

Lao People's Democratic Republic  
Peace Independence Democracy Unity Prosperity

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Ministry of Agriculture and Forestry  
Department of Planning and Finance  
The World Bank – IDA



## **LAO AGRICULTURE COMPETITIVENESS PROJECT**

**LACP – P161473**

# **Environment and Social Impact Assessment Report For Nongkeng Irrigation Pump Scheme (163 ha) Xaythany district, Vientiane Capital, Lao PDR**

**July 2021**

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## **I. PROJECT DESCRIPTION**

The Lao Agriculture Competitiveness Project (LACP) seeks to enhance the competitiveness and sustainability of Lao PDR's agriculture sector through technical and financial support to increase in agricultural productivity and Competitiveness in selected strategic value chains. The project would focus on: (i) the geographical areas with high agricultural development potentials; (ii) the farming systems with high potentials for Competitiveness (i.e. paddy, maize, vegetables); (iii) promotion of good agricultural practices and climate smart agricultural technologies and farming system diversification to enhance food and nutritional security; (iv) building capacity for farmers' organizations, agribusinesses, public and private service providers; and (v) building on and developing synergies with other government/donor programs. The Project Development Objective (PDO) is to increase competitiveness of selected value chains in the project areas. The Project has an estimated budget of USD 29.3 million, including government co-financing of USD 0.5 million, agribusinesses contributions of USD 5.6 million, and an IDA loan of USD 25.0 million. It will be implemented within five provinces (Khammouane, Bolykhamxay, Xayabury, Vientiane province, and Vientiane Capital). The Project implementation schedule is within 06 years (2018-2024). The LACP is comprised of three components:

### **Component A: Improved Agricultural Efficiency and Sustainability.**

This component will support (a) the increased adoption of improved varieties and high-quality seeds, (b) the increased application of GAP, (c) the provision of critical productive infrastructure, and (d) the strengthening of public services delivery.

(A3) Providing Critical Infrastructure. The project will finance rehabilitation of selected public infrastructure (mainly irrigation schemes). The project will also support PAFOs and Department of Irrigation (DOI) of MAF to provide training in new irrigation models aiming at reducing operation costs and improving water productivity through establishment and strengthening of water user groups to effectively operate and maintain existing and the newly built infrastructure supported by the project.

The total number of target pump irrigation schemes in Vientiane Capital to be rehabilitated by this project are 18, of which 6 pump schemes are under Batch-1B. The Feasibility Study and Engineering detailed design were completed in 2021 and the rehabilitation work is expected to be completed in 2022. The remaining 12 pump irrigation subprojects (Batch-2) will be done in the following year in FY 2022-2023.

One of 6 pump irrigation schemes proposed to rehabilitate for Batch-1B is Nongkeng scheme. It is located at Nongkeng village, Xaythany district, Vientiane Capital. It is far from Vientiane capital centre about 25 km to southern road no.10 A (Vientiane - Vientiane Capital). The pump scheme is bordering the villages of Ban Hai Thangone in the Western, Nam Ngum River in the Eastern, the Northern and Forest in the West. The location of the headwork is at Northern 18° 11' 57 59" N and for Eastern 102° 40' 44.42" E

Proposed rehabilitation irrigation scheme of Nongkeng includes (1) pontoon and its one set of electrical motor unit replacing.

## **Component B: Enhanced Agricultural Competitiveness.**

This subcomponent will support activities to promote good agricultural practices (GAP), including the provision of: (a) technical assistance for the establishment of FPGs and building their capacity to adopt GAP; (b) Matching Grants to selected FPGs to carry out Sub-projects that implement GAP; (c) technical and material assistance (i.e., small works, goods, equipment, training, etc.) to build the capacity of PAFOs, DAFOs, and relevant MAF technical departments to conduct training for FPGs on GAP and to carry out related extension and certification activities including soil analysis, organic fertilizer production, and organic farming; and (d) technical assistance to link FPGs with agribusinesses in marketing farm produce.

## **Component C: Project Management**

The component will support (a) project management and (b) monitoring and evaluation (M&E).

### **1 ANALYSIS OF ALTERNATIVES**

Improvement of irrigation systems is to improve the efficiency of rice production, improve and develop water user groups as future water user associations. Rice cultivation uses a large amount of water. Therefore, selected crop cultivation and techniques is alternative option to minimize water consumption during project implementation. The method includes sprinkler or drip irrigation crop cultivation.

## **II. ENVIRONMENTAL AND SOCIAL CONTEXT**

### **2.1 ENVIRONMENTAL CONTEXT**

Nogkeng irrigation scheme was developed in 2000 which is a pontoon pump irrigation system intaking water from Nam Ngum River. The two 75 KW electrical pumps motors were installed on the pontoon to supply water to the earthen distributive system. This irrigation scheme was financed by the government of Laos. After the project construction completion, it was transferred to the Water User Group (WUG) to operate and maintain.

Nongkern Pump Irrigation scheme comprises of pontoon as a headwork, water distribution system. The detailed system is described below:

- 1) The Pump station comprises: (1) One set of pontoon, (2) Two (2) pumps 75 kw, (3) it supports electricity, (4) delivery steel pipes and (5) Stilling basin structure;
- 2) One earth trapezoidal main canal (L=800m) with size b=1m, B=3m, h=1.0 m, inside slope (m=1). It has 2 farm inlet structures, 3 division box structures.
- 3) Earth trapezoidal SC1 canal (L= 527m), with size b=0.6m, B=2m, h=0.8m, inside slope (m=1)., include 21 farm inlet structures, 1 division box structure and 1 tail.
- 4) Earth trapezoidal canal SC2 (L=1,419m) with size b=0.6m, B=2m, h=0.8m, inside slope (m=1), include 7 farm inlets and one tail structure.
- 5) Earth trapezoidal canal SC3 (L=1,070m) with size b=0.6m, B=2m, h=0.8m, inside slope (m=1), include 8 farm inlets and one tail structure.
- 6) Earth trapezoidal canal SC4 (L=203m) with size b=0.5m, B=1.5m, h=0.5m, inside slope (m=1), include 1 farm inlets and one tail structure

Over all of the system is shown in the layout in Figure 1.

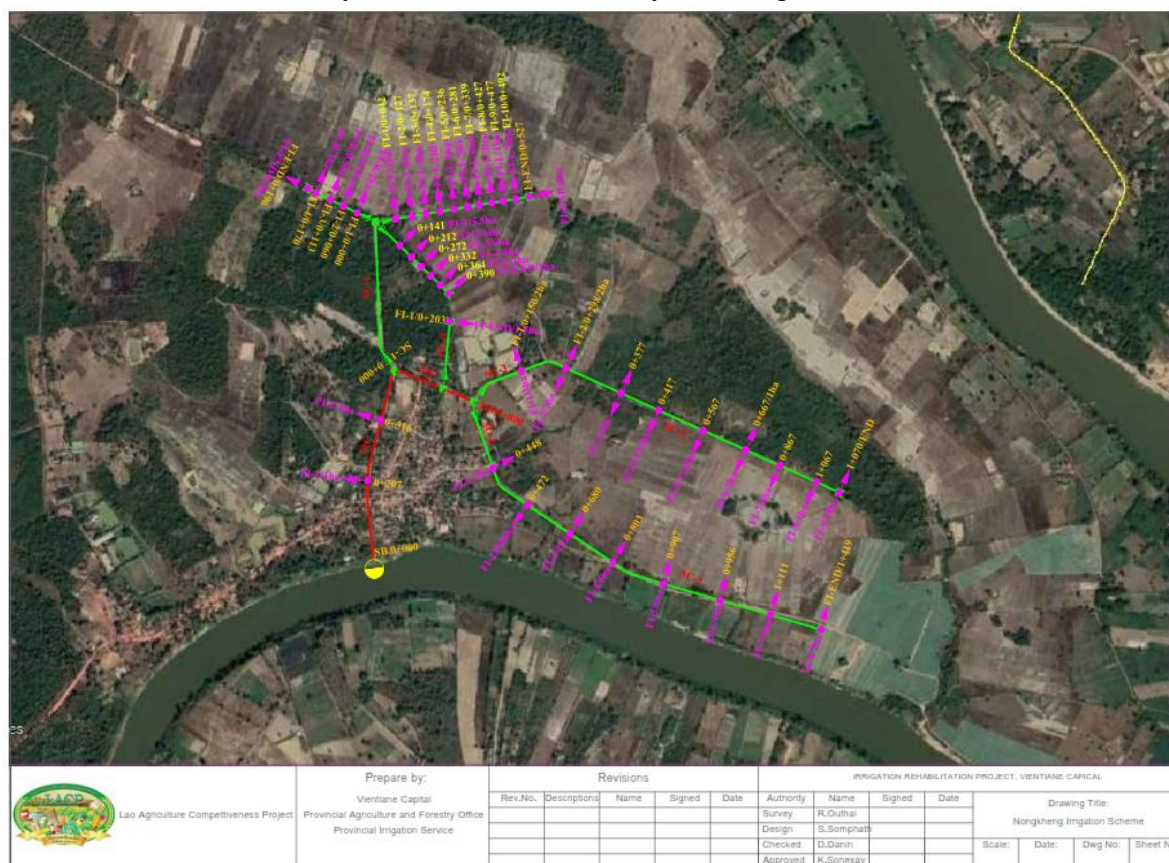


Figure 1. Sub-Project Layout

Currently, one of electric motor pump and its component are broken. The system cannot be operated full capacity as the original design. Therefore, to improve irrigated water efficiency, there is a need to replace a new pump set unit to this sub-project as the proposed pump specification below table:

Table 1 The specification of required pump replacement

No.	Item pump elements	Unit	Quantity /Specification
<b>Mechanical part</b>			
1	Pump (Size: 250-300-8-75)	unit	1
2	Capacity discharge (actual efficiency)	l/s	270 (189)
3	Pump efficiency	%	70
4	Brand and made in		Kirloskar, India
5	Pontoon & Roofing	set	1
6	Flexible pipe, d= 250 mm x 8 m	piece	2
7	Penstock pipeline, d= 250 mm x 39 length (ml)	piece	2 x 35
<b>Electrical part</b>			
8	Motor x 75 kw	unit	1
9	Electric delta boxes	unit	1
10	Electricity cable x 50 m	piece	1

11	Electric Breaker	unit	1
12	Electric meter box	unit	1
13	Electric Transformer x 250 kv	unit	1
<b>Civil part</b>			
14	Stilling basin (W:2 x L:3 x H:2.25) m	site	1
15	Reinforcement concrete foundation support	piece	12

Detailed design of headwork and its component show in Figure 2 below

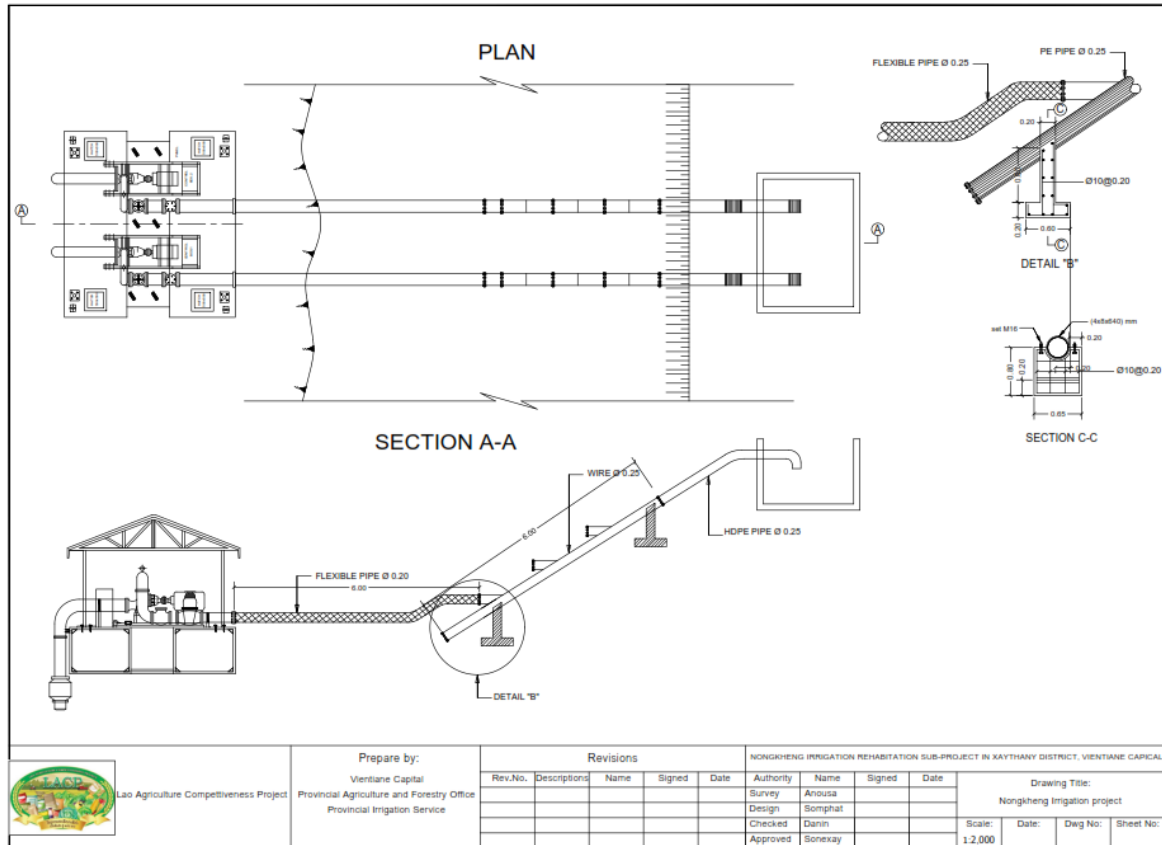


Figure 2. Proposed Pumping Unit Installation

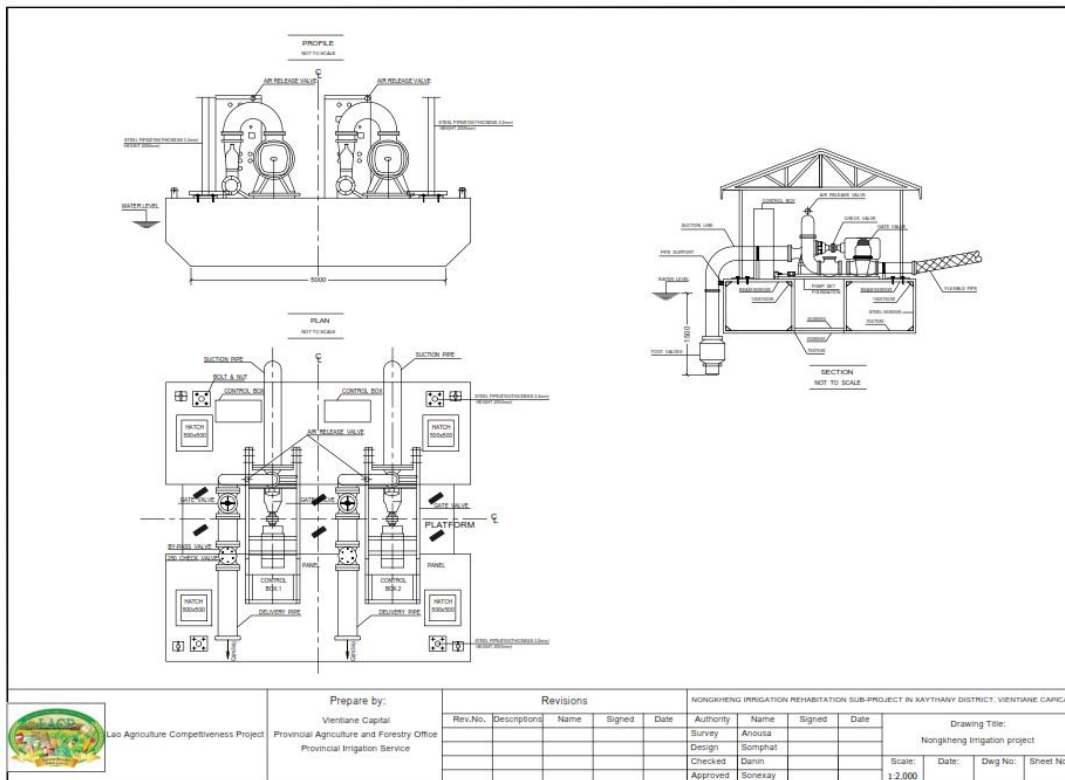


Figure 3. Proposed Pumping Unit Installation



Figure 4. Existing and Proposed Pumping Station



Figure 5. proposed electricity control box and spare part to replace

## 2.2 SOCIAL CONTEXT

Nongkeng Pump Irrigation Scheme is located in Nongkeng village, Xaythany district, Vientiane Capital. The total number of households is 247 hhs, in which 1,424 people including 675 women are registered. Population living in Nongkeng village are Lao Tai Ethnic groups 100 %, who believes in Buddhist religion and not considered to be indigenous People (IP) under the World Bank policy on Ips (OP 4.10). Table below shows the detailed population and beneficiary from the project.

No.	Village	Total Population			Beneficiaries			Percentage of Beneficiaries		
		HH	Total (PP)	Women (PP)	HH	Total (PP)	Women (PP)	HH	Total (PP)	Women (PP)
1	Nongkheng	247	1,424	675	83	479	227	33.60	33.64	33.63
	Total	247	1,424	675	83	479	227	33.60	33.64	33.63

According to the village consultation and group discussion during ESAR preparation carried out on 24 July 2021, villagers expressed their fully support for the irrigation sub-project implementation. Most of the household income come from agricultural production such as vegetable, rice and animal raising (Cattles, buffalos, pigs and poultries). Rice production could be undertaken only in wet season as it is the main sources of livelihood and income followed by vegetables. There are primary school and secondary school in the project area.

The main water resource for irrigation is NamNgum river and shallow well and groundwater for domestic utilization and consumption. Bottled water is also available in the district town for sale and home delivery.



The village is accessible all year round to commute and transport their agricultural products to the market in the district and provincial towns. Nongken village has electricity grid and tele-communication network.

Actually, only Nongkeng village benefits from Nongkeng Pump Irrigation Scheme Sub-project. Out of the total 83 households 247 or about 33.6 % can use and directly benefit from the proposed irrigation scheme rehabilitation. These 83 households are home to 479 people including 227 women.

After the improvement, the irrigation scheme will be able to supply fully to about 163.20 ha for Wet Season Rice production and 138.82 ha for the Dry Season rice production and about 139 ha for dry Season Vegetables. About 139 ha of Dry Season cropping areas will be increased after rehabilitation work.

### **III. ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT**

#### **3.1 ENVIRONMENTAL IMPACT ASSESSMENT**

Field visit was conducted after the feasibility study (FS) and Detailed Design (DD) have been completed with scope and corridors of impacts are determined. During the site visit, consultation was conducted with the targeted village that potentially affected by this sub-project with sub-project detailed design and information disseminated. The reassessment of the sub-project activities is shown that the sub-project location is not located near the protected areas or its sensitive habitats or buffer zone. The sub-project does not have impacts on any cultural resources (both physical and intangible) and to result in restrictions access to land and forest resources. According to the discussion with villagers, subproject locations are minor potential to have a risk of floods and droughts. Therefore, rehabilitation of the irrigation schemes will bring benefit to farmers not only rice cultivation but also vegetables and other cash crops. However, Potential environmental impacts related to replace electrical pump motor and spare part are minor and they can be mitigated by providing the environmental code of practice (ECOP) such as health safety of technicians and workers during installation of pump, motor and electrical control box and pontoon and roofing. Farmers will be temporarily disturbed and has insufficient water to supply for vegetable production due to the installation of new pump unit. . This installation and replacement work will limit a number of workers of 5-8 people with the duration of less than two weeks. Therefore, worker camp and facilities are not required.

#### **3.2 SOCIAL IMPACT ASSESSMENT**

Given that the work is mainly pump replacement and the work will be done by 5-8 workers with the duration less than two weeks no significant social impacts are envisaged. There could be potential risks of occupation and community health and safety during the replacement of the electric pump. During the operation phase, potential competition and dispute over water from the improved irrigation scheme may be arising between those who can access and those who cannot benefit from the subproject and between upstream and downstream water users.

#### **Positive social and economic impacts:**

The potential positive impacts of the Rehabilitation of the Nongkeng Irrigation Scheme are included:

- Improved crop productivity of farmers;
- Employment generation during rehabilitation, farm operations and maintenance phases;
- Enhanced income and livelihoods of farmers;
- Increased food production and food security in the village, district and the provincial at large;
- Improvement in the local and national economy.

#### **Potential Negative social impacts:**

- During the construction period, disturbance and limitation of access to the paddy land is anticipated. This could be minimized through consultation with the water user association and farmers on the work schedule so that it will be carried out at appropriate time/period, for example before crop cultivation and after harvest. The project engineers will supervise the contractor's performance to ensure that he completes his work as planned and as early as possible.
- **Noise:** The operation construction result in minor noise pollution at the immediate project site under construction.
- **Occupation health & safety (OHS) for workers:** Workers will be exposed to noise, dust and vibrations and possibility of electricity short circuit especially without the use of appropriate PPEs. There is a high risk of accidents and injury from handling with electricity and working at height to install the ponton roofing as well as the use of machinery and equipment if safety procedures are not adhered to.
- The work will be done by outside workers, attention needs to be paid to manage risk of communicable diseases, COVID-19 due to workers and technicians from outside the village will be worked in the subproject site.
- Community health and safety (CHS) issues: visit by the team of 5-7 workers and mechanics to be hired to do the work during the period of about 2 weeks could potentially bring about communicable waste, air and water borne diseases to the local communities particularly the COVID-19. CHS measures. Potential CHS risks associated with these workers especially those from provincial town or Vientiane capital city may include Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH), Gender-Based Violence (GBV) and Violence Against Children (VAC). To manage such risks, a Code of Conduct (CoC) and Contingency Plan for COVID-19 Responses and will be applied and observed by the contractor's workers and monitored by the focal staff appointed from PAFO/DAFO and PCO's consultants. The contingency plan and CoC are provided in annex 1-2.
- During operation phase (after replacement of pontoon and electric control unit), potential impacts envisage is an increase in dispute and competition over water from the improved irrigation scheme for their crop production between those farmers who can access and cannot. Conflict may be arising between downstream and upstream water users if water management regulation is not in place and reinforced.

#### **IV. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN OR ECOP**

ESCOP is prepared to be applied by the pump irrigation subproject. ESCOP incorporates site specific Environmental Code of Practice (ECOP), which is equivalent to site specific EMP and social management plan to address and mitigate the above described potential environmental and social impacts and issues anticipated during and after the civil work.

#### **4.1 ENVIRONMENTAL CODE OF PRACTICE (ECOP)**

To avoid and mitigate the potential environmental impacts related to each stage, mitigation measures in ESMF and ESCOP proposed in this report ANNEX 1 will be used; before installation of electricity pump, electricity must be switched off and double check to ensure no electricity leakage, provide proper PPE to workers such as gloves, boots, medical masks and electricity leak detector, limit working time from 7:30 am-17:00pm. Technicians and workers working on pontoon are required to wear safety gear to avoid falling to water.

To facilitate transportation during construction, villagers will be informed through village meeting and consultation for the project commencement and completion date before starting civil works. Existing main canal embankment shall be used to facilitate vehicles accessing to the pump station (no new temporally road to pontoon pumping station is required).

#### **4.2 SOCIAL MANAGEMENT PLAN**

To mitigate and manage social risks and impacts anticipated during subproject pump installation, villagers were and will be informed and consulted through village meeting before starting civil works. The above described OHS risk including safety-at-work issues will be addressed and mitigated through ECOP as integral part of ESCOP whereas CHS issues (communicable diseases including COVID-19 transmission) will be managed through ESCOP and contingency plan for COVID-19 responses and CoC to prevent and address SEA, SH, GBV and VAC incidences provide in the annexes. To minimize disturbance and limitation of access to paddy land, the farmers will be informed of rehabilitation work schedule to ensure that it will be carried out during before crop cultivation or after crop harvesting and that the work will be completed in a timely manner or as soon as possible.

To address and mitigate potential dispute and conflict over the water from the rehabilitated irrigation scheme, a technical O&M manuals of Irrigation project need to be prepared and provided to the Water Users Association (WUA) and farmers by Project Consultants, who will be responsible for O&M and WUG development. Training and technical support will be also provided for the WUA and water users to enable them to effectively manage the irrigation scheme and handle with grievances and conflicts that may happen.

Guide the WUG to operate and maintain the irrigation scheme properly, the mandates and rules of WUG need to be revised to meet the actual situation and needs. The capacity of WUG board members needs to be strengthened in the following topics (1) Operation and maintenance of the irrigation scheme: planning and implementing of cropping and water supply; (2) Management of the WUG/WUA: how to implement mandates, rules, WUG/WUA financial management, conflict management, general WUG/WUA management and so on; (2) Production techniques including the Pest Management.

Measures to mitigate potential conflicts among Water users include (iii) inclusion of downstream residents (who have no access to the improved irrigation schemes) in other economic activities of the project, (iii) include representatives of downstream water users in the Water User Groups/Association for joint decision making and management of the irrigation scheme; (iv) where necessary and feasible, construct high-drums to supply downstream residents with water for micro-irrigation systems and domestic use.

## **V. GRIEVANCE REDRESS MECHANISM (GRM)**

Social and environmental related grievances either from directly or indirectly affected people, including affected people from ethnic groups (will be resolved through the Grievance Redress Institution/Mechanism )GRI/M). However, complainant retains the right to bypass this procedure and as such can direct their grievance directly to the PAFOs or the Provincial Assembly, as provided by law in Lao PDR .At each level within the GRI/M process, discussions and outcomes of lodged complaints will be documented and recorded in a grievance logbook .The status of the grievances submitted and grievance resolution will be reported to PAFOs in monthly reports .In order to effectively and quickly resolve grievances of PAP, the following process will can be followed :

Stage 1 :if PAP and PAH are not satisfied with the resettlement plan or its implementation, PAP and PAH can issue a verbal or written complaint to the Village Mediation Unit or Committee )VMU/C .(If it is a verbal complaint, the village should deal with this complaint and document it in a written record .The VMU/C should resolve the complaint or grievance within two weeks or calendar 15 days.

Stage 2 :if PAP and PAH are not satisfied with the result in Step 1, PAP and PAH can file an appeal with the District Office of Justice )DOJ (via DAFOs after PAP and PAH receives the decision made in Step 1 .The DOJ should make a decision within two weeks or 15 calendar days

Stage 3 :if PAP and PAH are not satisfied with the result of Step 2, PAP and PAH can file an appeal with the Provincial Assembly )PA (via PAFO for administrative arbitration after receiving the decision made by the DOJ .The administrative arbitration organization should make the arbitrated decision within 20 calendar days; and

Stage 4 :if PAP and PAH are still unsatisfied with the arbitrated decision made by the administrative arbitration organization, after receiving the arbitrated decision, PAP and PAH can file a lawsuit in a civil court according to the relevant laws and regulations in Lao PDR.

Day to day work related grievances may be raised by affected farmers and villagers during the construction period and should be responded and addressed on the spot. Thus, a contact detail including the mobile phone or WhatsApp numbers of site engineer and focal staff appointed from PAFO and DAFO should be provided to the Water User Association and the local community and displayed in the place publicly accessible such as the subproject site and notice board in the village office. In case of emergency and server incidences, the phone call will be one the most helpful and efficient mean of communication and reporting locally accessible.

## **VI. CONSULTATION AND INFORMATION DISCLOSURE**

Consultation with the local communities and farmers/water user groups was conducted in Nongkeng village on 24 July, 2021. The questions and answers were exchanged by the water user group members and consultant. Consultation discussion included health safety and mitigation measure of technicians and workers during installation of the pump. Covid-19 prevention was also discussed. This draft ESAR was distributed to the community 7 days before the consultation. Main outcomes of the consultation are provided below:

- Potential negative impact during water pump replacement is water shortage during dry season cultivation.
- Covid-19 prevention measure and prevention
- Collaboration among villagers, provincial and district technical team including construction company

Further improvements are needed by farmers as summarized below:

1. Upgrading main canal to be brick masonry is required.
2. An existing electricity motor pump is also required to replace.
3. The points 1 and 2 above were discussed with the farmers and it has been made clear that due to the budget limitations during LACP implementation, the current plan needs to be followed as outlined in the FS and DD. If there will be a possibly for an additional grant, these issues will be considered by the FS and DD.

The final ESAR will be disclosed onto the MAF's website and hard copy will be available in POFO and DAFO prior to the subproject implementation.

## **VII. IMPLEMENTATION, MONITORING AND REPORTING ARRANGEMENT**

The implementation of the environment and social safeguard is followed by the project implementation arrangement. The project implementing agencies include MAF, MOIC, and the five project provinces. LACP is joining implementing by MAF and MOIC; MAF is the central agency responsible for coordination with concerning stakeholders and overall project implementation. MAF is core of implementing project activities and focusing on component A, C and coordinate with component, working with farmer and production group, upgrading on-farm infrastructure, farmer's production facilities and farm equipment. Technical department involved include DOPF, DOA, DOI and DTEAP.

MOIC is part of the project responsible implementing their respective activities under component B (Enhancing agricultural competitiveness) such as establishing productive partnerships between Abs and FOs and Matching grants for agribusiness (Abs) and farmer groups (FGs) to leverage investments in on-farm infrastructure, post-harvest machines, drying facilities, storages, cool rooms, packaging facilities.

DAFO is taken a lead responsible role at district level to supervise E&S consultant and PMU to conduct screening process, review and endorse sub-project proposal, monitor compliance of sub-project proposal implementation.

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E&S consultant will work closely with PMU and focal point to provide support to farmers and project proponents to prepare sub-project proposal, conduct E&S screening and prepare appropriate safeguard instrument .E&S consultant will also supervise and monitor the implementation of the ESCOP and review an environmental and social monitoring report from PAFO and DAFO before submitting to the World Bank.

## **VIII. CONCLUSION AND RECOMMENDATIONS**

The potential social and environmental impacts associated with the proposed subproject are expected to be minor and insignificant, mostly temporary, site specific and manageable during both operation phases. Health safety of technicians and workers can mostly be

minimized through the ESCOP, which combines ECOP (equivalent to site specific EMP and Social Management Plan as well as mitigation measure proposed in this report, which should form part of the construction contractor contract. Key provisions of ESCOP will be included in bidding documents and contract to be complied with by the contractor and supervised by the field inspection engineer and E&S consultants to minimize and address such impacts anticipated from the subproject implementation.

## ANNEXES

### Annex.1 Environmental and Social Code of Practice

<b>Potential Impacts Construction</b>	<b>Negative during</b>	<b>Mitigating Measures</b>
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<b>Potential Negative Impacts during Construction</b>	<b>Mitigating Measures</b>
Safety Hazards to workers and risk of accidents during installation and operation of electric pumping system to workers and local people.	<p>The contractor shall conduct the following:</p> <ul style="list-style-type: none"> <li>• Allocation of responsibility for site safety to the Contractor's site supervisors and staff, who will ensure that all reasonable safety measures, such as use of electricity leak detector, gloves, rubber boots, safety clothing and equipment will be used by workers and placing of adequate visible hazard warnings and instruction signs</li> <li>• Prepare and apply O&amp;M manual of the electric pump and provide training on the O&amp;M for the WUGs and committees, and local villagers</li> <li>• Electricity control box must be checked before installation a new set</li> <li>• before installation of electricity pump, electricity must be switched off and double check to ensure no electricity leakage,</li> <li>• limit working time from 7:30 am-17:00pm.</li> <li>• Technicians and workers working on pontoon are required to wear safety gear to avoid falling to the river. All safety gears must be provided to workers and wearing during working in pontoon</li> <li>• In case of emergency and server incidences, the contract detail including mobile phone/WhatsApp numbers of site engineers and focal staff appointed from PADO/DAFO will be provided to the contractor, WUA and displayed in publicly accessible venues. The NPCO is required to report on any severe (fatal and servery injured) incidences to the Bank within 48 hours.</li> </ul>
COVID-19 outbreak	<ul style="list-style-type: none"> <li>• Observe the applicable national and WHO regulations and guidelines and the WBG COVID-19 Advisory note on Contingency Planning for Existing Operations dated March 16, 2020 and WBG Safeguard Interim Note on COVID-19 Considerations in Construction/Civil Works Projects, April, 2020</li> <li>• Please refer to Annex 2: COVID-19 Rapid Assessment Form and Annex 3: Template of Contingency Plan for Response to COVID-19</li> </ul>
<b>Impacts during operation phase</b>	<ul style="list-style-type: none"> <li>•</li> </ul>
Effects of intensified agricultural production	<ul style="list-style-type: none"> <li>• instruction in purchase and use of pesticides,</li> <li>• promotion of the informed use of mineral fertilizers,</li> <li>• promotion of the concept of integrated pest management, and</li> <li>• emphatic discouragement of the use of persistent pesticides and introduce IPM instead.</li> </ul>
Extraction of water during the dry season	<ul style="list-style-type: none"> <li>• Monitoring of river flows and extraction levels, ensuring that an adequate riparian flow is maintained.</li> </ul>
Leaching of nutrients	<ul style="list-style-type: none"> <li>• Promotion of sustainable irrigated agriculture and soil management methods</li> </ul>

<b>Potential Impacts Construction</b>	<b>Negative during</b>	<b>Mitigating Measures</b>
Potential competition and conflict over water from the improved irrigation scheme		<ul style="list-style-type: none"> <li>• Prepare O&amp;M manual/guideline covering water management and water use regulations</li> <li>• Provide training and support to the Water Users and Water User Association on the O&amp;M and water use/management regulations</li> <li>• Include residents with no access to the irrigation scheme in other economic activities of the project</li> <li>• Include representatives of downstream water users in the Water User Groups/Association for joint decision making and management of the irrigation scheme, and</li> <li>• where necessary and feasible, construct high-drums to supply downstream residents with water for micro-irrigation systems and domestic use.</li> </ul>

## **Attachment 2: Contingency Plan for Response to COVID-19**

1. In a situation when there is a spread of COVID-19, contractor has to apply or comply with the government guidelines launched in line with WHO. Additional suggestions which are adapted from WBG Response to COVID-19 Advisory note on Contingency Planning for Existing Operations dated March 16, 2020, and WBG Safeguard Interim Note on COVID-19 Considerations in Construction/Civil Works Projects, April, 2020.
2. It is worth noting that the WBG Response to COVID-19 Advisory note and Interim Note may be updated from time to time. Where there is a conflict with government or WHO guideline, the government or WHO guideline prevail.

### **(a) Preparing for Covid-19**

- Contractor’s senior manager or project manager should inform PCO and/or PAFO details of the preparations being made on site. PCO and/or PAFO will, as necessary assist the projects with these preparations. The senior manager should be taking the advice of their healthcare team and their health and safety specialists in preparing the site, although the PCO, and/or PAFO may also need to assist, for example with coordinating responses and/or connecting project sites with national/local healthcare official and/or specialists.
- Contractor should put in place measures to minimize the chances and contain the spread of the virus as a result of the movement of workers, ensure their sites are prepared for an outbreak, and develop and practice contingency plans so that personnel know what to do if an outbreak occurs and how treatment will be provided. These preparation measures should be communicated not only to the workforce but also the local community, to reassure them that the movement of staff is controlled, and to ensure that stigma or discrimination is reduced in the event of an outbreak.

### **(b) Movement of Staff**

- Movement of staff can increase the risk of transmission of Covid-19 to a work site and the local community. Overseas, international and transient workers should adhere to government requirements and guidelines with respect to Covid-19 when travelling to or from worksites.



- Workers coming from or passing through countries/regions with cases of the virus<sup>1</sup> (a) Should not return if displaying symptoms and (b) Should self-isolate for 14 days following their return.

*Self-Isolation arrangements:* For self-isolation, the following actions should be considered (as appropriate):

- Workers should be provided with a single room that is well-ventilated (i.e., with open windows and an open door). If a single room is not available for each worker, adequate space should be provided to maintain a distance of at least 2 meters and a curtain to separate workers sharing a room. Men and women should not share a room. A dedicated bathroom should be provided for the isolation facilities and there should be separate bathroom facilities for men and women.
- Workers in isolation should limit their movements in areas which are also used by unaffected workers (shared areas), and should avoid using these areas when unaffected workers are present. Where workers in isolation need to use shared spaces (such as kitchens/canteens), arrangements should be made for cleaning prior to and after their use of the facilities. The number of staff involved in caring for those in isolation, including providing food and water, should be kept to a minimum and appropriate Personal Protection Equipment (PPE) should be used by those staff.
- At a minimum, isolation areas should be cleaned daily and healthcare professionals should visit workers in the isolation areas daily. Cleaners and healthcare professionals should wear appropriate PPE and ensure good hygiene when visiting workers in isolation. Further information is provided by WHO in [\*Home care for patients with suspected novel coronavirus \(COVID-19\)\*](#)
- Visitors should not be allowed until the worker has shown no signs and symptoms for 14 days.

### **(c) Preparing for an Outbreak**

3. Medical staff at the facilities or medical service personnel for the facilities should be trained and be kept up to date on Country and WHO advice (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance>) and recommendations on Covid-19. They should take stock of the equipment and medicines that are present on site and ensure that there are good supplies of any necessary treatments, including paracetamol/acetaminophen and other medicine in line with country and WHO guideline.
4. The following measures should be considered (as appropriate):
  - Ensure medical facilities or camp site are stocked with adequate supplies of medical Personal Protective Equipment (PPE), as a minimum: (a) Gowns, aprons; (b) Medical masks and some respirators (N95 or FFP2); (c) Gloves; and (d) Eye protection (goggles or face screens).
  - Cleaners also need to be provided with PPE and disinfectant. Minimum PPE to be used when cleaning areas that have been or suspected to have been contaminated with Covid-19 are: (a) Gowns, aprons; (b) Medical masks; (c) Gloves; (d) Eye protection (goggles or face screens); and (e) Boots or closed work shoes. Cleaners should be trained in how to safely put on and use PPE by medical staff, in necessary hygiene (including hand washing) prior to, during and post cleaning duties, and in waste control (including for used PPE and cleaning materials).
  - The medical staff should run awareness campaigns, training and arrange for appropriate posters, signs and advisory notices to be posted on site to advise workers on how to

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<sup>1</sup> WHO also updates information on countries reporting Covid-19 infection

minimize the spread of the disease, including: (a) to self-isolate if they feel ill or think they may have had contact with the virus, and to alert medical staff; (b) to regularly wash hands thoroughly with soap and water – many times per day; (c) how to avoid disease spread when coughing/sneezing (cough sneeze in crook of elbow or in a tissue that is immediately thrown away), and not to spit; and (d) to keep at least 2 meters or more away from colleagues.

- Hand washing stations should be set up at key places throughout site, including at entrances/exits to work areas, wherever there is a toilet, canteen/food and drinking water, or sleeping accommodation, at waste stations, at stores and at communal facilities. Each should have a supply of clean water, liquid soap and paper towels (for hand drying), with a closed waste bin (for used paper towels) that is regularly emptied and disposed off following government guideline.
- Where wash stations cannot be provided (for example at remote locations), alcohol-based hand rub should be provided.
- Enhanced cleaning arrangements should be put in place, to include regular and deep cleaning using disinfectant of catering facilities/canteens/food/drink facilities, latrines/toilets/showers, communal areas, including door handles, floors and all surfaces that are touched regularly. Worker accommodation will be in good state for keeping clean and hygienic, and for cleaning to minimize spread of infection.
- Working methods should be reviewed and changed as necessary to reduce use of PPE, in case supplies of PPE become scarce or hard to obtain. For example, water sprinkling systems at crushers and stock piles should be in good working order, trucks covered, water suppression on site increased and speed limits on haul roads lowered to reduce the need for respiratory (N95) dust masks.

#### **(d) Contingency Planning for an Outbreak**

5. The contingency plan to be developed by contractor should set out what procedures will be put in place in the event of Covid-19 reaching the site and it should be developed in consultation with national and local healthcare facilities and PCO or PAFO, to ensure that arrangements are in place for the effective containment, care and treatment of workers who have contracted Covid-19.
6. The contingency plan should also consider the response if a significant number of the workforce become ill, when it is likely that access to and from a site will be restricted to avoid spread. The following measures should be considered, as appropriate:
  - Contingencies should be developed and communicated to the workforce for: (a) Isolation and testing procedures for workers (and those they have been in contact with) that display symptoms; (b) Care and treatment of workers, including where and how this will be provided; and (c) Getting adequate supplies of water, food, medical supplies and cleaning equipment in the event of an outbreak on site, especially should access to the site become restricted or movements of supplies limited. The contingency plan shall be align with the government guideline.
  - Specifically, the plan should set out what will be done if someone is suspected to become ill with Covid-19 at a worksite. The plan should: (a) Set out arrangements for putting the person in a room or area where they are isolated from others in the workplace, limiting the number of people who have contact with the person and contacting the local health authorities; (b) Consider how to identify persons who may be at risk (e.g. due to a pre-existing condition such as diabetes, heart and lung disease, or as a result of older age), and support them, without inviting stigma and discrimination into your workplace; and (c) Consider contingency and business continuity arrangements if there is an outbreak in neighboring communities.

- Arrangements for the storage and disposal arrangements for medical waste, which may increase in volume and which can remain infectious for several days (depending upon the material). The support that site medical staff may need, as well as arrangements for transporting (without risk of cross infection) sick workers to intensive care facilities or into the care of national healthcare facilities should be discussed and agreed.
- How to maintain worker and community safety on site should works be suspended or illness affect significant numbers of the workforce at any point. It is important that worksite safety measures are reviewed by a safety specialist and implemented prior to work areas being suspended.

**(e) Communicating the plans**

7. In order to reduce the risk of social stigma<sup>2</sup> or discrimination, and to ensure that individuals roles and responsibilities are clear, the preparation measures and contingency plans should be communicated widely. Workers, sub-contractors, suppliers, adjacent communities, and local healthcare authorities should all be made aware of the preparations that have been made.

When communicating to the workforce, their roles and responsibilities should be outlined clearly, and the importance for their colleagues, the local communities and their families that the workers follow the plans should be stressed. Workers may need to be reassured that they there will be no retaliation or discrimination if they self-isolate as a result of feeling ill, and also with respect to the compensation or insurance arrangements that are in place. Further guidance on preventing social stigma as a result of Covid-19 is available in WHO guidelines

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<sup>2</sup> Social stigma in the context of health is the negative association between a person or group of people who share certain characteristics and a specific disease.