dikes and drainage swales, shall be installed along paved surfaces, the top of slopes and below areas where runoff starts to concentrate, to divert off-site water runoff during construction and limit the exposure of disturbed sediments to moving water.</li> <li>Silt traps/sedimentation basins/settlement pond to capture and detain construction site runoff shall be installed.</li> <li>Slope failure protection should be considered during construction and after construction (operation).</li> <li>All works at or near the river must be rehabilitated immediately, to minimize the risk of bank erosion and soil being washed into the river.</li> <li>The contractor will be prohibited from quarrying materials directly from any river. Construction materials will be procured from Government-permitted sources/ suppliers only.</li> <li>Construct silt traps, deviation channels, mounting barriers or trenches around the stockpiles of materials.</li> </ul>	Contractor	Social Safeguard and - Environment Specialists; PMU and PIU
<b>2. Air Quality reduction, dust generation</b>	<ul style="list-style-type: none"> <li>Spray water on access roads and construction sites during dry weather conditions to control dust emission, particularly roads near residences and through the town core area.</li> <li>Impose speed limits on construction vehicles.</li> <li>Excavation work will be avoided in periods of high wind.</li> <li>The contractor will comply with a 10 km/h speed limit when in the community area.</li> <li>Transport of materials that may generate dust shall be covered with canvass or similar.</li> <li>Install temporary fens or barriers around the subproject facility construction site.</li> <li>The burning of site clearance debris (trees, undergrowth) or construction waste material is prohibited.</li> <li>Keep the stockpile of aggregate material covered to avoid suspension or dispersal of fine soil particles during windy days or disturbance from stray animals.</li> <li>Regularly maintain the construction machines to ensure they are in good condition.</li> </ul>	Contractor	Social Safeguard and - Environment Specialists; PMU and PIU
<b>3. Noise and Vibration</b>	<ul style="list-style-type: none"> <li>Limit construction activities, particularly operation of noise/vibration generating equipment at night.</li> <li>Position any stationary equipment that produces high noise levels such as diesel generators as far as practical from sensitive receptors.</li> </ul>		

Impacts/Risks	Mitigation Measure	Responsibility	
		Implementation	Supervisor/approval
	<ul style="list-style-type: none"> <li>Install temporary fences or barriers around the subproject facility construction site especially near schools, healthcare stations and houses.</li> <li>Require drivers to minimize honking and to comply with speed limits of 10 km/h when driving in community area.</li> <li>Provide information to community on schedule of construction activities through billboard/signs.</li> <li>Avoid using equipment that may result in high levels of vibrations</li> </ul>		
<b>4. Impacts and risks to biodiversity</b>	<ul style="list-style-type: none"> <li>The contractors will prohibit activities such as cutting wood for cooking, harvesting and hunting, or wildlife trade.</li> <li>Cutting of trees will be undertaken as per approved design and only upon approval of relevant authorities. Avoid the cutting of trees as much as possible and minimize damage to native vegetation.</li> <li>The width of roads and paths to the intakes and the WTPs, will be kept to a minimum, only to accommodate the construction.</li> <li>The use of vehicles/equipment will be kept to a minimum to reduce the land acquisition required. Manual labor will be utilized in sloping terrain where use of heavy equipment would cause unnecessary damage. Steep exposed slopes will be graded and covered with bush and grass to minimize erosion.</li> <li>Implement landscaping and planting of trees/vegetation, using native plant species for greening at the WTP site</li> </ul>	Contractor	Social Safeguard and - Environment Specialists; PMU and PIU
<b>5. Impact and Risks on Private and community assets</b>	<ul style="list-style-type: none"> <li>Contractor will inform work plan to the community one-week prior start pipeline work.</li> <li>Build access roads to minimum necessary width.</li> <li>Installation of pipelines affect existing housing/shop structures Provide temporary access to the house and back fill the pipe trenches as soon as possible.</li> <li>installation of pipelines within the Right-of-Way when feasible.</li> <li>Protect slopes where excavation potentially affect existing housing/shop structures.</li> <li>The written agreement/MOM will be made between contractor and village authority/land owner prior dumping.</li> <li>Any impact on private land and assets from water supply system will be compensated by contractors</li> </ul>	Contractor	Social Safeguard and Environment Specialists; PMU and PIU
<b>6. Disruption to traffic and pedestrians' access to properties</b>	<ul style="list-style-type: none"> <li>Prepare and implement measures for temporary traffic management prior to construction to ensure road safety. The plan should include provisions for diverting or scheduling construction traffic to avoid morning and afternoon peak traffic hours.</li> <li>Walking access will be maintained to affected properties and access routes will be temporarily lined with suitable material. Particular attention will be given to ensuring safety along roads and paths used by pedestrians, including school children.</li> </ul>	Contractor	Social Safeguard and Environment Specialists; PMU and PIU

Impacts/Risks	Mitigation Measure	Responsibility	
		Implementation	Supervisor/approval
	<ul style="list-style-type: none"> <li>Side street parking of construction vehicles on prolonged basis will not be allowed.</li> <li>Install barriers and safety warning signs on road sections and, if necessary, deploy traffic aides/ flag persons at affected locations. Information boards at blocked roads will provide information about the temporary closure of roads, schedule of works, and the traffic-rerouting plan.</li> <li>Ensure the contractor immediately rehabilitates excavated or disturbed areas and any damaged road and path sections or any other existing infrastructure and the related services.</li> </ul>		
<b>7. Risks on Relics and artifacts exposure Chance Find Procedures</b>	<ul style="list-style-type: none"> <li>The Contractor will ensure that the workforce is briefed that in the event of accidental finds relics they should immediately cease any works in the area and promptly report the find to their supervisor.</li> <li>If the contractor discovers archeological sites, historical site, remains and objects, including graveyards, and/or individual graves during excavation or construction, the Contractor will carry out the following steps<sup>2</sup>:             <ul style="list-style-type: none"> <li>Stop the construction activities in the area of the chance find;</li> <li>Delineate the discovered site or area;</li> <li>Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities, or the National Culture Administration take over;</li> <li>Notify the project engineer, supervisor (CSC), and/or PSC who in turn will notify the responsible local authorities and the provincial Culture Department immediately (within 24 hours or less);</li> <li>Responsible local authorities and the provincial Culture Department would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of</li> <li>National Culture Administration. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values.</li> <li>Decisions on how to handle the finding shall be taken by the responsible authorities and the provincial Culture Department. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;</li> <li>Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and</li> </ul> </li> </ul>	Contractor	Social Safeguard and Environment Specialists; PMU and PIU

<sup>2</sup> Refer to the Table 6-3 Environmental and Social Codes of Practices is based on ESMP

Impacts/Risks	Mitigation Measure	Responsibility	
		Implementation	Supervisor/approval
	<ul style="list-style-type: none"> <li>Construction work could resume only after permission is given from the responsible local authorities or the provincial Culture Department concerning safeguard of the heritage.</li> </ul>		
<b>8. Generation Solid Waste</b>	<ul style="list-style-type: none"> <li>Excavated material will be utilized to backfill the trench and/or ground leveling at the construction sites such as the WTP, access roads and pipe trenches. The contractor is required to properly reinstate the excavated trench after completion of pipe laying.</li> <li>Surplus excavated material/cut soil from construction of the WTP will be used as backfill material for low-lying areas that have been identified by the village authority.<sup>3</sup></li> <li>Non-hazardous construction waste shall be disposed of at a designated disposal site with the necessary environmental compliance certificate, as agreed with District Authorities.</li> <li>The contractor will segregate solid waste into hazardous and non-hazardous waste on a daily basis, and then further segregate into recyclable and non-recyclable waste. Recyclable waste includes plastic bottles, cans, and metal. Non-recyclable waste is likely to include wrappings, packaging, and construction waste. The waste fractions will be stored temporarily in bins or in fenced-off and covered enclosures.</li> <li>The contractor will bring recyclable waste to the local recycling dealer or shop - if there is one. If there is no local recycling dealer, the recyclables (still segregated) shall be brought to the waste disposal site as specified by the District Authorities for possible recycling by dealers operating there or disposed together with non-recyclable waste at that site.</li> <li>Disposal of waste (that is not recycled) is only allowed at the solid waste disposal site specified by the District Authorities.</li> <li>Open burning or burial of any form of waste or materials is strictly prohibited both onsite and offsite.</li> <li>Littering of waste is strictly prohibited</li> </ul>	Contractor	Social Safeguard and Environment Specialists; PMU and PIU
<b>9. Occupational Health and Safety</b>	<p>The Contractor will appoint a Site Manager or his/her representative with the appropriate qualifications in environmental and occupational health and safety associated with the implementation of the ECOP, the Labor Management Plan and Environmental, Health and Safety of IFC (<a href="http://www.ifc.org/ehsguidelines/">http://www.ifc.org/ehsguidelines/</a>).</p> <p><b>Site sanitation</b></p> <ul style="list-style-type: none"> <li>The contractor will install the Worker Camp in an area far enough from water sources, houses and sensitive areas and in consultation with the community;</li> <li>The contractor will be responsible for reinstatements of temporary disturbed areas by camp and site offices work completion.</li> <li>Provide an adequate number of latrines and other sanitary arrangements at the site and work areas, and ensure that they are cleaned and maintained to a hygienic standard;</li> </ul>	Contractor	Social Safeguard and Environment Specialists; PMU and PIU

<sup>3</sup> Refer to table 6-3 Environmental and Social Codes of Practices is based on ESMP

Impacts/Risks	Mitigation Measure	Responsibility	
		Implementation	Supervisor/approval
	<ul style="list-style-type: none"> <li>The contractor should make separate arrangements for men and women workers.</li> <li>Provide garbage receptacles at the construction site and camps, which will be periodically cleared to prevent the outbreak of diseases and maintain hygiene; and</li> <li>Collect and treat camp wastewater before discharge into the environment. There is no existing wastewater treatment in this area, but it is proposed to make the septic tank system at worker camp to collect, treat camp wastewater before discharge.</li> </ul> <p><b>Occupational Safety</b></p> <ul style="list-style-type: none"> <li>Provision of first-aid facilities readily accessible by workers.</li> <li>Contractors should include an emergency management plan in case of an accident, and safety drills. Workers must be made aware of the emergency management plan.</li> <li>Provisions of personal protection equipment (PPE), such as safety boots, helmets, gloves, protective clothing, goggles, and ear protection, in accordance with relevant health and safety regulations for workers. All workers must be trained in the use of the required equipment.</li> <li>Wearing PPEs while working on-site will be a mandatory requirement for workers.</li> <li>Posting of safety signs/reminders in strategic areas within the construction area.</li> <li>Installation of sufficient lighting at night.</li> <li>Contractors should provide training to the workers for awareness and measures to prevent sexually transmitted diseases (STD).</li> </ul> <p><b>Food Safety</b></p> <ul style="list-style-type: none"> <li>Provide a clean and sufficient supply of fresh water.</li> <li>Inspect and supervise food hygiene in canteens on site regularly. Canteen workers must have valid health permits.</li> <li>If food poisoning is discovered, implement effective control measures immediately to prevent it from spreading.</li> </ul> <p><b>Disease prevention and safety awareness</b></p> <ul style="list-style-type: none"> <li>Construction workers must have a physical examination before starting work on site. If an infectious disease is found, the patient must be isolated for treatment to prevent the disease from spreading.</li> <li>Provide induction and training by local health departments on the prevention and management of communicable diseases.</li> <li>Implement STIs/HIV/AIDS and other communicable diseases awareness and prevention programs.</li> <li>Provide training on the specific hazards associated with the work, as well as training on basic sanitation and health care issues, and general health and safety.</li> </ul>		

Impacts/Risks	Mitigation Measure	Responsibility	
		Implementation	Supervisor/approval
	<p><b>Security:</b></p> <ul style="list-style-type: none"> <li>• Regular attendance and a controlled time keeping of all employees;</li> <li>• Restriction of un-authorized persons to the residential and work areas;</li> <li>• Restriction of carrying weapons and control hunting by employees; and</li> </ul> Provision of boundary walls/fence with proper exits to the camp		
<b>10. Community Health and Safety</b>	<ul style="list-style-type: none"> <li>• Install barricades/barriers and sturdy plate covers in open excavations during non-working time.</li> <li>• The contractor must install the physical barrier to limit access to the construction site.</li> <li>• Install signs at construction sites warning people of potential dangers.</li> <li>• Erect construction billboards, which include construction contents, schedule, responsible person and complaint phone number, at the entry to each construction site and construction staging area.</li> <li>• Construction works with noise and dust will be prohibited during the nighttime.</li> <li>• Liaise with PIU to inform the community about the upcoming construction work and important precautions to protect the community.</li> <li>• Coordinate with Village Authority Committee and share the work plans and number of workers who will stay in the camp.</li> </ul>	Contractor	Social Safeguard and Environment Specialists; PMU and PIU
<b>11. Disposal of Sludge generated from sludge lagoon</b>	<ul style="list-style-type: none"> <li>• The selected contractor shall work with the PMU/PIA and relevant local authorities to identify disposal sites for the sludges and get approval/agreement with landowner before dumping.</li> <li>• The disposal site should be empty and lower land that needs to fill up and it shall be located far enough from water sources, residential areas and sensitive areas.</li> <li>• Do not located in forest areas, cultivation areas and other sensitive areas.</li> <li>• Do not allow reuse of sludge for filling food crop land.</li> <li>• Do not dump the sludge in the natural water sources/natural drainage courses.</li> <li>• Do not located within the</li> <li>• Install barrier and safety waring sings around the disposal area.</li> <li>• Land levelling shall be completed before handover to landowner.</li> </ul>	PNP staff	DPWT

## APPENDIX 2 CODE OF CONDUCT

### **WORKERS CODES OF CONDUCTS**

Each employee shall be informed of the Code of Conduct and bound by it while in the employment of the Client or its Contractors. The Code of Conduct shall be available to local communities at the project information centers or other places easily accessible to the communities.

The Contractor is responsible for providing appropriate training to all staff according to their level of responsibility for environmental, health and safety matters.

*The Code of Conduct* shall address the following measures (but not limited to them):

- All of the workforces shall abide by the laws and regulations of the Lao PDR;
- Illegal substances, weapons and firearms shall be prohibited;
- Pornographic material and gambling shall be prohibited;
- Fighting (physical or verbal) shall be prohibited;
- Creating nuisances and disturbances in or near communities shall be prohibited;
- Disrespecting local customs and traditions shall be prohibited;
- Smoking shall only be allowed in designated areas;
- Maintenance of appropriate standards of dress and personal hygiene;
- Maintenance of appropriate standards hygiene in their accommodation quarters;
- Residing camp workforce visiting the local communities shall behave in a manner consistent with the Code of Conduct; and
- Failure to comply with the Code of Conduct, or the rules, regulations, and procedures implemented at the construction camp will result in disciplinary actions.

*Security.* Some security measures shall be put into place to ensure the safe and secure running of the camp and its residents. Some of these security measures include:

- The list of workers must be registered to local authorities in accordance with existing regulations of Lao PDR;
- Children under 14 years of age will not be hired under the Project;
- Adequate, day-time night-time lighting shall be provided;
- Control of camp access. Access to the camp shall be limited to the residing workforce, construction camp employees, and those visiting personnel on business purposes;
- Prior approval from the construction camp manager for visitor's access to the construction camp;
- A perimeter security fence at least 2m in height constructed from appropriate materials;
- Provision and installation in all buildings of firefighting equipment and portable fires extinguishers.

Any construction worker, office staff, Contractor's employees or any other person related to the project found violating these prohibitions will be subject to disciplinary actions that can range from a simple reprimand to termination of his/her employment depending on the seriousness of the violation.

**Prohibitions:**

The following activities are prohibited on or near the subproject sites:

- Cutting of trees for any reason outside the approved construction area;
- Hunting, fishing, wildlife capture, or plant collection.
- Buying of wild animals for food;
- Having caged wild animals (especially birds) in camps;
- Poaching of any description;
- Explosive and chemical fishing;
- Disturbance to any thing with architectural or historical values;
- Building of fires;
- Use of unapproved toxic materials, including lead-based paints, asbestos, etc.; Use of firearms (except authorized security guards);
- Use of alcohol by workers in office hours;
- Driving in an unsafe manner in local roads;
- Washing cars or machinery in streams or creeks;
- Maintenance (change of oils and filters) of cars and equipment outside authorized areas;
- Creating nuisances and disturbances in or near communities;
- Disposing garbage in unauthorized places;
- Indiscriminate disposal of rubbish or construction wastes; Littering the site;
- Spillage of potential pollutants, such as petroleum products;
- Collection of firewood;
- Urinating or defecating outside the designated facilities; and
- Burning of waste and/or cleared vegetation.

**MANAGEMENT REQUIREMENTS OF CONSTRUCTION SITES AND WORKERS CAMPS**

The contractor will be responsible to comply with, but not limited to the following:

- Temporary workers' camps will be required to accommodate 5-6 engineers and skilled workers at each site.
- Camp will be installed at the site of allocated land for the WTP.
- After the construction is completed, the temporary camp will be unfabricated and the sites will be cleaned.
- The contractor shall install the Worker Camp in an area far enough from water points, houses and sensitive areas in consultation with the community. Good quality sanitary equipment should be installed in the Worker Camp.
- The contractor shall manage all activities in compliance with laws, rules and other permits related to site construction regulations and will protect public properties. Degradation and demolition of private properties will be avoided. Paying compensation to damage to the public facilities and/or private property will be required.
- The contractor is responsible for the protection of the local environment against dust, air, noise, vibration, exhaust fuels and oils and other solid residues generated from the work site. The contractor shall manage waste properly and do not burn it on site and will also provide proper storage for construction materials, organize parking and displacement of the machines in the site. Used oil and construction waste materials must be appropriately disposed and adequate waste disposal and sanitation services will be provided at the construction site next to the generated area. In order to protect soil, surface and ground water the Contractor must avoid any wastewater discharge, oil spill

and discharge of any type of pollutants on soils, in surface or ground water, in sewers and drainage ditches.

- The contractor shall be responsible for maintaining good hygiene, safety, and security of the work sites, including protection of health and safety of staff and workers. The contractor will prevent standing water in open construction pits to avoid potential contamination of the water table and the development of a habitat for disease-carrying vectors and insects.
- The contractor shall be prohibited from quarrying material directly from the river.
- The contractors shall procure construction materials from government-permitted sources/suppliers only.
- During construction, the contractor must be taking serious action to control dust by using water or through other means and the construction site will be cleaned on a daily basis.
- The Contractor will work with local authority and management local traffic effectively and ensure traffic access of road safety of local residents and road users during the works. Speed limits at work sites and community areas will be applied to all vehicles and cars. All vehicles and their drivers must be identified and registered and the drivers are properly trained.
- Install barriers and safety warning signs on road sections and if necessary, deploy traffic aids/flag persons at affected locations. Information boards at blocked roads will provide information about the temporary closure of roads, schedule of works and the traffic-rerouting plan.
- The contractor should install signaling of work, ensure no blockage of access to households during construction and/or provide alternative access.
- The contractor must immediately rehabilitate the excavated areas and any damaged road and path sections.

### **House Keeping**

The Contractor will follow a 'good housekeeping' policy at all times. This will include, but not necessarily be limited to the following:

- Ensure considerate site behavior of the Contractor's staff;
- Open fires will be prohibited at all times;
- Ensure that appropriate provisions for dust control and road cleanliness are implemented;
- All site areas will be kept in clean and tidy condition, rubbish and food waste will be removed frequently;
- Wheel washing facilities will be brushed or sprayed clean frequently;
- Storage sites, fixed plant and machinery, equipment and temporary buildings will be located to limit adverse environmental effects
- Frequently inspect, repair and re-paint as necessary all site hoardings to comply with the local conditions and local regulations, all flying post/board is to be removed as soon as reasonably practicable and within 24 hours of notice;
- Adequate toilet facilities will be provided for all site staff;

### **Working Hours**

Core working hours will be from 08:00 to 16:00 on weekdays and 0800 to 1300 on weekends. Individual site requirements which differ from the above will be considered on a site-by-site basis. Noisy operations shall not take place outside these hours without prior approval from delegated agencies and local authorities.

In the case of work required in response to an emergency (or which if not completed would be damaging and unsafe), the relevant local authority will be advised as soon as is reasonably practicable of the reasons for and likely duration of such works.

### **Workers Camps**

*Workers' Camp and Site Installation Requirement.* Potential sites of workers' camps must be discussed with and proposed by local communities and authorities during consultations and prior to their establishment. If additional camps and ancillary construction sites are selected, the following criteria must be used:

- minimize the land occupation;
- Site offices shall be located at least 200 meters from any existing residential settlements
- Camp facilities should not be located in steep slopes;
- Site offices and camps be located at least 100 meters from any watercourses and be operated so that no pollutants enter watercourses. Camp areas shall be located to allow effective natural drainage;
- The workforce shall be provided with safe, suitable and comfortable accommodation. They have to be maintained in clean and sanitary conditions;
- In every site adequate and suitable facilities for washing clothes and utensils shall be provided and maintained for the use of contract labor employed therein;
- Potable water for human consumption shall be provided at camps, site offices.
- Adequate sanitation facilities (toilets and washing areas) shall be provided for workers to use. Toilets should be provided with adequate supplies of running water, soap, and toilet paper. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic conditions;
- At every construction camp, there must be at least one septic tank. The wastewater from the tank shall not be discharged into any watercourses. The wastewater shall be periodically transported away by a water tank to the nearest treatment plant;
- *Medical Facilities.* A medical and first aid kit shall be provided at each camp area. All consumables in the first aid kit should be checked and recharged regularly.

# Scaling-Up Water Supply, Sanitation and Hygiene (WSSH) Project (Project ID No: P164901)

Propose the Slope erosion protection methods by  
using the Geotextiles and Mats

Project Owner:		PMU: Department of Water Supply
Funded By:		The World Bank
Consultant:		PiSECCON (Lao) Co., Ltd JV SLS

## AGENDA

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1. Descriptions
2. Applications
3. Installations and implementation requirements
4. Considerations
5. Inspections
6. Maintenance
7. Typical drawings for geotextiles and mats construction methods.
8. Recommendation for some manufacturer of the turf reinforced mats

## 1. Descriptions:

**Natural or synthetic mats are roll-type materials used for temporary or permanent soil stabilization and protection from rain, wind erosion.**



## 2. Applications

- Stabilize drainage ditches, channels, and stream banks.
- Stabilize steep slopes with high protection by erosion.
- Stabilize slopes until vegetation is established.
- Hold water near surface to assist in vegetable growths.
- Protect stockpiles from the erosion.
- Provide temporary cover for bare areas that idle.

## 3. Installations and implementation requirements

- Apply matting to disturbed soils and areas where vegetation have been removed.
- Installation matting immediately after the areas is seeded and fertilize.
- Minimize disturb of the slop greater than 15% in grade.
- Phase disturbances and use stabilization techniques designed for steep grades if disturbance the steep slope is unavoidable.
- Grade and shape disturbed slopes to installing geotextiles and/or erosion control mattings.
- Prepare area by remove rocks, vegetation and other obstructions that will inhabit contact with soil.

### **3. Installations and implementation requirements (continued)**

- Entrench or anchor material at top and bottom of the slope in a 6-inches x 6-inches trench or per manufacturer's specifications, whichever is more stringent. The trench should be placed on minimum 12 inches from the top of slope.
- Intermittence check slots can also be installed for large or long length of the mat areas to increase stabilize of the area.
- Do not stretch mattings. Maximize mat contact with soil by loosely laying blankets and securing to slope with stakes.
- Ensure matting maintain direct contact with soil to prevent rills, gullies, and undermining.
- Follow manufacturer's specification on overlapping and stake spacing requirements. Steep slopes may require additional staking requirements.
- If geotextile matting is to be installed on steep slopes greater than 15% space stake every 2 feet.
- Organic matting provide temporary protection until permanence vegetation has been established or construction activities recommence. Organic matting material include the following:
  - Jute matting
  - Straw matting

### **3. Installations and implementation requirements (continued)**

- Synthetic matting provides temporary or post construction stabilization in both vegetated and non-vegetated areas. Synthetic matting materials include the following:
  - Excelsior "matting"
  - Glass fiber matting
  - Stakes
  - Mulch netting
  - Plastic sheeting/covering

### **3. Installations and implementation requirements (continued)**

- Key in temporary plastic sheeting at top of slope and weight down by gravel bags no more than 6 feet apart.
- Install erosion control measure or devices at top of the slope to filter sediment-laden runoff and decrease storm water velocity.
- Other proprietary devices may be used per manufacturer's recommendation.
- The contractor shall immediately initiate soil stabilization measure earth disturbing construction activities on exposes areas have been completed or will be temporary inactive for 14 or more calendar days.

### **4. considerations**

- Minimize use of matting to areas where other erosion control measure are not applicable such as channel or steep slopes since matting is costly compare to erosion control measure.
- Seed germination maybe delayed due to decrease soil temperature.
- Extensive soil preparation is needed before installation for adequate contact with slope.
- Mats made of natural material have a limited life and low shear strength.
- High material cost and extensive manpower needed.
- Generally, the slope needs to be smooth and free of large rocks.
- Plastic sheeting results in 100% runoff and is easily torn/damaged.

## 5. Inspection

What to Inspect

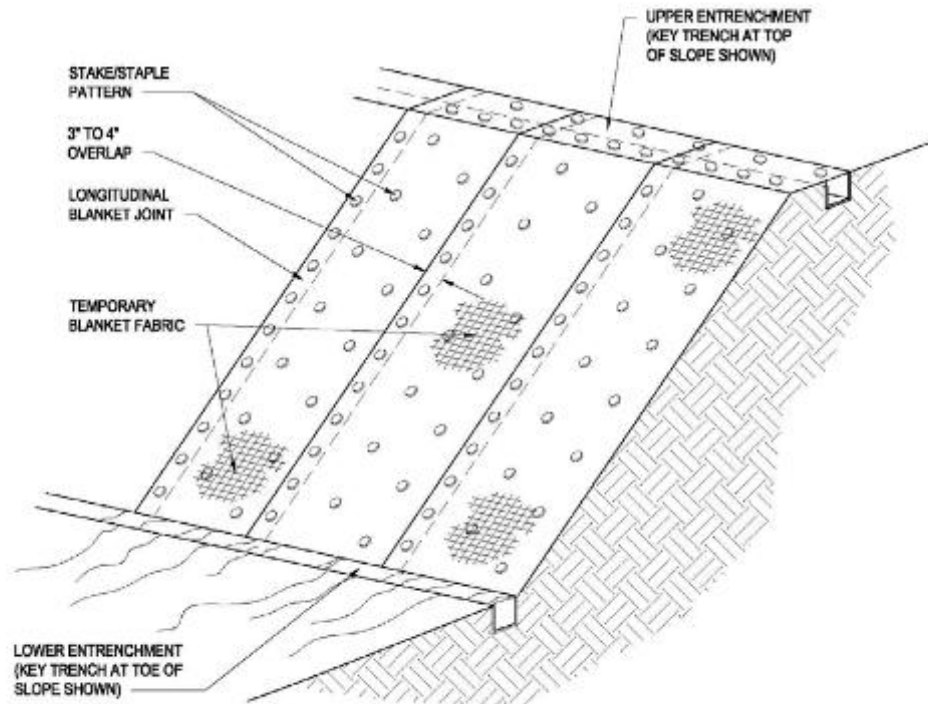
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- Is there evidence of undercutting at the top of slope?
- Is the slope eroding beneath the blanket?
- Are blankets firmly anchored and trenched in at top and bottom of slope?
- Are blanket segments properly overlapped?
- Are stakes properly spaced and driven into the soil to prevent the blanket from lifting away from soil?

## 6. Maintenance

- Repair undermining or erosion.
- Repair/replace damaged blankets.

## 7. Typical drawings of geotextiles and mats construction methods.

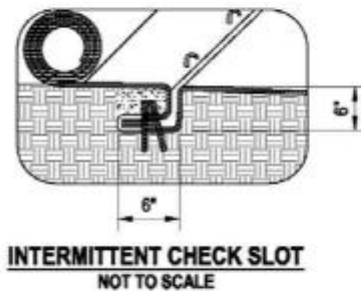
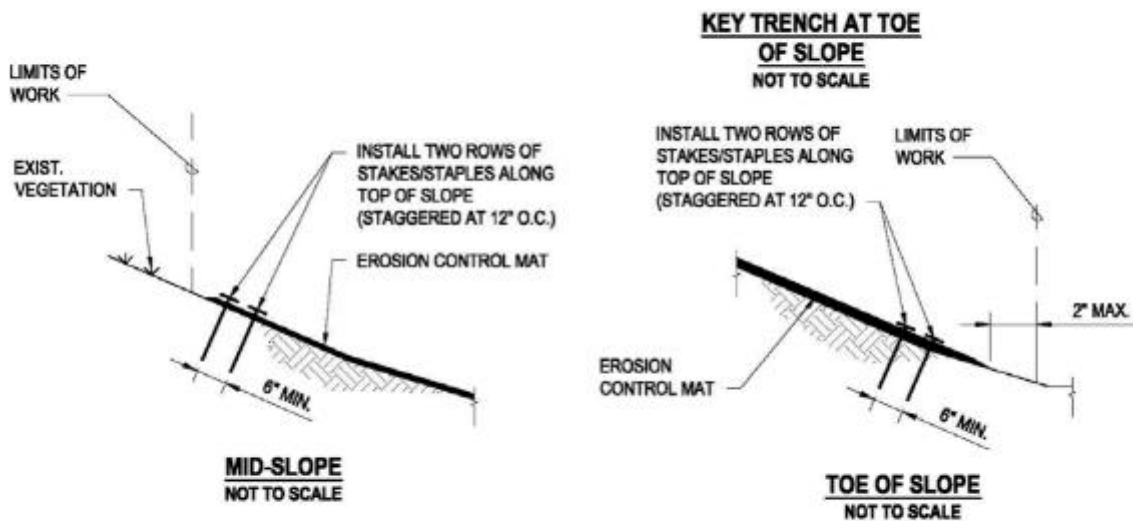
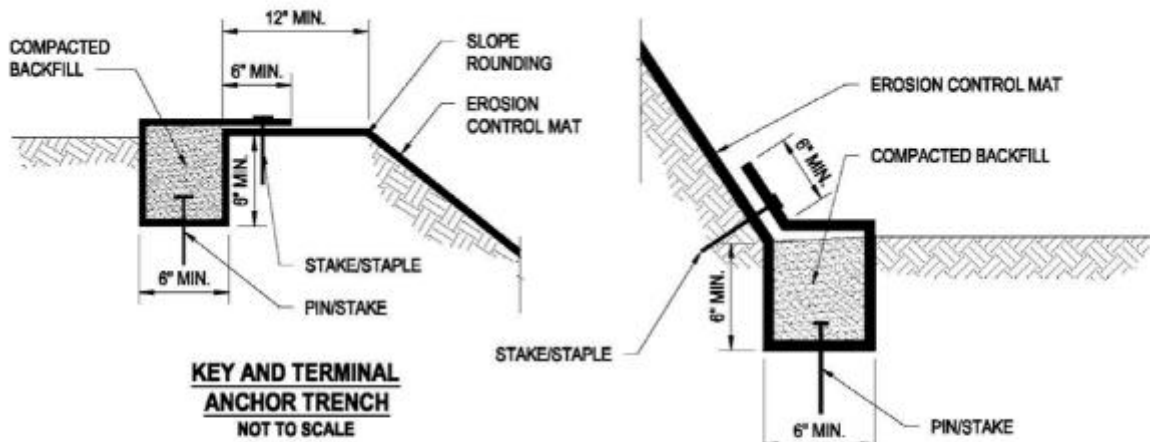


**TEMPORARY EROSION CONTROL BLANKET ON SLOPE**

NOT TO SCALE

**NOTES:**

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS. SOIL CONTACT SHALL BE MAXIMIZED.
2. LAY BLANKETS LOOSELY AND STAKE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
3. INSTALLATION MAY VARY ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. APPLY THE MORE STRINGENT REQUIREMENT.



**GEOTEXTILES AND MATS INSTALLATION**  
**DETAIL FOR SLOPES**

**Scaling-Up Water Supply, Sanitation, and Hygiene Project**  
**IDA Project No.: SWSSHP (P-164901)**

**Contract Package:**

**ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY (ESHS)**

**MONTHLY MONITORING REPORT**

for

Water Supply Systems (Nam Papa)

In [name of village cluster], [name of district]

[name of province]

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**[Month Year]**

**I GENERAL INFORMATION**

- PMU (name, address, contact number):
- Construction Supervision (CS) Entity (name, address, contact number):
- Environmental, Social, Health and Safety (Safeguard) Officer of the CS ((name, address, contact number):
- Phone No.: \_\_\_\_\_ Email: \_\_\_\_\_
- Date of report submission to PMU: ...

**II PROGRESS OF CIVIL WORKS CONTRACTS**

**Status of Civil Works contract**

- **Bidding package:** .....
- **Contract signing date:**
- **Contract end date:**

**III IMPLEMENTATION PROGRESS**

**3.1 Key summary of construction activities**

- Pipe installation: 500m (from where to where or put coordinate)

**3.2 Capacity building and Training**

**Table 1 – Summary of Training Activities**

<i>Date</i>	<i>Contents/Topics covered</i>	<i>Delivered by</i>	<i>Number of Participants, organization</i>

**3.2.1 Safety Briefings** –[table listing all safety briefings during the month including date, time, location and number of participants’

Table... Summary of Safety briefings

<b>Date and time</b>	<b>Location</b>	<b>Number of Participant</b>	
		<b>Total</b>	<b>Female</b>

### **3.3 The key mitigation measure implemented during the reporting month**

**Table 2 – Monthly summary of key impacts and implementation of mitigation measures**

Key impacts	Description of impacts	Mitigation measure	Progress of mitigation measure	Due date
<b><i>Environmental aspects</i></b>				
<b><i>Flow/Flood control/ sedimentation prevention</i></b>	<b><i>[drainage creation and maintenance, embankments, flow diversion etc]</i></b>			
<b><i>Biological impacts management</i></b>		<b><i>[avoid, minimize disturbance to vegetation covers, trees, etc.]</i></b>		
<b><i>Dust, emission</i></b>	<b><i>[Demolition of structure, soil extraction, and concrete mixing under dry weather conditions, and material transporting trucks passing by people residence or shops and public entities are likely to generate fugitive dust, emission and noise]</i></b>			
<b><i>Noise and Vibration</i></b>	<b><i>[Using Powered Mechanical Equipment (PME), heavy equipment, and certain hand tools and vehicles may generate intruding noise that will disturb the village people]</i></b>			
<b><i>Solid Waste from head works, pipe alignment, water treatment plant, and water storage tank.</i></b>	<b><i>[The solid waste will mainly consist of construction waste (wood, concrete, bricks, metal, used bags, sweepings) excavated soil and a small amount of domestic waste]</i></b>			
<b><i>Pollution control in work camp</i></b>	<b><i>[implementation of ESCOP, Sanitation condition, waste management, dust and noise control, wastewater collection, drainages with sedimentation traps, toilets, waste bins, watering dusty roads, dust fences, clean up and disposal of the wastes, management of fuels and oils/gas etc.]</i></b>			

<b>Materials Management</b>	<i>[Stockpiles of materials (cement, sand, gravel, other construction materials)]</i>			
<b>Social aspects</b>				
<b>Community Health and Safety</b>	<i>[Potential risk to the health and safety of adults and children traveling across the forest where the pipe alignment is located]</i>			
<b>Occupational Health and Safety</b>	<p>Eg:</p> <ul style="list-style-type: none"> <li>- Some labors do not familiar with PPE</li> <li>- Dust generation from soil excavation</li> </ul> <p><b>[Site sanitation</b></p> <p><b>Occupational safety: Provision and Usage of the PPEs, slope protection measures, traffic control, fences, barriers, warning signs, lighting, flag man, forbid unauthorized access, cover the holes, protect material loading related activities, truck load control, safe access to deep holes and high above structures, etc. ]</b></p>	<ul style="list-style-type: none"> <li>- PPE has been provided by contractor. Additional training has been provided to 15 workers</li> </ul>	<ul style="list-style-type: none"> <li>- Completed</li> </ul>	<ul style="list-style-type: none"> <li>- Since 3/3/2025</li> </ul>
<b>Land acquisition, If any</b>	-	-	-	-
<b>Temporary impact on access and land restriction</b>	<p>Eg:</p> <ul style="list-style-type: none"> <li>- Temporary blocking the access of 2 houses on 22/3/2025</li> <li>- Temporary blocking access to 2 form lands</li> </ul>	<ul style="list-style-type: none"> <li>- Refilled the trench within the day</li> </ul> <p>Water the ground</p>	<p>Eg:</p> <p><i>Completed: Refilled 500 m of trenches under pipeline installation activities</i></p>	<p><i>Completed on 23/03/2025</i></p>
<b>Others</b>	Eg:			

	- Chance find Procedures. Unlikely but included as a precautionary measure			
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**3.3.1 Labour force, Resource allocation for ESHS monitoring and supervision**

**Table 3 – Labour force, Contractor’s Site ESHS Supervisors**

Package	Nos. of workers mobilised	Nos. of Females	Name of ESHS staff	Tel

**3.3.2 Emergency response team- names and contacts**

**3.3.3 Inspections, meeting with stakeholders**

[List the inspects, meetings with various stake holders, their feedbacks and follow up actions]

4. **HSE incidents** – table listing any reportable incidents during the month and status of corrective actions; if none, write "none"

**5. Grievance Redress**

[List the complaints/complaints received by the community, local authorities or workers during the month and the previous unresolved complaints/complaints by date, method of receipt of complaints, who must be resolved, solution and date of completion (if completed), report settlement information to the complainant (Cross-reference with other departments if necessary)]

Table..... Summary of Workforce complaints

Case ID and Date	Name of Grievant	Description of Issue/Compliant	Outcome of Investigation	Current Status	Date of Resolution

Table..... Summary of project affected person complaints

Case ID and Date	Name of Grievant	Description of Issue/Compliant	Outcome of Investigation	Current Status	Date of Resolution

**Annex1: Construction Site Photos**

[add the photos of the construction site at all typical locations of each package with comments on the measures that have been implemented well and measures to be overcome. These photos must be returned to .jpeg and limited in capacity]

**Annex2: Incident Reports: must be prepared as soon as possible after an incident has happened and attach to the monthly reports. Provide details about:**

- Affirming any violation to current legislation or international treaties.
- Any fatal accident or serious accident.
- Serious impacts or damage to personal property such as traffic accidents, damage to people's houses, roads and other incidents.
- Seriously polluting surface or groundwater.
- Any allegations related to sexual harassment or sexual misconduct, child abuse, child labor, or other violations involving children.

APPENDIX 5 SOIL DISPOSAL AGREEMENT BETWEEN VIENGOUDOMXAP CONSTRUCTION, AGRICULTURE AND TOURIST SOLE CO., LTD AND RELEVANT LOCAL AUTHORITIES CONCERN IN NATHONG VILLAGE, KOUAN DISTRICT.

ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ  
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ  
ໂຮງຮຽນ \* ໐໑໐໑໐໑໐໑

ບໍລິສັດ ວຽງອຸດົມຊັບ ກໍ່ສ້າງ, ກະສິກໍາ ແລະ ທ່ອງທ່ຽວຈໍາກັດຜູ້ດຽວ  
ບ້ານຈອມມະນີ, ເມືອງໄຊເສດຖາ, ນະຄອນຫຼວງວຽງຈັນ

ວັນທີ : 21/4/2025

**ບົດບັນທຶກ**

ເລື່ອງ: ການຖິ້ມດິນຈາກການຂຸດດິນທີ່ຕັ້ງ, ທາງເຂົ້າຫາໂຮງງານຜະລິດນໍ້າປະປາ ກຸ່ມບ້ານ ເມືອງນາ, ເມືອງ ກວັນ, ແຂວງ ຫົວພັນ.

- ອີງຕາມ: ສັນຍາຮັບເໝົາກໍ່ສ້າງວ່າດ້ວຍການກໍ່ສ້າງໂຄງການກໍ່ສ້າງລະບົບນໍ້າປະປາກຸ່ມບ້ານຢູ່ເມືອງຊໍາໃຕ້ ແລະ ເມືອງກ້ວນ ແຂວງຫົວພັນ. ລະຫວ່າງ ກົມນໍ້າປະປາ, ກະຊວງໂຍທາທິການ ແລະ ຂົນສົ່ງ ກັບ ບໍລິສັດວຽງອຸດົມຊັບ ກໍ່ສ້າງ, ກະສິກໍາ ແລະ ທ່ອງທ່ຽວຈໍາກັດຜູ້ດຽວ ສະບັບເລກທີ C1/W/27 ລົງວັນທີ 22 ຕຸລາ 2024
- ອີງຕາມ: ການຈັດຈັງປະຕິບັດໜ້າວຽກຕົວຈິງຢູ່ໃນພາກສະໜາມ ໃນວຽກຂຸດດິນ.
- ອີງຕາມ: ອີງຕາມການປຶກສາຫາລືກັບອົງການປົກຄອງບ້ານ ແລະ ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ.

ໃນວັນທີ 21/4/2025 ຂ້າພະເຈົ້າຕາງໜ້າໃຫ້ບໍລິສັດ ວຽງອຸດົມຊັບ ກໍ່ສ້າງ, ກະສິກໍາ ແລະ ທ່ອງທ່ຽວ ຈໍາກັດຜູ້ດຽວ ສົມທົບ ກັບ ຫນ່ວຍງານປະຕິບັດໂຄງການຂັ້ນເມືອງ PIU ແລະ ອຳນາດການປົກຄອງບ້ານ ບ້ານ ນາທອງ, ເມືອງ ກວັນ, ແຂວງ ຫົວພັນ ໄດ້ປຶກສາຫາລື ແລະ ຕົກລົງເຫັນດີເປັນເອກະພາບກັນ ໃນການຖິ້ມດິນທີ່ຂຸດເຜື້ອກໍ່ສ້າງໂຮງງານຜະລິດນໍ້າປະປາເຊິ່ງມີລາຍລະອຽດດັ່ງນີ້:

- 1 ເຫັນດີໃຫ້ຖິ້ມດິນຈາກການຕັດດິນໂຮງງານຜະລິດນໍ້າປະປາກຸ່ມເມືອງນາ ໃສ່ພື້ນທີ່ດິນຂອງບ້ານ.
- 2 ໃນການຖິ້ມດິນ ແມ່ນບໍ່ໃຫ້ມີຜົນກະທົບດ້ານລົບຕໍ່ປະຊາຊົນ ແລະ ສະພາບແວດລ້ອມ ເຊິ່ງໄດ້ກຳນົດໄວ້ ໃນສັນຍາກໍ່ສ້າງໂຄງການ.
- 3 ອົງການປົກຄອງບ້ານ ເຫັນດີມອບພື້ນທີ່ດັ່ງກ່າວໃຫ້ໂຄງການ ກໍ່ສ້າງ PIU ຂັ້ນເມືອງ, ຂັ້ນແຂວງ ເພື່ອພັດທະນາໃຫ້ເປັນໂຮງງານຜະລິດນໍ້າປະປາໃນຂັ້ນຕໍ່ໄປ.

ດັ່ງນັ້ນ ຈຶ່ງສ້າງບົດບັນທຶກສະບັບນີ້ໄວ້ ເພື່ອເປັນຫຼັກຖານ ໃນການຈັດຕັ້ງປະຕິບັດວຽກໃນຕໍ່ໜ້າ.

ນາຍບ້ານ ນາທອງ	ຫນ່ວຍງານປະຕິບັດໂຄງການ ຂັ້ນເມືອງ PIU	ທີ່ປຶກສາປະຈຳສະໜາມ	ວິຊາການພາກສະໜາມ ບໍລິສັດຜູ້ຮັບເໝົາ.
	ດ້ວຍ ຕົ້າພົນຕີ Touy KHAMPONDY		ວິທະຍາສາດ ສິດທິໂອດ

APPENDIX 6 SOIL DISPOSAL AGREEMENT BETWEEN VIENGOUDOMAP CONSTRUCTION, AGRICULTURE AND TOURIST CO.,LTD AND RELEVANT LOCAL AUTHORITIES CONCERN IN SOPKEAM VILLAGE, XAMTAY DISTRICT.

ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ  
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ  
ໂຮງໝໍາ ສາທາລະນະລັດ \* ໑໙໗໕

ບໍລິສັດ ວຽງອຸດົມຊັບ ກໍ່ສ້າງ, ກະສິກໍາແລະທ່ອງທ່ຽວຈຳກັດຜູ້ດຽວ  
ບ້ານຈອມມະນີ, ເມືອງໄຊເສດຖາ, ນະຄອນຫຼວງວຽງຈັນ

ວັນທີ: 19/12/2025

### ບົດບັນທຶກ


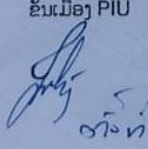
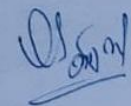

ເລື່ອງ: ການຖິ້ມດິນຈາກການຂຸດດິນທີ່ຕັ້ງ, ທາງເຂົ້າຫາໂຮງງານຜະລິດນ້ຳປະປາ ກຸ່ມບ້ານ ພັນຊ້າ, ເມືອງຊຳໃຕ້ ແຂວງຫົວພັນ.

- ອີງຕາມ: ສັນຍາຮັບເໝົາກໍ່ສ້າງວ່າດ້ວຍການກໍ່ສ້າງໂຄງການກໍ່ສ້າງລະບົບນ້ຳປະປາກຸ່ມບ້ານຢູ່ເມືອງຊຳໃຕ້ ແລະ ເມືອງກ້ວນ ແຂວງຫົວພັນ. ລະຫວ່າງ ກົມນ້ຳປະປາ, ກະຊວງໂຍທາທິການແລະຂົນສົ່ງ ກັບ ບໍລິສັດວຽງອຸດົມຊັບ ກໍ່ສ້າງ, ກະສິກໍາແລະທ່ອງທ່ຽວຈຳກັດຜູ້ດຽວ ສະບັບເລກທີ C1/W/27 ລົງວັນທີ 22 ຕຸລາ 2024
- ອີງຕາມ: ການຈັດຈັງປະຕິບັດໜ້າວຽກຕົວຈິງຢູ່ໃນພາກສະໜາມ ໃນວຽກຂຸດດິນ.
- ອີງຕາມ: ອີງຕາມການປຶກສາຫາລືກັບອົງການປົກຄອງບ້ານ ແລະ ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ.

ໃນວັນທີ 19/12/2025 ຂ້າພະເຈົ້າຕາງໜ້າໃຫ້ບໍລິສັດ ວຽງອຸດົມຊັບ ກໍ່ສ້າງ, ກະສິກໍາ ແລະ ທ່ອງທ່ຽວ ຈຳກັດຜູ້ດຽວ ສົມທົບ ກັບ ໜ່ວຍງານປະຕິບັດໂຄງການຂັ້ນເມືອງ PIU ແລະ ອຳນາດການປົກຄອງບ້ານ ບ້ານສົບແກ້ມ, ເມືອງຊຳໃຕ້, ແຂວງຫົວພັນໄດ້ປຶກສາຫາລື ແລະ ຕົກລົງເຫັນດີເປັນເອກະພາບກັນ ໃນການຖິ້ມດິນທີ່ຂຸດເພື່ອກໍ່ສ້າງໂຮງງານຜະລິດນ້ຳປະປາເຊິ່ງມີລາຍລະອຽດດັ່ງນີ້:

- 1 ເຫັນດີໃຫ້ຖິ້ມດິນຈາກການຕັດດິນໂຮງງານຜະລິດນ້ຳປະປາກຸ່ມບ້ານພັນຊ້າ ໃສ່ພື້ນທີ່ດິນຂອງບ້ານ.
- 2 ໃນການຖິ້ມດິນ ແມ່ນບໍ່ໃຫ້ມີຜົນກະທົບຕໍ່ດ້ານລົບຕໍ່ປະຊາຊົນ ແລະ ສະພາບແວດລ້ອມ ເຊິ່ງໄດ້ກຳນົດໄວ້ ໃນສັນຍາກໍ່ສ້າງໂຄງການ.
- 3 ອົງການປົກຄອງບ້ານ ເຫັນດີມອບພື້ນທີ່ດັ່ງກ່າວໃຫ້ໂຄງການ ກໍ່ຄື PIU ຂັ້ນເມືອງ, ຂັ້ນແຂວງ ເພື່ອພັດທະນາໃຫ້ເປັນໂຮງງານຜະລິດນ້ຳປະປາໃນຂັ້ນຕໍ່ໄປ.

ດັ່ງນັ້ນ ຈຶ່ງສ້າງບົດບັນທຶກສະບັບນີ້ໄວ້ ເພື່ອເປັນຫຼັກຖານ ໃນການຈັດຕັ້ງປະຕິບັດວຽກໃນຕໍ່ໜ້າ.

ນາຍບ້ານ ແຂວງ ຫົວພັນ ນາຍບ້ານ ສົບແກ້ມ ເມືອງ ຊຳໃຕ້	ໜ່ວຍງານປະຕິບັດໂຄງການ ຂັ້ນເມືອງ PIU	ທີ່ປຶກສາປະຈຳສະໜາມ	ວິຊາການພາກສະໜາມ ບໍລິສັດຜູ້ຮັບເໝົາ.
			
ນ ໄມສິ້ ອຸດົມຊັບ			


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APPENDIX 7 THE BUSINESS LICENSES OF COMPANY THAT SUPPLY SAND AND GRAVEL TO VIENGOUDOMXAP CONSTRUCTION, AGRICULTURE AND TOURIST SOLE CO.,LTD



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ  
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ເມືອງຊຳໃຕ້  
ຫ້ອງການພະລັງງານ ແລະ ບໍ່ແຮ່ ເລກທີ: 126.../ພບ.ຊຕ



**ໃບອະນຸຍາດ**  
ດຳເນີນກິດຈະການຜະລິດ ແລະ ປຸງແຕ່ງ  
( ປະເພດຫີນກໍ່ສ້າງ )

- ອີງຕາມ ລັດຖະບັນຍັດຂອງປະທານປະເທດ ລະບົບເລກທີ:003/ປປທ, ລົງວັນທີ 26 ທັນວາ 2012.
- ອີງຕາມ ກົດໝາຍ ວ່າດ້ວຍ ແຮ່ທາດ ສະບັບເລກທີ 31/ສພຊ, ລົງວັນທີ 03 ພະຈິກ 2017.
- ອີງຕາມ ຂໍ້ຕົກລົງ ເຈົ້າເມືອງ ເມືອງຊຳໃຕ້ ສະບັບເລກທີ 303/ ຈມ, ລົງວັນທີ: 23 ສິງຫາ 2022.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການຈັດຕັ້ງ ແລະ ການເຄື່ອນໄຫວ ຂອງຫ້ອງການພະລັງງານ ແລະ ບໍ່ແຮ່ ເມືອງຊຳໃຕ້ ສະບັບເລກທີ 130/ຈມ,ລົງວັນທີ 25 ພຶດສະພາ 2022.

**ຫ້ອງການພະລັງງານ ແລະ ບໍ່ແຮ່ ເມືອງຊຳໃຕ້ ອະນຸຍາດໃຫ້ :**

ບໍລິສັດ ແຄ່ງຫົວພັນ ສິ່ງເສີມກະສິກຳຂາອອກ-ຂາເຂົ້າ ຈຳກັດ ໃນນາມ ບໍລິສັດຜະລິດ ແລະ ປຸງແຕ່ງຫີນກໍ່ສ້າງ, ປະຈຸບັນຢູ່ບ້ານ: ພັນສະຫວັນ, ເມືອງ: ຊຳໃຕ້, ແຂວງ:ຫົວພັນ; ໂທລະສັບ:020 92808999,

- ຊື່ວິສາຫະກິດ: ບໍລິສັດ ແຄ່ງຫົວພັນສິ່ງເສີມກະສິກຳ ຂາອອກ-ຂາເຂົ້າ ຈຳກັດ;
- ສະຖານທີ່ຜະລິດ ແລະ ປຸງແຕ່ງ: ບ້ານ ເມືອງຂັນ, ເມືອງຊຳໃຕ້, ແຂວງຫົວພັນ;
- ເນື້ອທີ່ອະນຸຍາດດຳເນີນກິດຈະການຜະລິດ ແລະ ປຸງແຕ່ງຫີນກໍ່ສ້າງ: ມີເນື້ອທີ່ 1 ເຮັກຕາ;
- ກຳມະວິທີນຳໃຊ້ໃນການຜະລິດ ແລະ ປຸງແຕ່ງ: ຕັ້ງບຸກຄົນເສດເຫຼືອຈາກການເຈາະອຸໂມງ3(ໃຊ້ເຄື່ອງຈັກຂົບ ຂະໜາດກາງ)
- ຄວາມອາດສາມາດຜະລິດ ແລະ ປຸງແຕ່ງບໍ່ເກີນ 14.400 ມ<sup>3</sup>/ປີ;
- ປະເພດແຮ່ທາດອະນຸຍາດຜະລິດ ແລະ ປຸງແຕ່ງ: ຫີນກໍ່ສ້າງ;
- ຮູບແບບການລົງທຶນ: ຕ່າງປະເທດ ;
- ມູນຄ່າທັງໝົດໃນການດຳເນີນກິດຈະການ: 450,000,000 ກີບ( ສີ່ຮ້ອຍຫ້າສິບລ້ານກີບ );ຕາມບົດວິພາກເສດຖະກິດ,ສະບັບ,ລົງວັນທີ 27 ທັນວາ 2022.

ໃບອະນຸຍາດສະບັບນີ້ນຳໃຊ້ໄດ້ຈົນເຖິງວັນທີ: 30 ທັນວາ 2023.

ຊຳໃຕ້, ວັນທີ: 29...ທັນວາ 2022  
ຫ້ອງການພະລັງງານ ແລະ ບໍ່ແຮ່



ພອນໄຊ ແສງວາດວິງ  
Phonexay SENGVATHONG

APPENDIX 8 THE RENTAL AGREEMENT BETWEEN BUILDING OWNER AND VIENGOUDOMXAP CONSTRUCTION, AGRICULTURE AND TOURIST SOLE CO.,LTD AT PIENGTHIN VILLAGE

Date	Remarks
	<p>លក្ខខណ្ឌ រៀបរយ លើកទី 10/2/2025 ក្នុង ការ បង្កើត</p> <p>ការ ទំនាក់ ទំនង រវាង ភាគី ទាំង ២ គឺ ភាគី ទី ១ គឺ ភាគី ទី ២ គឺ</p> <p>ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ ភាគី ទី ៥ គឺ</p> <p>1/ ការ បង្កើត គ្រឹះស្ថាន ក្រុម ហ៊ុន ១ គឺ</p> <p>2/ ការ បង្កើត គ្រឹះស្ថាន ក្រុម ហ៊ុន ១ គឺ ១០០០០០ ដុល្លារ អាមេរិក</p> <p>3/ ការ បង្កើត គ្រឹះស្ថាន ក្រុម ហ៊ុន ១ គឺ ១០០០០០ ដុល្លារ អាមេរិក</p> <p>4/ ការ បង្កើត គ្រឹះស្ថាន ក្រុម ហ៊ុន ១ គឺ ១០/2/2025 លេខ ១០០០០០ ដុល្លារ អាមេរិក</p> <p>10/12/2025 ក្នុង គ្រឹះស្ថាន ក្រុម ហ៊ុន ១ គឺ ១០០០០០ ដុល្លារ អាមេរិក</p> <p>4 គឺ គ្រឹះស្ថាន ក្រុម ហ៊ុន ១ គឺ ១០០០០០ ដុល្លារ អាមេរិក</p> <p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p>
<p>ប្រតិបត្តិ</p> <p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p> <p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p>	<p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p> <p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p>
<p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p> <p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p>	<p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p> <p>លើក ទី ១ គឺ ភាគី ទី ២ គឺ ភាគី ទី ៣ គឺ ភាគី ទី ៤ គឺ</p>

APPENDIX 9 THE RENTAL AGREEMENT BETWEEN BUILDING OWNER AND VIENGOUDOMXAP CONSTRUCTION, AGRICULTURE AND TOURIST SOLE CO.,LTD AT MUANGNA VILLAGE

ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ  
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

**ສັນຍາເຊົ່າເຮືອນ**

ສັນຍາສະບັບເຮັດຂຶ້ນທີ່ ບ້ານ ເມືອງນາ ເມືອງ ກວັນ ແຂວງ ຫົວພັນ ວັນທີ 20/05/2025 ລະຫວ່າງ

ຜູ້ໃຫ້ເຊົ່າ: ນາງ ໄມທອງ, ທີ່ຢູ່: ເຮືອນເລກທີ 107 ໜ່ວຍ 04 ບ້ານ ເມືອງນາ ເມືອງ ກວັນ ແຂວງ ຫົວພັນ, ເບີໂທ: 56 021 582, ຕໍ່ໄປນີ້ໃນສັນຍາເອີ້ນວ່າ “ຜູ້ໃຫ້ເຊົ່າ”

ກັບ

ຜູ້ເຊົ່າ: ບໍລິສັດ ວຽງອຸດົມຊັບ ກໍ່ສ້າງ ກະສິກໍາ ແລະ ທ່ອງທ່ຽວ ຈຳກັດຜູ້ດຽວ, ທີ່ຢູ່: ບ້ານ ຈອມມະນີ ເມືອງໄຊເສດຖາ ນະຄອນຫຼວງວຽງຈັນ, ເບີໂທ: 57 779 707

ມາດຕາ 1: ວ່າດ້ວຍຊັບສິນໃຫ້ເຊົ່າ

- ຜູ້ໃຫ້ເຊົ່າຕົກລົງໃຫ້ເຊົ່າ ແລະ ຜູ້ເຊົ່າຕົກລົງເຊົ່າເຮືອນ 1 ຊັ້ນ ຂະໜາດ 5 x 5 ຕັ້ງຢູ່ບໍລິເວນສາມແຍກ ບ້ານ ເມືອງນາ ເມືອງ ກວັນ ແຂວງ ຫົວພັນ ລວມທັງສິ່ງປຸກສ້າງ ແລະ ສິ່ງອຳນວຍຄວາມສະດວກພາຍໃນບໍລິເວນດັ່ງກ່າວ

ມາດຕາ 2: ວ່າດ້ວຍໄລຍະເວລາການເຊົ່າ

- ການເຊົ່ານີ້ມີໄລຍະເວລາ 6 ເດືອນ ເລີ່ມຕົ້ນແຕ່ວັນທີ 01 ເມສາ 2025 ເຖິງວັນທີ 30 ກັນຍາ 2025
- ຫາກຕ້ອງການຕໍ່ສັນຍາຜູ້ເຊົ່າຕ້ອງແຈ້ງກ່ອນຢ່າງໜ້ອຍ 7 ວັນກ່ອນສິ້ນສຸດສັນຍາ

ມາດຕາ 3: ວ່າດ້ວຍຄ່າເຊົ່າ

- ຜູ້ເຊົ່າຕົກລົງຈ່າຍຄ່າເຊົ່າເປັນຈຳນວນເງິນ 400 000 ກີບ ຕໍ່ເດືອນ (ຂຽນເປັນຕົວໜັງສື: “ສີ່ແສນກີບຕໍ່ເດືອນ”)
- ຜູ້ເຊົ່າຕົກລົງຈ່າຍຄ່ານໍ້າ ແລະ ຄ່າໄຟທີ່ໃຊ້ໃນແຕ່ລະເດືອນໃນຂອບເຂດຂອງສັນຍານີ້
- ຜູ້ເຊົ່າຕ້ອງຊໍາລະຄ່າເຊົ່າທັງໝົດເຂົ້າໃສ່ບັນຊີ ທະນາຄານການຄ້າ ຕ່າງປະເທດລາວ ຂອງຜູ້ໃຫ້ເຊົ່າ ເຊິ່ງມີລາຍລະອຽດດັ່ງນີ້:  
ຊື່ບັນຊີ: MS MAITHONG  
ເລກບັນຊີ: 170-122-113-8712

ມາດຕາ 4: ວ່າດ້ວຍການບອກເລີກສັນຍາ

- ທັງສອງຝ່າຍສາມາດບອກເລີກສັນຍາກ່ອນຄົບກຳນົດໄດ້ ໂດຍຕ້ອງແຈ້ງລ່ວງໜ້າເປັນລາຍລັກອັກສອນບໍ່ໜ້ອຍກວ່າ 30 ວັນ

5 ນາຍບ້ານ

ຜູ້ໃຫ້ເຊົ່າ

ຜູ້ເຊົ່າ



ນາງ  
56021582

Handwritten signature of the tenant.

Handwritten signature of the Village Head.