

# INITIAL ENVIRONMENTAL EXAMINATION (IEE)

August 2023

LAO PEOPLE'S DEMOCRATIC REPUBLIC:  
SUSTAINABLE RURAL INFRASTRUCTURE AND WATERSHED  
MANAGEMENT SECTOR PROJECT (SRIWMSP)

SUBPROJECTS: XAYABULY PROVINCE

NAM KHAEN RIVER IRRIGATION SYSTEM SUB-PROJECT  
NAM YANG 3 RIVER IRRIGATION SYSTEM SUB PROJECT

## **CURRENCY EQUIVALENTS**

(as of August 2023)

Currency unit - Lao Kip (K)

K1.00 = \$0.0000555

\$1.00 = K 18,000

## **ABBREVIATIONS**

ADB	-	Asian Development Bank
CSA	-	Climate Smart Agriculture
DALAM	-	Department of Agricultural Land Management
DOI	-	Department of Irrigation
DoNRE	-	Department of Natural Resources and Environment
DoPF	-	Department of Planning and Finance
DRDC	-	Department of Rural Development and Cooperatives
DTEAP	-	Department of Technical Extension and Agro-Processing
EARF	-	Environmental Assessment and Review Framework
EHS	-	Environmental Health and Safety
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
EPL	-	Environmental Protection Law
GRM	-	Grievance Redress Mechanism
IEE	-	Initial Environmental Examination
MAF	-	Ministry of Agriculture and Forestry
MOF	-	Ministry of Finance
MOIC	-	Ministry of Industry and Commerce
MoNRE	-	Ministry of Natural Resources and Environment
NAPA	-	National Adaptation Program of Action
NFSCC	-	National Food Security and Commodities Committee
NPMO	-	National Project Management Office
PIC	-	Project Implementation Consultants
PPIU	-	Provincial Project Implementation Unit
PSC	-	Project Steering Committee
SAEMR	-	Semi Annual Environmental Monitoring Report
SPS	-	Safeguards Policy Statement, 2009
UNFCCC	-	United Nations Framework Convention on Climate Change
UXO	-	Unexploded Ordnance
VDC	-	Village Development Committee

## **WEIGHTS AND MEASURE**

ha	-	Hectare
m	-	Meter
km	-	Kilometer
l/s	-	Liters per second
masl	-	Meters above sea level
mm	-	Millimetre
oC	-	Degree Centigrade
dBa	-	Decibel
mg/l	-	Milligram per liter
oC	-	Degree Centigrade
dBa	-	Decibel
mg/l	-	Milligram per liter

## **NOTE**

In this report, "\$" refers to US dollars.

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# **1 EXECUTIVE SUMMARY**

## **1.1 INTRODUCTION**

1. This IEE for the Nam Khaen Nam Khaen and Nam Yang 3 Irrigation Systems Sub-Projects in Xayabuly Province presents an assessment of the environmental impacts and the detailed Environmental Management Plan (EMP) for the subproject based on detailed engineering design. The preparation of this IEE is guided by the Environmental Assessment and Review Framework (EARF) of the Sustainable Rural Infrastructure and Watershed Management (SRIWSM), ADB Safeguard Policy Statement (SPS, 2009), ADB Operational Manual Section F1/BP (2013), Access to Information Policy (ADB AIP, 2018), IFC-World Bank Environment, Health and Safety (EHS) Guidelines, the Government of Lao PDR's Environmental Protection Law (2013), and other Government environmental laws, policies, rules and regulations applicable for irrigation projects.

2. The Nam Khaen and Nam Yang 3 Irrigation Systems Sub-Projects in Xayabuly Province are the second batch of subprojects of the SRIWSM. The SRIWSM is expected to have a net positive impact on subproject catchments as it will reduce the risk from dry season cropping of the irrigation command areas. It will also support a potential increase in income from higher crop values. This will reduce the pressure on land conversion for upland cropping. Such land conversion is identified as a major driver of forest loss as crops are grown on steep, bare ground subject to high rates of soil erosion in the wet season.

## **1.2 DESCRIPTION OF SUB-PROJECTS**

3. The Nam Khaen Irrigation Sub-Project is located in Xayabouly District, Xayabouly Province. The headwork is located at Nala Village (Nakhoun Area) about 15 Km from the district center. The exact location is at E= 791000-792400 and N= 2140000-2144000. The average elevation is about 300m to 400m (AMSL). The project is along the national road number 4 connecting from Xayabouly to Luang Prabang Province. The proposed Nam Khaen Irrigation Sub-Project is an earthen dam headwork with an intake, a spillway, as well as the completed canal system (Main Canal-MC, Secondary Canal-SC and TC). The project was constructed in 2009 to 2012.

4. The proposed Nam Yang 3 Irrigation System Sub-Project is located in Palai Village about 25 Km from Paklai District at coordinates N=2013654 and E= 742215. Nam Yang 3 was constructed in 2001 to 2005. The headwork is earthen dam with reservoir with a reinforced concrete spillway and intake. The dam height is 17.28 m and 219 m length with a crest of 7 m. The proposed Nam Yang 3 Irrigation System Sub-Project includes 2 Main Canals (MCs), 2 Secondary Canals (SCs) and 11 Tertiary Canals (TCs) at the left of the SCs and 11 Tertiary Canals at the right of the SCs. The proposed designed irrigated area for the Nam Yang 3 Irrigation System Sub-Project is 550 ha during the rainy season and 400 ha for the dry season.

## **1.3 ENVIRONMENTAL POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK**

5. The law governing the protection of the environment, including the assessment and management of projects in Lao PDR is the Environmental Protection Law (EPL), which was issued in 1999 and amended in 2013. The *Decree on Environmental Assessment, No.21/PM, January 2019* is the country's principal environmental legislation regarding Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA). The Decree was enacted to implement Part III of the Law on Environment Protection, in relation to Environmental Protection and Environmental Assessment.



6. The project screening is the first step of the environmental assessment stated in Article 8 of the said Law. By using the list of the project and activities that have to conduct the IEE or EIA No. 8056/MoNRE, dated 17 December 2013, irrigation facilities (Item 3.52) fall under Category 1 so an IEE is required by Government. The requirements for the securing of the requisite Environmental Compliance Certificate (ECC) from PoNRE Xayabury have been complied with and the ECC has been issued on 24 May 2022.

#### **1.4 DESCRIPTION OF THE ENVIRONMENT**

7. Xayabury is the main town and seat of the provincial government in Xayabury Province. Xayabury District comprises 77 villages. The town lies about 100 km to the south-west of Luang Prabang and about 385 km by road northwest of Vientiane. The province, which has a total land area of 16,389 square kilometres, borders Bokeo Province and Oudomxai Province to the north, Luang Prabang Province and Vientiane Province to the east, and (from the south clockwise) the Thai provinces of Loei, Phitsanulok, Uttaradit, Nan and Phayao. Xayabury is the only Laotian province that is completely to the west of the Mekong River. The province of Xayabury is mountainous with the Luang Prabang Range running in a north-south direction forming a natural border with the Thai highlands. Elevations in the mountainous areas of the province reach 1,000 meters.

8. A survey on the presence of unexploded ordnance (UXO) was commissioned by the PAFO Xayabuly Province. The survey revealed that there are no UXO remaining in the area. Local residents also reported no known occurrence of UXO in the vicinity of the proposed developments. DOI is in the process of coordinating with the National Regulatory Authority for the UXO/Mine Action Sector for confirmation and validation of the findings of the PAFO Houaphan that there are no UXO remaining in the area.

#### **1.5 ENVIRONMENTAL IMPACTS**

9. In general, the benefits of the subproject outweigh the anticipated negative environmental impacts. Most of the environmental impacts are expected to occur during the construction phase and could be mitigated through implementation of appropriate mitigating measures. The following paragraphs describe the expected negative impacts that have to be considered during project design and implementation.

#### **1.6 INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION**

10. During the preparation of the IEE Public/Stakeholder consultations were held in the village meeting halls of Nala, Pongvan, Ladsavanng and Palai Villages with the Provincial Agriculture and Forestry Office (PAFO) and Loan Implementation Consultants (LIC) from June 15 to 17, 2022, June 29 to July 02, 2022 and October 3, 2022. Stakeholders who participated during the public consultation process included villagers, local government officers and staff. In general, consultees were of the view that the project would result in more benefits than negative impacts.

#### **1.7 GRIEVANCE REDRESS MECHANISM**

11. A Grievance Redress Mechanism (GRM) was developed in compliance with the National regulations of the Government of Lao PDR (GoL) and with ADB Safeguards Policy Statement (2009). The GRM will provide the means to resolve grievance and complaints in a timely and satisfactory manner. The details of the PGT, GRM Focal Contact Persons and Construction Manager will be prominently displayed in the respective construction areas for the reference of the affected communities/persons. Complaints and grievances can be directly filed, both written and verbal, to the concerned entities. The procedures for the GRM are outlined in Section 8 of this IEE.

## **1.8 ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

12. The EMP has been prepared, outlining the institutional responsibilities and management arrangements to ensure effective implementation and monitoring of mitigation measures. Throughout the construction period, the contractors will submit monthly environmental compliance progress reports to the PAFO with a copy furnished to the PGT.

13. The implementation of the EMP during the operational phase of the subproject will be undertaken by the PAFO, with verification by the PGT who will report to ADB the project's adherence to the EMP, information on project implementation, and environmental compliance through semi-annual integrated safeguards monitoring reports. The monitoring parameter during the operational phase is outlined in the EMP.

## **2 INTRODUCTION**

14. The Sustainable Rural Infrastructure and Watershed Management Sector Project (SRIWSM) aims to improve rural incomes from market-driven diversified farm output, watershed health, and community nutrition in the four northern provinces of Houaphan, Louang Prabang, Xayabouli, and Xengkhouang. The Project is aligned with the following impacts: market-driven and safe agricultural products developed, and rural areas integrated into the national economy. SRIWSM will have the following outcome: high value agricultural production, natural resources management, status of women and community nutrition improved. There are four outputs as follows: Output 1: Market-oriented agricultural production increased; Output 2: Watershed ecological services protected; Output 3: Command area irrigation reliability improved; and Output 4: Nutrition awareness and facilities improved.

15. There are a total of 18 subprojects to be implemented under Outputs 2 and 3, of which four representative subprojects (RSPs) and a further 14 additional subprojects (ASPs) in subsequent stages of the sector Project. SRIWSM aligns and integrates with the Partnerships for Irrigation and Commercialization of Smallholder Agriculture (PICSA) in all four provinces for Output 3 funded by the International Fund for Agricultural Development (IFAD), and the Lao PDR Emission Reductions Program (ERP) through Implementation of Governance, Forest Landscapes and Livelihoods Program funded by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), in the three provinces of Houaphan, Xengkhuang and Xayabuly for Output 1 and in the province of Houaphan for Output 2.

16. The Ministry of Agriculture and Forestry (MAF) is the Executing Agency and the Provincial Agriculture and Forestry Offices (PAFOs) are the Implementation Agencies. Within the MAF, the Department of Irrigation (DOI) is responsible for, among other things, the development of irrigation infrastructure in Laos.

17. This IEE for the Nam Khaen and Nam Yang 3 Irrigation Sub-Projects in Xayabuly Province presents an assessment of the environmental impacts and the detailed Environmental Management Plan (EMP) for the subproject based on detailed engineering design. The preparation of this IEE is guided by the Environmental Assessment and Review Framework (EARF) of the SRIWSM, ADB Safeguard Policy Statement (SPS, 2009), ADB Operational Manual Section F1/BP (2013), Access to Information Policy (ADB AIP, 2018), IFC-World Bank Environment, Health and Safety (EHS) Guidelines, the Government of Lao PDR's Environmental Protection Law (2013), and other Government environmental laws, policies, rules and regulations applicable for irrigation projects. The Rapid Environmental Assessment (REA) checklist is presented in Appendix A.

## **2.1 METHODOLOGY**

18. This Initial Environmental Examination (IEE) is prepared according to the Environmental Assessment and Review Framework (EARF) of the SRIWSM, ADB Safeguard Policy Statement (SPS, 2009), ADB Operations Manual Section F1/P, Access to Information Policy (ADB AIP, 2018), International Finance Corporation - World Bank Environment, Health and Safety (EHS) Guidelines, and the GoL Environmental Protection Law (2013), and other environmental laws, policies, rules and regulations applicable for system projects. The potential impacts have been analyzed and mitigation measures identified following site visits to the locations of the subproject component facilities and service area in June 2022. The visits included an assessment of the proposed sites, discussions with Provincial and District officials and village representatives.

## **2.2 PROJECT CATEGORY**

19. The requisite screening was carried out during the preparation phase of the SRIWSM using the ADB Rapid Environmental Assessment (REA) checklist. The SRIWSM was classified Environment Category B requiring the preparation of IEE and EMP. This IEE confirms the sub-project remains Category B. The potential adverse environmental impacts are site-specific, reversible, and can be readily mitigated via an environmental management and monitoring plan (EMP).

# **3 POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK**

## **3.1 ENVIRONMENTAL SAFEGUARDS POLICIES, ADB**

20. The environment safeguards requirements of ADB are presented in the following guidelines:

- Safeguard Policy Statement (2009);
- Operations Manual Section F1/P<sup>1</sup>; and
- Access to Information Policy (2018).

21. The Safeguards Policy Statement (SPS, 2009) of the Bank governs the environmental and social safeguards of ADB's operations. When a project has been identified for ADB financing, it is screened and categorized to determine the following:

- Significance of potential impacts or risks of the project to the environment;
- Level of assessment and institutional resources required to address the safeguard issues; and
- Information disclosure and consultation requirements.

22. The Environmental Safeguard Requirements 1 (SR1) of the SPS outlines the environmental safeguards requirements that borrowers/clients have to comply with. These requirements include assessing impacts, planning and managing impact mitigations, preparing environmental assessment reports, disclosing information and undertaking stakeholder consultations, establishing a grievance redress mechanism, and monitoring and reporting. It also includes specific environmental safeguard requirements pertaining to biodiversity conservation and sustainable management of natural resources, pollution prevention and abatement, occupational and community health and safety, and conservation of physical cultural resources.

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<sup>1</sup> Operations Manual Bank Policies (BP) issued on 1 October 2013, based on ADB Safeguard Policy Statement, 2009.

23. Every project is initially categorized for potential environmental impacts and risks:

- Category A – if a proposed project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented; impacts may affect an area larger than the sites or facilities subject to physical works. A full-scale environmental impact assessment (EIA) including an EMP is required.
- Category B – if a proposed project's potential environmental impacts are less adverse and fewer in number than those of category A projects; impacts are site-specific, few if any of them are irreversible, and impacts can be readily addressed through mitigation measures. An IEE, including an EMP is required.
- Category C – if a proposed project is likely to have minimal or no adverse environmental impacts. No EIA or IEE is required although environmental implications need to be reviewed.
- Category FI – is assigned to projects that involve investment of ADB funds to or through a financial intermediary.

24. There are eleven basic principles in the ADB safeguards policy on environment, which are summarized in Table 1 below.

**TABLE 1. ENVIRONMENTAL SAFEGUARD POLICY PRINCIPLES IN SPS (2009)**

ENVIRONMENT POLICY PRINCIPLE	REQUIREMENT
Screening and categorization	Use of a screening process for each proposed project to determine the extent and type of environmental assessment commensurate with the significance or potential impacts and risks.
Environmental assessment	Conduct of an environmental assessment for each proposed project to identify potential impacts and risks to environment and people.
Alternatives Examination	Examine alternatives to project's location, design, technology, and components and their potential environmental and social impacts. Also consider the "no project" alternative.
Environmental mitigation and monitoring plans	Prepare an EMP that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators.
Consultation and GRM	Carry out meaningful consultation with affected people and facilitate their informed participation early in the project preparation process and ensure that their views and concerns are taken into account. Establish a GRM to receive and facilitate resolution of the affected people's (AP's) concerns regarding the project's environmental performance.
Public disclosure	Disclose the environmental assessment, including the EMP, in a form and language understandable to AP and other stakeholders.
EMP implementation and monitoring	Implement the EMP and monitor its effectiveness. Document the monitoring results, including corrective actions and disclose the monitoring reports.
Protection of critical habitats	Do not implement project activities in areas of critical habitats unless (i) there are no measurable adverse impacts on the critical habitat, (ii) there is no reduction in the population of any recognized endangered or critically endangered species and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, additional programs to promote and enhance the conservation aims of the protected area will be implemented.
Pollution prevention and control technologies	Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank's Environmental, Health, and Safety (EHS) Guidelines.
Occupational health and safety	Provide workers with safe and healthy working conditions and prevent accidents, injuries and diseases in the workplace. Minimize adverse impacts and risks to the health and safety of local communities.
Preservation of physical cultural resources	Conserve physical cultural resources and provide a "chance find" procedure and conservation approach for materials that may be discovered during project implementation.

AP = affected people, EHS = Environmental, Health, and Safety; EMP = environmental management plan, GRM = grievance redress mechanism.

25. Aside from the SPS (2009), ADB also prescribes the Access to Information Policy (2018), which requires consultations, participation, and disclosure of information to enhance stakeholders' trust in, and ability to engage with, ADB. The policy promotes transparency, accountability, and participatory development. It establishes the disclosure requirements for documents produced or to be produced through ADB assistance. The IEE, EMP, and the environmental monitoring reports (EMRs) of the project are to be disclosed on the ADB website in accordance with the AIP (2018). As a Category B project, the draft IEE report should be available to interested stakeholders before project approval and posted on the ADB's website upon Board approval of the project, in compliance with the SPS (2009) and the AIP (2018).

### **3.2 LEGAL AND INSTITUTIONAL FRAMEWORK ON ENVIRONMENTAL MANAGEMENT IN LAO PEOPLE'S DEMOCRATIC REPUBLIC**

#### **3.2.1 Law on Environmental Protection**

26. The law governing the protection of the environment, including the assessment and management of projects in Lao PDR is the Environmental Protection Law (EPL), which was issued in 1999 and amended in 2013.

#### **3.2.2 Law on Environmental Impact Assessment of Development Projects**

27. ***Decree on Environmental Assessment, No.21/PM, January 2019.*** The decree is the country's principal environmental legislation regarding IEE and EIA. It was enacted to implement Part III of the *Law on Environment Protection* in relation to environmental protection and assessment. MONRE is the central authority to coordinate with the local agencies and administration to disseminate and enforce this decree. Key features of the decree are:

- Development projects in Lao PDR must undertake an environmental assessment (EA) in accordance with the content determined in the regulation and any regulation of the concerned line ministry.
- Projects must prepare mitigation measures, environmental management and monitoring plan (EMMP), and social management and monitoring plan (SMMP).
- Large-scale or complex project with significant impact need to conduct EIA.
- Small-scale projects or with minor environmental impact need to conduct IEE.
- Investment projects not listed in the Ministerial Decree MONRE/8056 are not subject to the requirements.

##### **3.2.2.1 Project Screening**

28. The project screening is the first step of the environmental assessment stated in Article 8 of the said Law. Investment projects are categorized according to a schedule to the EIA Decree into:

- Category 1: small scale investment projects with minor environmental and social impacts, for which initial environmental examination is required;
- Category 2: Large scale investment projects which are complicated or create significant environmental and social impacts, for which environmental impact assessment is required.

29. For irrigation projects, those with a command area of between 100 and 2,000 hectares are in category 1, and those with a command area greater than 2,000 hectares are in category 2. The implication is that an irrigation project with a command area less than 100 hectares and with negligible environmental impacts would not qualify as either. In the EIA Decree, where a

project is of a type that is not in either category, an investment application is submitted to the MONRE for further screening.

30. By using the list of the project and activities that have to conduct the IEE or EIA No. 8056/MoNRE, dated 17 December 2013, irrigation facilities (Item 3.52) fall under Category 1 so an IEE is required by the Government.

### **3.2.2.2 Public Consultations**

31. Stakeholder consultation is an integral part of the domestic EIA process. The guidelines in the conduct of stakeholder and community consultations, as part of the environmental and social assessment process, are outlined in the *Ministerial Instruction on Public Involvement* (2012).

32. The guidelines provide the principles and process of engaging and consulting with project stakeholders and project-affected persons (PAPs) in project preparation, design, and implementation. It aims to ensure that stakeholders and PAPs are adequately consulted and provided with the opportunity to articulate their feedback and suggestions on project design and implementation to avoid or mitigate potential impacts on their livelihood and environment.

33. The requirements for the securing of the requisite Environmental Compliance Certificate (ECC) from PoNRE Xayabuly have been complied with and the ECC has been issued on 24 May 2022. Appendix B shows the Environmental Compliance Certificate for the irrigation sub-projects in Xayabuly.

### **3.2.3 Law on Forestry No. 08/NA (2019)**

34. This Forestry Law determines the principles, regulations and measures for the management, protection, development, utilization and inspection of forests and forestland, promoting tree plantations, regenerating and increasing forest resources; aims to make forest resources rich, increase forest cover, as a source for tourism and for sustainable use in people's livelihoods; ensures the protection of soil quality, air quality, water sources, biodiversity, and environmental protection in a green and sustainable manner; and contributes to the socio-economic development of the country.

35. The Forest Law classifies forests into: (i) conservation forests; (ii) protection forests; and (iii) production forests. Conservation Forests are forests classified for the purposes of conserving nature, preserving and propagating plant species, aquatic animals and wildlife species, protecting forest ecosystems and others of natural, historical, cultural, touristic, environmental and educational value and for scientific research experiments.

36. Conservation Forests consist of national, provincial, district and village conservation forests which as specified in a specific regulation. Conservation Forests are rich in biodiversity, have unique natural scenery, are of outstanding importance at national, regional and global levels and may be proposed as wildlife conservation areas, national parks, regional or world heritage sites.

37. Protection Forests are forests classified for the function of maintaining water sources, river banks and road sides, for preventing soil erosion and improving soil quality, strategic areas for national defence and security, safeguarding against natural disasters and providing environmental protection and other functions. Protection Forests comprise national, provincial, district and village protection forests, as specified in a specific regulation.

38. Production Forests are forests including natural forests and planted forests designated for the supply of wood and NTFPs as commodities to fulfil the requirements of national socio-economic development and people's livelihoods.

#### **3.2.4 Decree on Protected Area No. 134/G (May 2015)**

39. This decree determines the principles, regulations, and standards related to the establishment, allocation, protection, development, utilization, and inspection of protected areas in order to make the areas become abundant and sustainable by focusing on environmental protection, watershed protection, prevention from erosion, protection of soil quality, protection of strategic zones for national defence and security, adaptation and reduction of climate change, solutions to global warming, contributing to the improvement of the living condition of people of all ethnic groups and the development of the national economy. The government allows the use of protected areas only in an allocated zone which must be used in accordance with related regulation to ensure that there are no negative impacts on forests, quality of soil, and the natural and social environment. The use of protected areas for public benefit are for research and testing, recreation and tourism, source of medicines, and for protection of the watershed, biodiversity, natural and historical environmental and cultural resources. The use of protected areas for the public benefit is permitted by MONRE. Local people who reside in and around protected areas and contribute to the protection and regeneration of forest and non-timber forest products (NTFPs) in the protected areas have the right to use the forest and forest products as determined in the allocation plan of the protected area and related regulation.

#### **3.2.5 Law on National Heritage No. 08/PDR (2005)**

40. This law provides the regulations and measures for the administration, use, protection, conservation, restoration, and rehabilitation of national cultural, historical, and natural heritage. Any individual is prohibited from causing damage to the national cultural and historical heritage, such as archaeological and anthropological sites, encroaching onto historical sites, occupying land in national heritage conservation areas, and changing the original condition of any heritage. Under the law, the protected area of heritage sites is divided into three zones:

- Zone 1, or the central area where the heritage is located and which must be protected and where no construction is permitted;
- Zone 2, or the area surrounding the central area where some activities are permitted to increase the value of zone 1, provided that no damage is caused to the surrounding area; and
- Zone 3, or the administrative area where construction is permitted to serve zones 1 and 2 for the accommodation of tourists.

#### **3.2.6 Law on Water Resources (2013)**

41. This law prescribes the regulations related to the protection, administration, exploitation, use, and development of water and water resources, protection against damage to water or water resources, and rehabilitation of affected areas to assure quality and quantity of water to respond to the people's living requirements. It also prescribes the protection of natural and social environment, river basin management, and flood management. The law covers water diversion, abstraction, impoundment, wastewater discharge, construction along river banks, return of water after use into natural water sources, emergency response during drought, flood, and reservoir safety including irrigation systems.

### **3.2.7 Decree on Pesticide Management (2017)**

42. This Decree defines the principles, regulations and measures regarding the use of pesticides, management and monitoring of pesticide activities to ensure the quality, efficiency and safety for humans, animals, plants and environment with the aim of allowing the agricultural and forest production to be carried out in line with clean, green and sustainable agriculture, capable to ensure regional and international integration, and contribute to the national socio-economic development.

### **3.2.8 Law on Irrigation (2012)**

43. This law establishes guidelines, rules, and measures for the management and monitoring of irrigation operations it requires that all sizes and types of irrigation construction be carried out effectively and in compliance with technical and regulatory standards, with the goal of ensuring water supply, preventing droughts and floods, avoiding damage to agricultural production, enhancing food security, promoting production and reducing poverty.

### **3.2.9 Wildlife and Aquatic Law No. 07/NA (2008)**

44. The law prescribes the regulations to promote sustainable regeneration and utilization of wildlife and aquatic life, without any harmful impact on natural resources or habitats. It restricts anthropogenic pressure on decreasing species and the extinction of wildlife and aquatic resources by encouraging people to understand and recognize the significance of managing, monitoring, conserving, protecting, developing, and utilizing wildlife in a sustainable manner.

### **3.2.10 Law on Construction No. 197/NA (November 2009)**

45. This law prescribes the requirements of all construction activities, including requirements for public works and transportation sector, water supply and sanitation, irrigation and flood protection, among others. Individuals or organizations intending to construct, install, repair, or demolish any structure are required to obtain a permit for construction of the project (Article 31) prior to implementation. Article 34 also specifies the requirements on safety during project execution, such as provision of tools for workers (helmets, shoes, gloves, and glass) and measures to be implemented in case of natural calamities at the construction site.

### **3.2.11 Labor Law (2013)**

46. This law defines the principles, regulations, and measures on administration, monitoring, labor skills development, recruitment, and labor protection. Section IV of the law prescribes the regulations related to labor protection, safety, and the rights of employees.

### **3.2.12 Law on Handling Petitions 012/NA (December 2014)**

47. The *Revised Law on Handling Petitions 012/NA* or the *Grievance Redress Law* was approved by the National Assembly on 5 December 2014 and by the President in 2015. The law provides the objectives, principles, and process of applying and handling different types of grievances, petitions, and complaints that may be raised by citizens.



### 3.3 ENVIRONMENTAL STANDARDS

48. The national environmental standards in Lao PDR are based on the Environmental Protection Law No. 29/NA (December 2012) and Decree on National Environmental Standards issued by the government on 21 February 2017. The standards on water, soil, air, and noise are set under the decree as basis for environmental monitoring and pollution control. The limits set in these national standards are aligned with international standards such as the World Health Organization (WHO) noise guidelines shown in Table 2.

**TABLE 2. NOISE STANDARDS IN LAO PDR AND WHO GUIDELINE VALUES**

AREA	LAO PDR NOISE STANDARDS			WHO/EHS NOISE LEVEL GUIDELINES	
	06H00 – 18H00	18H00 – 22H00	22H00 – 06H00	DAYTIME 07H00 – 22H00	NIGHTTIME 22H00 – 07H00
Quiet areas: hospitals, libraries, kindergarten, and schools	50	45	40	55	45
Residential areas: hotels and houses	55	55	45		
Commercial and service areas	70	70	50	70	70
Small industrial factories located in residential areas	70	70	50		

EHS = Environment, Health, Safety, Lao PDR = Lao People's Democratic Republic; WHO = World Health Organization.

### 3.4 INTERNATIONAL CONVENTIONS

49. Lao PDR is signatory to a number of international conventions, such as:

- *Stockholm Conventions on Persistent Organic Pollutants (POPs)*: Lao PDR signed the Stockholm Convention in 2002 and ratified it in June 2006. The MONRE (previously the Water Resources and Environment Administration or WREA) serves as contact for the Stockholm Convention. A National Implementation Plan (NIP) was prepared with assistance from UNIDO.
- *Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal*. Lao PDR became a signatory to the Basel Convention on 21 September 2010.
- *RAMSAR Convention on Wetlands*. Lao PDR is a contracting party to the Ramsar Convention to which it acceded in 2010. It has two sites designated as wetlands of international importance, i.e., Being Kiat Ngong wetlands in Champasak and the Xe Champone wetlands in Savannakhet. Lao PDR pursues an active policy in biodiversity conservation and has taken initiatives to support wetlands conservation and sustainable use.
- *Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*. Lao PDR was a signatory to CITES, which entered into force 1 July 1975.
- *Kyoto Protocol and the United Nations Framework Convention on Climate Change (UNFCCC)*. The latter was ratified by Lao PDR in 1995 and the Kyoto Protocol in 2003. The national strategy of Lao PDR on climate change builds on the country's commitment to the UNFCCC.
- *Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade*. Lao PDR became the 157th party to the Rotterdam Convention on 10 September 2010.
- *Vienna Convention for the Protection of the Ozone Layer*. Lao PDR became a signatory to the Vienna Convention on 19 November 1998.

## **4 DESCRIPTION OF THE SUB-PROJECT**

50. The Nam Khaen River and Nam Yang 3 River Irrigation Sub-Projects are the second batch of subprojects of the SRIWSM. The SRIWSM is expected to have a net positive impact on subproject catchments as it will reduce the risk from dry season cropping of the irrigation command areas. It will also support a potential increase in income from higher crop values. This will reduce the pressure on land conversion for upland cropping. Such land conversion is identified as a major driver of forest loss as crops are grown on steep, bare ground subject to high rates of soil erosion in the wet season. Figure 1 shows the location of the Sub-Projects in Xayabuly Province. Plate 1 provides the imagery of the locations of the proposed sub-projects in Xayabuly Province.

### **4.1 NAM KHAEN RIVER IRRIGATION SYSTEM SUB-PROJECT**

#### **4.1.1 Existing Conditions**

51. The headworks for the Nam Khaen River Irrigation System consist of an earthen dam, built with 95% compacted earthen clay, with a control gate and canal to one side. The earth dam on the Nam Khaen is in Ban Yai-Na La village, Xayabouly district, Xayabouly province at N=2013654 E= 742215 (WGS 1984 UTM Zone 48 N). The Nam Khaen River Irrigation System bounded in the North and East by the Phouhong Mountains to the South by Ban Nala village and to the west by Thamlod Village. The project is along the national road number 4 connecting from Xayabouly to Luang Prabang Province.

52. Construction started in 2009 and was completed in 2012. The length of the dam is 150 meters, and the height is 20 meters. The maximum reservoir area is 37 hectares. The storage volume is 2.25 million cubic meters, and the usable storage is 2.23 million cubic meters. The canal system has 13 distribution canals with a total length of 16,447 m. The details are: Main Canal MC with a total length of 5,149 m, made of stone; Secondary canals with a total length of 1,849m made of earth and Tertiary canals with a total length of 9,449 m made of brick. The total value was 53.8 billion kips. The Nam Khaen irrigation scheme currently supports 289 hectares of rice production in the rainy season and 50 hectares in the dry season. The Nam Khaen River flows year-round.

53. Agricultural production supported by the project includes rice production, garden crops, and animal husbandry. The population growth rate in the project area is high, while the food production area is limited. Years with limited rainfall and resulting low yields of paddy rice production create food security challenges for the local population. In these years there is increased pressure on the upland forests and natural streams to supplied food.

#### **4.1.2 Proposed Development**

54. The proposed Nam Khaen River Irrigation Sub-Project in the Xayabouly district, Xayabouly province will refurbish an existing irrigation scheme that directly supports the three (3) villages of Nala, Nakhoun, and Nathone and their 549 families. The Nam Khaen irrigation scheme currently supports 289 hectares of rice production in the rainy season and 50 hectares in the dry season. With a refurbished irrigation system, the dry season irrigation is expected to be expanded to 120 hectares. The proposed development will also include the provision of fish passages in the headworks/weirs.

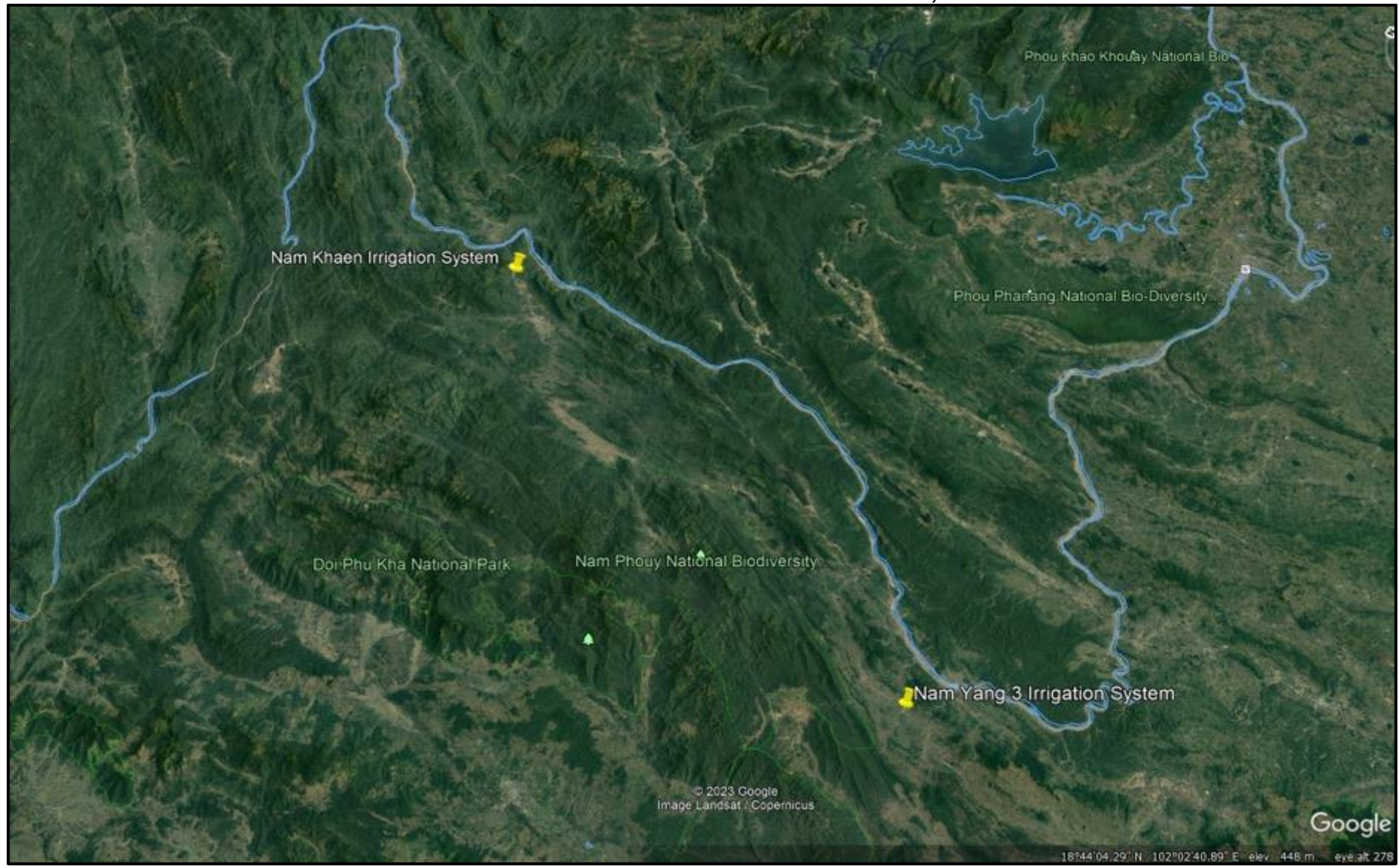
55. The project is included in the comprehensive agricultural development 2020 to 2025 strategy of the province under the national economic development plan. The project once refurbished will support agricultural production for food security and will address poverty reduction through an improved system for water delivery and the increased dry season irrigation.

FIGURE 1. LOCATION MAP OF THE XAYABULY PROVINCE SUB-PROJECTS





**PLATE 1. IMAGERY OF THE LOCATION OF THE PROPOSED SUB-PROJECTS, XAYABULY PROVINCE**



56. The proposed Nam Khaen Irrigation Sub-Project involves the rehabilitation of the earthen dam headwork, intake, spillway as well as the canal system. The main and secondary canals are constructed of concrete for ease of maintenance. The canal design is based on the experience of the previous irrigation projects to ensure the efficiency of water use, and to minimize the loss of production area. The canal layout is based on the existing scheme and considers the irrigated area and construction cost. The canal system is divided into main and secondary canals as shown in the Table 3 below. Table 4 present the canal dimensions of the system.

**TABLE 3. CANAL SYSTEM, PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM**

CANAL LEVEL	LENGTH (M)	TOTAL COMMAND AREA (HA)	SPECIFIC AREA (HAS)
MC	402	298	298
RMC	418	98	98
LMC	2316	200	200
LSC-1	555	60	60
LSC-2	2195	73	73
LTC-1	1510	46.1	46.1
LTC-2	500	54.1	54.1
LTC-3	550	27.1	27.1

**TABLE 4. CANAL DIMENSIONS OF THE PROPOSED NAM KHAEN RIVER IRRIGATION**

Sta.	Canal Name	Location (Lat)	Length	Area	Starting Point	Value (m³/s)	Size																				Remarks
							b		h		t		a		b		c		d		e		f		g		
							m	cm	m	cm	m	cm	m	cm	m	cm	m	cm	m	cm	m	cm	m	cm	m	cm	
1	MC	0+000-0+402	402	298,00	2,00	0,771	1,20	0,73	0,00	0,016	0,0010	0,88	2,86	0,33	33,94	0,94	0,835	0,27	1,00	4,00	402	1,20	1,20	1,00	0,00	Steel reinforcement	
2	RMC	0+000-0+418	418	98,00	2,00	0,254	0,80	0,53	0,00	0,016	0,0015	0,32	1,86	0,19	47,45	0,80	0,250	0,24	1,90	4,00	418	0,80	0,80	0,77	0,00	Steel reinforcement	
3	LMC	0+000-0+118	2,316	200,00	2,00	0,518	0,80	0,70	0,00	0,016	0,0015	0,56	2,20	0,25	49,76	0,97	0,544	0,40	4,00	1,00	2,316	0,80	0,80	1,10	0,00	Steel reinforcement	
4	LSC-1	0+000-0+555	555	60,00	2,00	0,155	0,50	0,35	0,00	0,014	0,0018	0,18	1,20	0,15	53,82	0,79	0,339	0,15	3,00	1,00	555	0,50	0,50	0,50	0,00	Steel reinforcement	
5	LSC-2	0+000-2+395	2,195	73,00	2,00	0,189	0,60	0,60	0,00	0,014	0,0018	0,56	1,80	0,20	54,62	0,98	0,352	0,20	3,00	1,00	2,195	0,60	0,60	0,80	0,00	Steel reinforcement	
6	LTC-1	0+000-1+5+10	1510	46,06	2,00	0,119	0,55	0,30	0,00	0,014	0,0018	0,17	1,15	0,14	51,88	0,76	0,129	0,20	1,00	3,00	1510	0,55	0,55	0,50	0,00	Steel reinforcement	
7	LTC-2	0+000-0+500	500	54,08	2,00	0,140	0,50	0,30	0,00	0,014	0,0018	0,15	1,10	0,14	51,25	0,76	0,114	0,20	1,00	3,00	500	0,50	0,50	0,50	0,00	Steel reinforcement	
8	LTC-3	0+000-0+550	550	27,10	2,00	0,070	0,40	0,30	0,00	0,014	0,0018	0,12	1,00	0,12	50,17	0,70	0,083	0,20	3,00	1,00	550	0,40	0,40	0,50	0,00	Steel reinforcement	

57. The hydraulic calculations for the structures along the canal were undertaken to ensure that the supply of water through the structures will meet the irrigation water needs and also considers ease of management. Table 5 show the summary of structures along the canals.

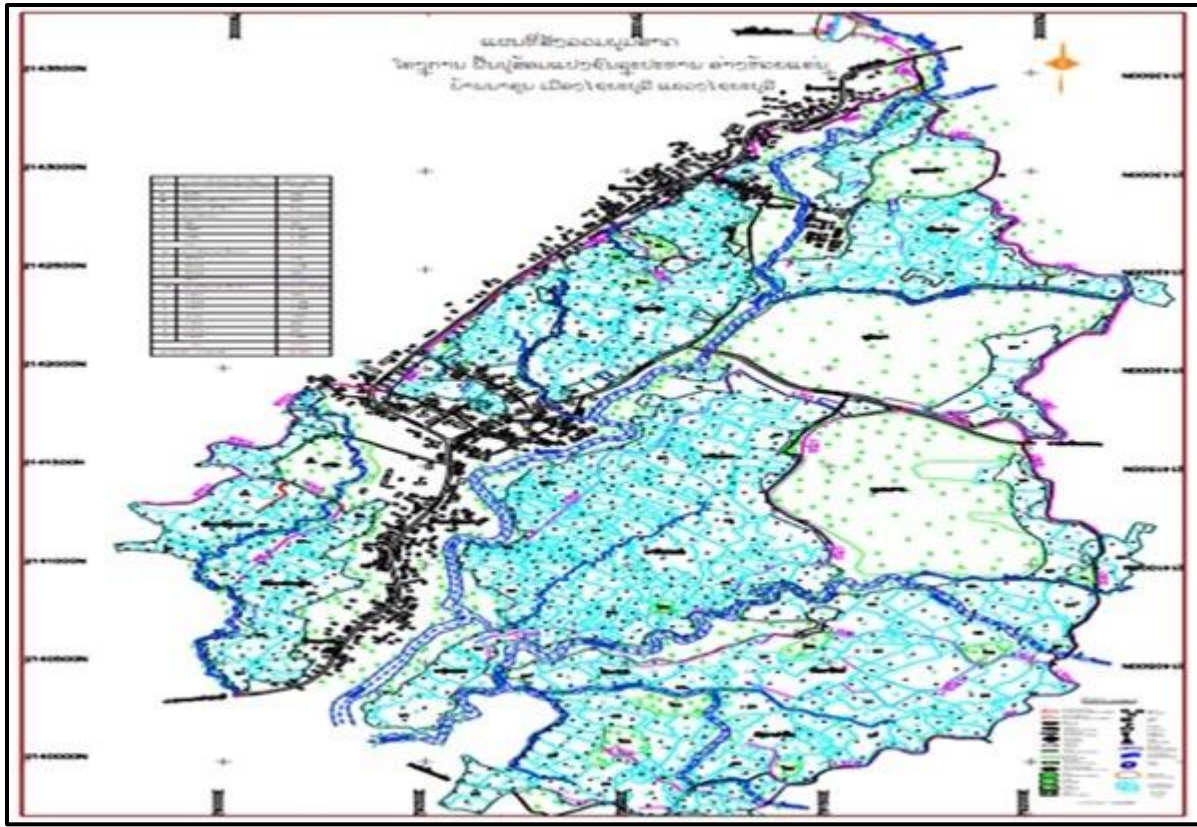
**TABLE 5. SUMMARY OF STRUCTURES ALONG THE CANALS**

CANAL NAME	STRUCTURE	QUANTITY
Headworks	Lockhouse	1
MC	Pipe for ice fields	5
	Water distribution building	1
RMC	Pipe under road	3
	Pipe for rice fields	22
	Bridge over the canal	4
	Pipe for sub-canal	2
LMC	Pipe for rice fields	19
	Bridge building over the canal	6
	Water distribution building	2
LSC-1	Pipe for rice fields	5
	Pipe under road	1
	Pipe for sub-canal	2
LSC-2	Bridge building over the canal	1
	Pipe for rice fields	10
	Pipe under road	1
	Water distribution building	1
LTC-1	Pipe for rice fields	16
	Pipe at the canal end	1
LTC-2	Pipe for rice fields	20
	Pipe at the canal end	1
LTC-3	Pipe for rice fields	10
	Pipe at the canal end	1



58. Figure No. 2 presents the Canal Plan for the proposed Nam Khaen River Irrigation System. Figure No. 3 shows the Schematic Diagram of the Canal Layout. Figures 4 and 5 presents the typical design standard for the main canals.

**FIGURE 2. CANAL PLAN FOR THE PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM**



**FIGURE 3. SCHEMATIC DIAGRAM OF THE CANAL LAYOUT, PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM**

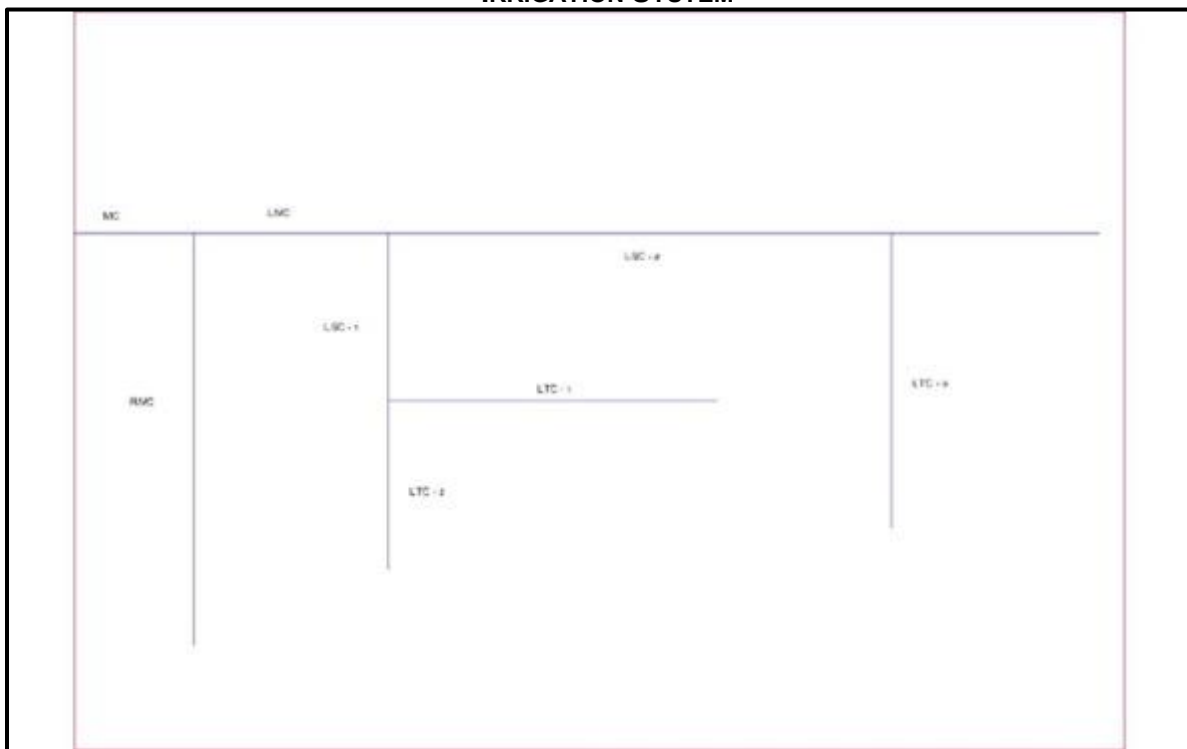


FIGURE 4. TYPICAL DESIGN STANDARD FOR THE MAIN CANALS, PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM

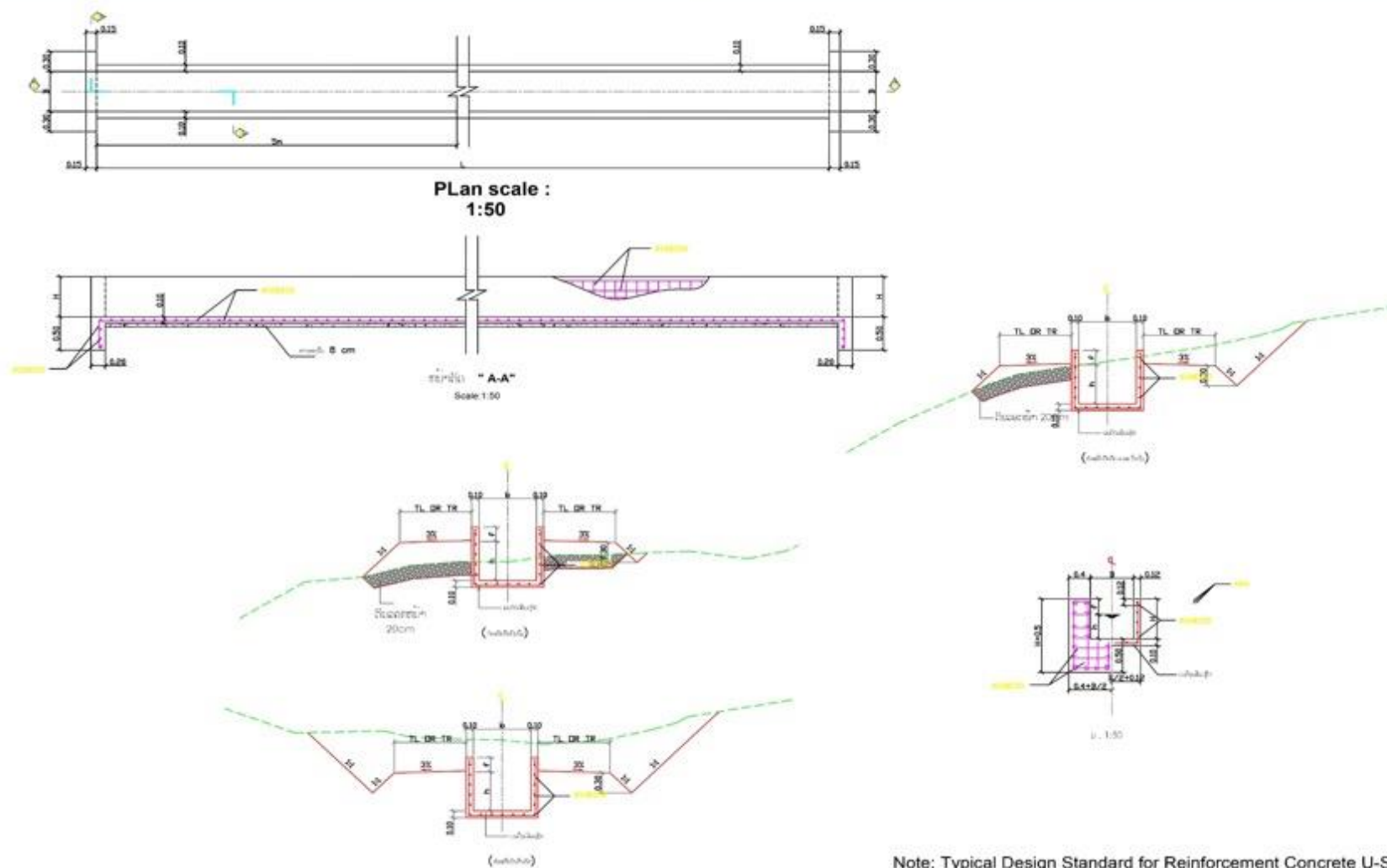
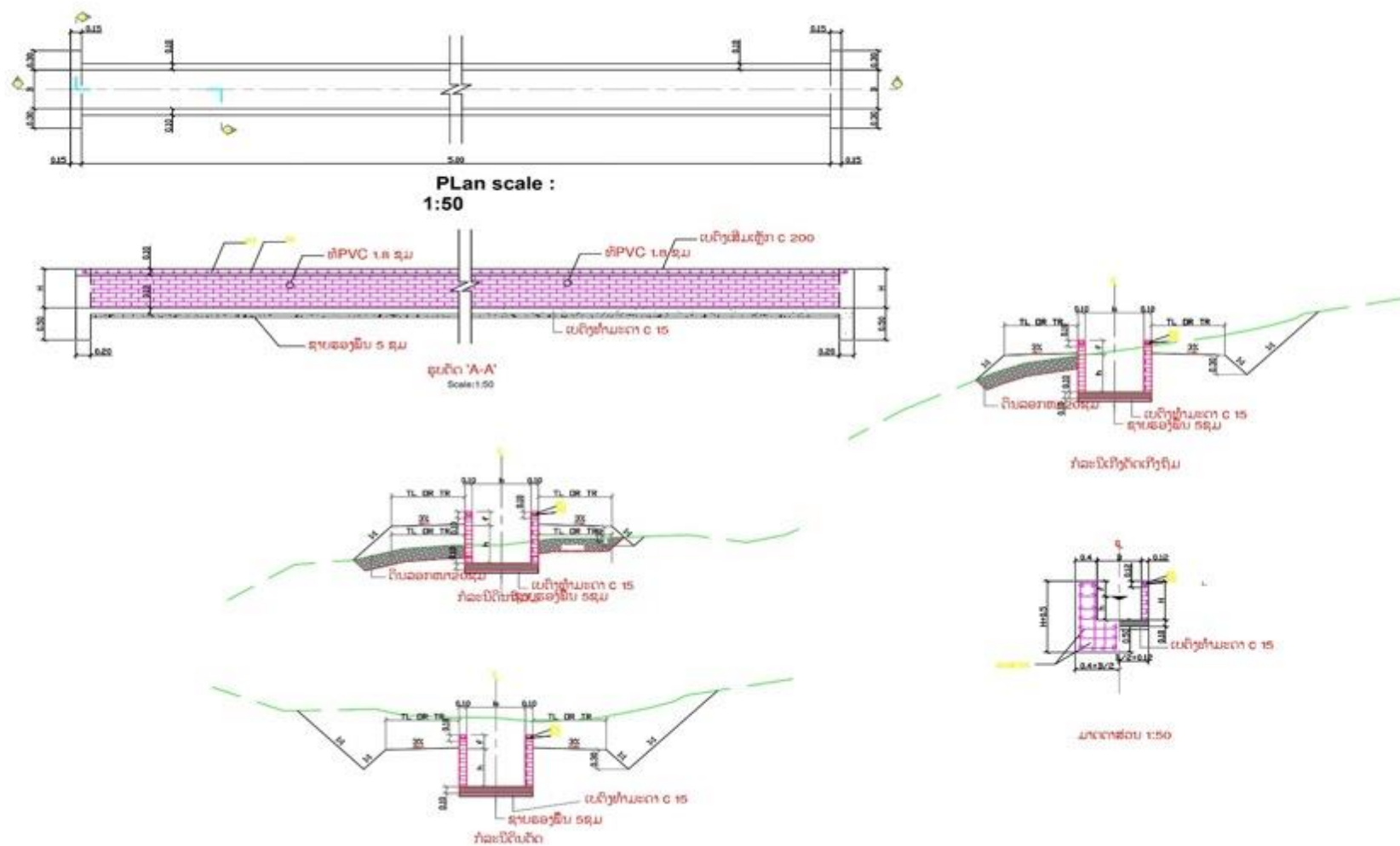


FIGURE 5. TYPICAL DESIGN STANDARD FOR THE MAIN CANALS, PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM





### 4.1.3 Hydrological Study

59. The requisite hydrologic study was undertaken during the design stage of the sub-project. The details of this study are provided in the Feasibility Study for the proposed sub-project. It can be provided upon request. The Nam Khaen River Watershed is located in Yai-Na Village, Xayabouly District, Xayabouly Province. It has total area of 11.694 square kilometers. Table 6 below presents the characteristics of the Nam Khaen River Watershed.

**TABLE 6. NAM KHAEN RIVER WATERSHED CHARACTERISTICS**

AREA (KM <sup>2</sup> )	WATERSHED SLOPE (%)	LENGTH OF RIVERS (KM)	LENGTH OF MAIN RIVER (KM)	LENGTH OF TRIBUTARIES (KM)	RIVER SLOPE (%)
11.7	97.87	10.85	5.83	5.02	78

60. The Houay-Khaen Irrigation project has a total area of 298 ha in the rainy season, 100 hectares of dry season rice, and 120 hectares of vegetables. The plant water requirements were calculated considering present climate information. The plant water requirements are:

- 2.0 l/s/ha for dry season rice
- 2.0 l/s/ha for rainy season rice
- 0.37 l/s/ha for dry season beans

61. For the design, 2.0 l/s/ha was used to guarantee a sufficient water supply. The calculation of water requirements is presented in the Feasibility Study for the proposed sub-project and considers recent precipitation, and evaporation data. According to the parameters used in the design, the annual rainfall was set as 600 mm. The design guarantee of a safe water supply was set as P=85% of the volume. The 100-year flood peak was calculated using Sokolov and it was determined that this is 31.50m<sup>3</sup>/s. The results are shown in Tables 7 to 9.

**TABLE 7. SAFE WATER SUPPLY PARAMETERS**

WATERSHED	WATERSHED AREA (KM <sup>2</sup> )	ANNUAL VOLUME (M <sup>3</sup> /S)	VOLUME P=85% (M <sup>3</sup> ) * 106	CALCULATION METHOD
Houay-Khaen	11.7	0.50	10.29	Average Monthly Rainfall

**TABLE 8. DETERMINATION OF SAFE WATER SUPPLY VOLUME**

ATTRIBUTE	ANNUAL WATER SUPPLY						
	AVERAGE KP MEAN	50%	75%	80%	85%	90%	95%
VOLUME 106 (M <sup>3</sup> )	5.847	0.959	0.746	0.7	0.654	0.608	0.562
AMOUNT (M <sup>3</sup> /S)	0.19	0.18	0.14	0.13	0.12	0.11	0.10

**TABLE 9. DISTRIBUTION OF WATER SUPPLY VOLUME FOR EACH MONTH AT 85%**

ATTRIBUTE	DAYS	31	28	31	30	31	30	31	31	30	31	30	31
	MONTH	1	2	3	4	5	6	7	8	9	10	11	12
	%	0.53	0.36	0.22	0.73	4.67	8.99	21.2	27.4	25.5	7.75	1.89	0.77
WATER QUANTITY Q: (M <sup>3</sup> /S)		0.008	0.006	0.003	0.011	0.067	0.133	0.303	0.391	0.376	0.111	0.028	0.011
WATER VOLUME W: 106(M <sup>3</sup> )		0.020	0.014	0.008	0.028	0.179	0.344	0.811	1.048	0.975	0.296	0.072	0.029

62. The water requirements for rice fields and dry season crops use a design requirement of q=2.0 l/s/ha. The Feasibility Study provides the detailed calculations for rice fields and dry season crops. Tables 10 and 11 presents the water requirements of rice and sweet corn respectively. Tables 12 and 13 shows the summary of the water requirements and water balance

63. Figure 6 show the layout of the Proposed Nam Khaen River Irrigation System Sub-Project. Plates 2 and 3 presents the Imagery of the Location and photos of the Nam Khaen River Irrigation System Sub-Project.

**TABLE 10. RICE WATER REQUIREMENT (RIWR)**

DAY	30	30	30	30	30	30	30	30	30	30	30	30
MONTH	11	12	1	2	3	4	5	6	7	8	9	10
PRODUCTION SEASON	<b>DRY SEASON</b>						<b>RAINY SEASON</b>					
GROWTH PERIOD		SOIL PREPARATION SEEDING	GROWTH PERIOD	MID TERM	FINAL TERM		SOIL PREPARATION SEEDING	GROWTH PERIOD			MID TERM	FINAL TERM
SEASONAL KC COEFFICIENT/MONTH		1.10	1.23	1.18	1.00			1.10	1.10	1.20	1.15	1.00
EVAPORATION ETO CROP (MM/M)	-	33.29	44.23	58.77	29.75			52.30	43.34	41.55	36.95	14.55
SEEDING (MM)	40.00						40.00					
SOIL SATURATED WITH WATER (MM)	200.00						200.00					
WATER INFILTRATION RATE		114.00	228.00	228.00	228.00		114.00	228.00	228.00	228.00	228.00	228.00
WATER LEVEL (MM)		100.00						50.00				
USEFUL RAIN, PE (MM/M)					20.26		114.71	131.94	-	207.09	153.39	53.26
RIWR (MM/M)	240.00	247.29	272.23	286.77	237.49		239.29	198.36				
RIWR (MM/D)	8.00	8.24	9.07	9.56	7.92		7.98	6.61				
EFFICIENCY OF RECEIVING WATER	0.60	0.60	0.60	0.60	0.60		0.60	0.60	0.60	0.60	0.60	0.60
AWR (L/S/HA)	1.54	1.59	1.75	1.84	1.53		1.54	1.28	-			
EFFICIENCY OF SUPPLYING WATER IN THE SUB-CANAL	0.90	0.90	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.90
SUB-CANAL WATER REQUIREMENT (L/S/HA)	1.71	1.77	1.94	2.05	1.70		1.71	1.42				
EFFICIENCY OF SUPPLYING WATER IN THE MC	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
MC WATER REQUIREMENT (L/S/HA)	1.80	1.86	2.05	2.16	1.79		1.80	1.49				

**TABLE 11. SWEET CORN WATER REQUIREMENT**

DAY	30	30	30	30	30	30	30	30	30	30	30	30
MONTH	11	12	1	2	3	4	5	6	7	8	9	10
PRODUCTION SEASON			<b>DRY SEASON</b>						<b>RAINY SEASON</b>			
GROWTH PERIOD			IS	CDS	MSS	LSS						
SEASONAL KC COEFFICIENT/MONTH			0.53	0.98	1.05							
EVAPORATION ETO CROP (MM/M)	-	-	19.14	48.81	41.65	-	-	-	-	-	-	-
USEFUL RAIN, PE (MM/M)					20.26	63.36	114.71	131.94	214.69	207.09	153.39	53.26
CIWR (MM)	-	-	19.14	48.81	21.39		-	-				
CIWR (MM/D)	-	-	0.64	1.63	0.71		-	-				
EFFICIENCY OF RECEIVING WATER	0.90	0.90	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.90
AWR (L/S/HA)	-	-	0.12	0.31	0.14							
EFFICIENCY OF SUPPLYING WATER IN THE SUB-CANAL	0.90	0.90	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.90
SUB-CANAL WATER REQUIREMENT (L/S/HA)	-	-	0.14	0.35	0.15		-	-				
EFFICIENCY OF SUPPLYING WATER IN THE MC	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
WATER REQUIREMENT THROUGH THE MC (L/S/HA)	-	-	0.14	0.37	0.16		-	-				

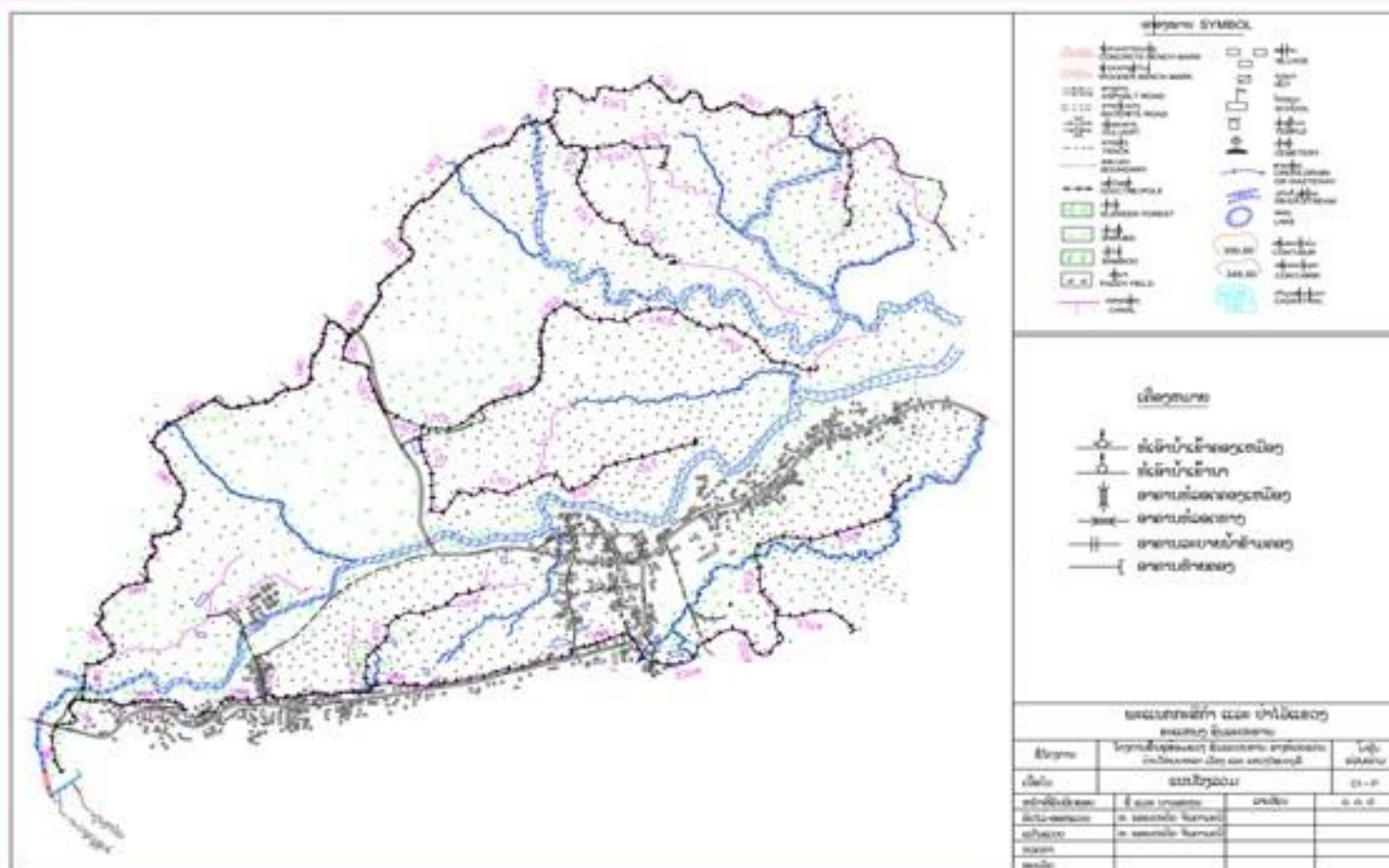
**TABLE 12. SUMMARY OF THE WATER REQUIREMENTS FOR CROPS PER SEASON**

OFF-SEASON RICE FARMING							
MONTHS	11	12	1	2	3	4	TOTAL
Rice Water Requirement RIWR (mm)	240.00	268.14	313.93	328.47	279.19		1429.737
Volume of water P (mm/m)	25.02	7.82	14.09	10.72	50.43		108.080
Water flowing coefficient	0.34	0.34	0.34	0.34	0.34		
Water flowing into basin (mm)	8.507	2.659	4.791	3.645	17.146		36.747
Water demand usage (mm)	231.49	265.49	309.14	324.83	262.05		1,392.99
Water demand usage (m <sup>3</sup> /ha)	2,314.93	2,654.86	3,091.39	3,248.25	2,620.46		13,929.89
IN-SEASON RICE FARMING							
MONTHS	5	6	7	8	9	10	TOTAL
Rice Water Requirement RIWR (mm)	260.138	240.062			153.258	230.968	884.44
Volume of water P (mm/m)	195.813	181.213			222.990	97.830	697.85
Water flowing coefficient	0.34	0.34			0.34	0.34	
Water flowing into basin (mm)	66.577	61.613			75.817	33.262	237.27
Water demand usage (mm)	193.561	178.450			77.441	197.723	647.18
Water demand usage (m <sup>3</sup> /ha)	1935.615	1784.499			774.409	1977.233	6,471.76
PLANTING CROPS IN THE DRY SEASON							
MONTHS	1	2	3	4	5	6	TOTAL
Rice Water Requirement RIWR (mm)	19.136	48.809	21.392				89.337
Volume of water P (mm/m)	14.090	10.720	50.430				75.240
Water flowing coefficient	0.34	0.34	0.34				
Water flowing into basin (mm)	4.791	3.645	17.146				25.582
Water demand usage (mm)	14.346	45.164	4.246				63.755
Water demand usage (m <sup>3</sup> /ha)	143.456	451.641	42.458				637.555

**TABLE 13. WATER BALANCE**

DETAIL	AREA (HA)	WATER DEMAND PER SEASON (M <sup>3</sup> /HA)	VOLUME OF WATER USED	
			RAINY SEASON	DRY SEASON
The volume of water flowing into the basin			4,843,000	2,914,415
Dry season	298	6,472	1,928,584	
Wet season	100	13,930		1,393,000
HVC Plants	120	638		76,506
Calculate the water balance per area per year			2,914,415	1,444,909

**FIGURE 6. LAYOUT OF THE PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM SUB-PROJECT**





**PLATE 2. IMAGERY OF THE LOCATION OF THE PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM**



**PLATE 3. PHOTOS OF PROPOSED NAM KHAEN RIVER IRRIGATION SYSTEM SUB-PROJECT**



## **4.2 NAM YANG 3 RIVER IRRIGATION SYSTEM SUB-PROJECT**

### **4.2.1 Existing Conditions**

64. The Nam Yang 3 Irrigation System is located in Palai Village about 25 Km from Paklai District, Xayabuly Province at coordinates N=2013654 and E= 742215. It was constructed in 2001 and completed in 2005. The headworks consists of a reservoir with a concrete outlet structure. The main irrigation canal is on the left bank and was constructed as an earth canal. There is one main canal, two secondary canals, and 11 sub-canals on the left and 9 sub-canals on the right.

65. The construction budget was 22,260 billion kip. The existing Nam Yang 3 Irrigation System provide water to 550 hectares in the rainy season and 400 hectares in the dry season. The Nam Yang 3 Irrigation System supports the three villages of Palai, Latsavang and Pongwan. The headwork is an earthen dam 17.28 meters high, 7 meters wide, and 219 meters long. The reservoir can store 5.5 million cubic meters of water with a usable water volume of 4.5 million cubic meters. The catchment area is 272.4 square kilometers. The headworks are operational. The Nam Yang River is the main source of water with the Nam Pone River as a secondary source. Both rivers flow throughout the year.

66. Due to the deteriorated state of the earth canal system, there is a problem of sufficient water reaching the irrigated areas. Some areas of the irrigation scheme rely on rainwater only given the poor state of the canal distribution system. In years of limited rainfall, it is difficult to grow rice, and the rice fields become abandoned or yields are low creating food security issues with the local population.



## 4.2.2 Proposed Development

67. The proposed Nam Yang 3 River Irrigation System Sub-Project will involve the rehabilitation of the earthen dam headwork, reservoir with a reinforced concrete spillway and intake and the provision of fish passages in the headworks/weirs. The dam height is 17.28 m and 219 m length with a crest of 7m.

68. The proposed Nam Yang 3 River Irrigation System Sub-Project includes 2 Main Canals (MCs), 2 Secondary Canals (SCs) and 11 Tertiary Canals (TCs) at the left of the SCs and 11 Tertiary Canals at the right of the SCs. The proposed designed irrigated area for the Nam Yang 3 Irrigation System Sub-Project is 550 ha during the rainy season and 400 ha for the dry season.

69. The canal layout is based on the original schemes, which consider the irrigated area and construction cost. The canal system is divided into main and secondary canals as shown in Table 14. The hydraulic calculations for the structures along the canal were undertaken to ensure that the supply of water through the structures will meet the irrigation water needs and also considers ease of management. Table 15 show the summary of structures along the canals. Table 16 present the canal dimensions of the system.

70. Figure 7 presents the Canal Plan for the proposed Nam Yang 3 River Irrigation System. Figure 8 shows the Schematic Diagram of the Canal Layout. Figure 9 and 10 presents the typical design standard for the main canals.

**TABLE 14. CANAL SYSTEM, PROPOSED NAM YANG 3 RIVER IRRIGATION SYSTEM SUB-PROJECT**

CANAL LEVEL	LENGTH (M)	TOTAL COMMAND AREA (HA)	SPECIFIC AREA (HAS)
MC	413	418,63	418,63
RMC	4,200	242,11	242,11
LMC	4,958	182,60	182,60
LMC-9R	550	21.27	21.27
LMC-10R	800	15.02	15.02
LMC-11R	218	7.63	7.63
RMC-1R	400	13.21	13.21
RMC-1L	560	17.72	17.72
RMC-3L	350	10.12	10.12
RMC-5L	500	59.84	50.85
RMC-3R	1100	42.14	42.14

**TABLE 15. SUMMARY OF STRUCTURES ALONG THE CANALS**

CANAL NAME	STRUCTURE	QUANTITY
Main Canal (MC)	Water Separation Buildings	1
Main Canal (RMC)	Buildings of the canal bridges	4
	Pipes underneath the canals	3
	Water Separation Buildings	8
	Water Supply Pipes to Rice Paddy	1
Main Canal (LMC)	Buildings of the canal bridges	5
	Pipe underneath the canals	4
	Water Separation Buildings	10
LMC-9R	Water Supply Pipes to Rice Paddy	3
	Buildings of the canal bridges	1
LMC-10R	Water Supply Pipes to Rice Paddy	7
	Buildings of the canal bridges	1
RMC-1R	Water Supply Pipes to Rice Paddy	5
	Buildings of the canal bridges	1
RMC-1L	Water Supply Pipes to Rice Paddy	9
	Buildings of the canal bridges	1



**TABLE 16. CANAL DIMENSIONS, PROPOSED NAM YANG 3 RIVER IRRIGATION SUB-PROJECT**

CANAL	(KM)	(M)	(HA)	(L/S ~HA)	Q (M3/S)	B (M)	H (M)	M	N	I	A (M2)	P (M)	R (M)	C	V (M/S)	Q* (M3/S)	FR (M)	DR (M)	DL (M)	L (M)	B (M)	B (M)	H (M)	M*H (M)
Mc	0+000-0+413	413	427.62	3.00	1.660	3.00	1.20	1.00	0.025	0.0002	5.04	6.39	0.79	38.44	0.48	2.433	0.50	1.00	4.00	413	3.00	6.40	1.70	1.70
McR	0+000-4+246	4,246	242.11	3.00	0.940	2.00	1.20	1.00	0.025	0.0002	3.84	5.39	0.71	37.80	0.45	1.732	0.40	1.00	4.00	4,246	2.00	5.20	1.60	1.60
McL	0+000-4+958	4,958	182.60	3.00	0.709	2.00	1.20	1.00	0.025	0.0002	3.84	5.39	0.71	37.80	0.45	1.732	0.40	4.00	1.00	4,958	2.00	5.20	1.60	1.60
McL-9R	0+000-0+550	550	21.27	3.00	0.083	0.45	0.45	0.00	0.014	0.0005	0.20	1.35	0.15	52.07	0.45	0.091	0.25	3.00	1.00	550	0.45	0.45	0.70	0.00
McL-10R	0+000-0+800	800	15.02	3.00	0.058	0.40	0.40	0.00	0.014	0.0005	0.16	1.20	0.13	51.05	0.42	0.067	0.25	3.00	1.00	800	0.40	0.40	0.65	0.00
McL-11R	0+000-0+218	218	7.63	3.00	0.030	0.35	0.25	0.00	0.014	0.0005	0.09	0.85	0.10	48.90	0.35	0.031	0.20	1.00	3.00	218	0.35	0.35	0.45	0.00
McR-1R	0+000-0+400	400	13.21	3.00	0.051	0.40	0.35	0.00	0.014	0.0005	0.14	1.10	0.13	50.66	0.40	0.057	0.25	1.00	3.00	400	0.40	0.40	0.60	0.00
McR-2R	0+000-0+150	150	2.35	3.00	0.009	0.30	0.20	0.00	0.014	0.0005	0.06	0.70	0.09	47.43	0.31	0.019	0.20	3.00	1.00	150	0.30	0.30	0.40	0.00
McR-1L	0+000-0+560	560	17.72	3.00	0.069	0.40	0.45	0.00	0.014	0.0005	0.18	1.30	0.14	51.38	0.43	0.077	0.25	3.00	1.00	560	0.40	0.40	0.70	0.00
McR-3L	0+000-0+350	350	10.12	3.00	0.039	0.35	0.35	0.00	0.014	0.0005	0.12	1.05	0.12	49.93	0.38	0.047	0.25	3.00	1.00	350	0.35	0.35	0.60	0.00
McR-5L	0+000-0+130	130	59.84	3.00	0.232	0.70	0.65	0.00	0.016	0.0005	0.46	2.00	0.23	48.83	0.52	0.237	0.30	3.00	1.00	130	0.70	0.70	0.95	0.00
McR-5L	0+130-0+500	370	50.85	3.00	0.197	0.65	0.65	0.00	0.016	0.0005	0.42	1.95	0.22	48.44	0.50	0.213	0.30	3.00	1.00	370	0.65	0.65	0.95	0.00
McR-3R	0+000-1+100	1,100	42.14	3.00	0.164	0.60	0.60	0.00	0.016	0.0005	0.36	1.80	0.20	47.80	0.48	0.172	0.30	1.00	3.00	1,100	0.60	0.60	0.90	0.00

**FIGURE 7. CANAL PLAN FOR THE PROPOSED NAM YANG 3 RIVER IRRIGATION SYSTEM SUB-PROJECT**

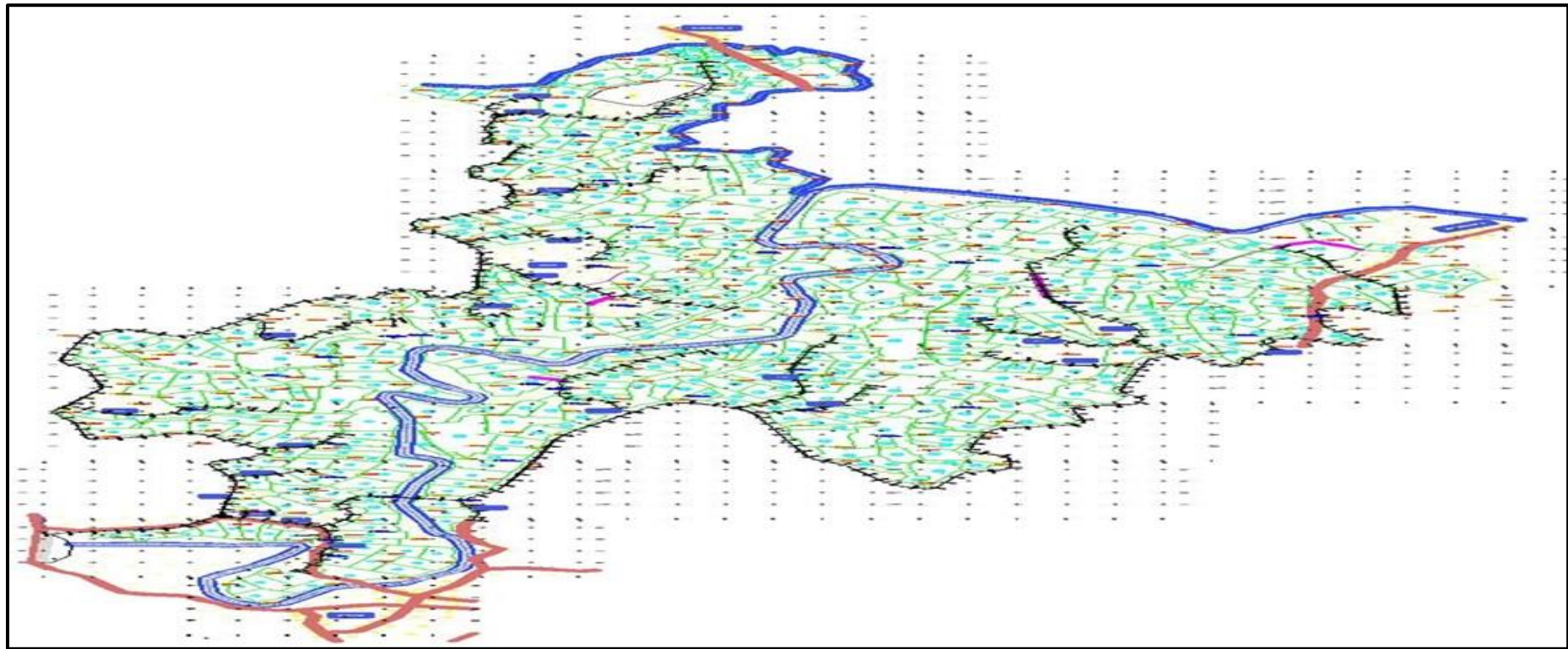
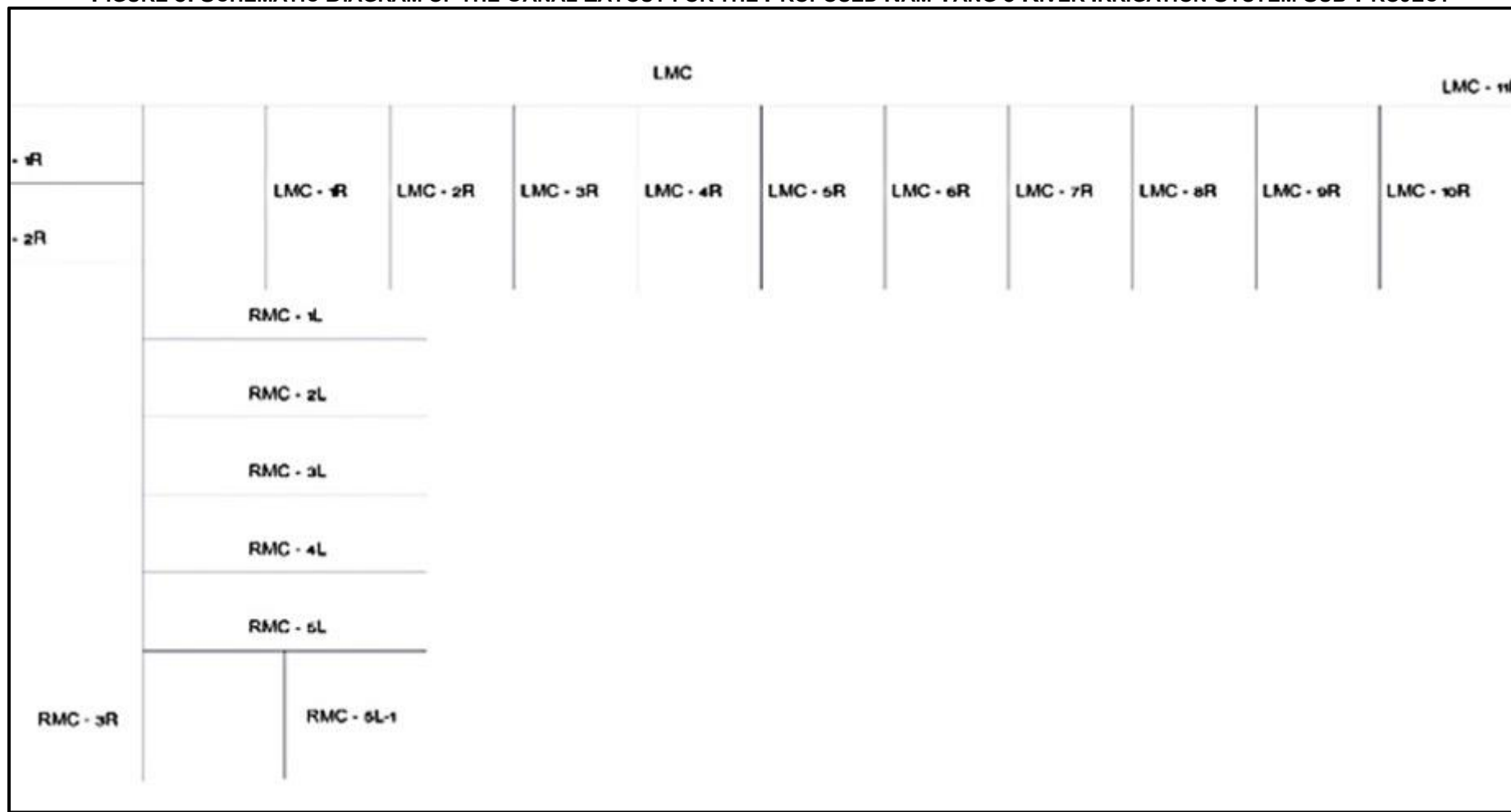


FIGURE 8. SCHEMATIC DIAGRAM OF THE CANAL LAYOUT FOR THE PROPOSED NAM YANG 3 RIVER IRRIGATION SYSTEM SUB-PROJECT



**FIGURE 9. TYPICAL DESIGN STANDARD FOR THE MAIN CANALS, PROPOSED NAM YANG 3 RIVER IRRIGATION SYSTEM**

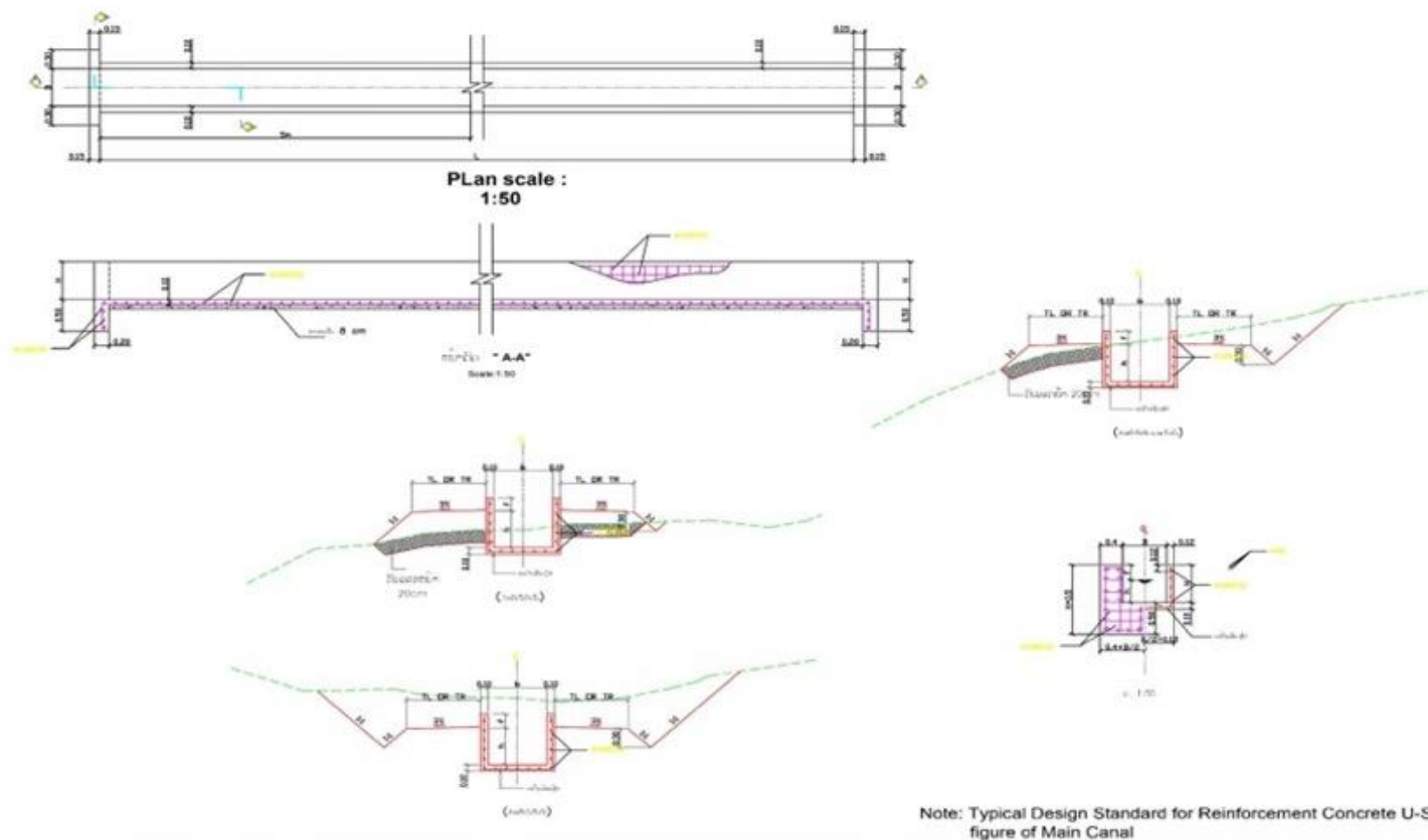
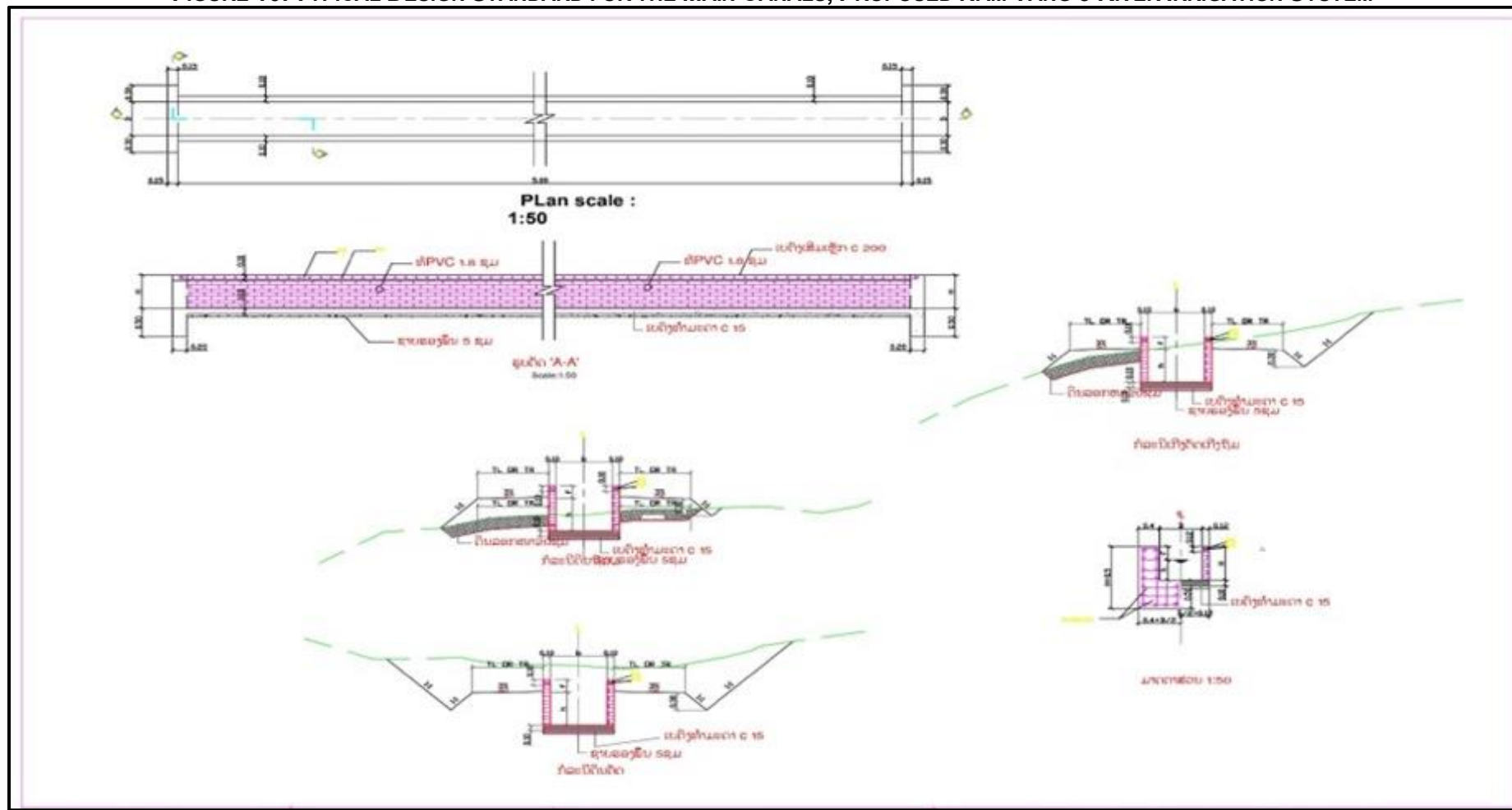


FIGURE 10. TYPICAL DESIGN STANDARD FOR THE MAIN CANALS, PROPOSED NAM YANG 3 RIVER IRRIGATION SYSTEM



### 4.2.3 Hydrological Study

71. The Nam Yang River Watershed is located in Xayabuly Province and has a total area of 272,436 square kilometers. Table 17 below presents the characteristics of the Nam Yang River Watershed.

**TABLE 17. NAM YANG RIVER WATERSHED CHARACTERISTICS**

AREA (KM <sup>2</sup> )	WATERSHED SLOPE (%)	LENGTH OF RIVERS (KM)	LENGTH OF MAIN RIVER (KM)	LENGTH OF TRIBUTARIES (KM)	RIVER SLOPE (%)
272.436	16	57.053	24.62	32.433	130

72. The Nam Yang Irrigation project has a total area of 419 ha in the rainy season, 300 hectares of dry season rice, and 119 hectares of vegetables. The plant water requirements were calculated considering present climate information and are shown below:

- 3.01 l/s/ha for dry season rice
- 3.01 l/s/ha for rainy season rice
- 0.37 l/s/ha for dry season beans

73. For the design, 3.01 l/s/ha was used to guarantee a sufficient water supply. The calculation of water requirements is presented in the Feasibility Study for the proposed sub-project and considers recent precipitation, and evaporation data. According to the parameters used in the design, the annual rainfall was set as 600 mm. The 100-year flood peak was calculated using Sokolov and it was determined that this is 735.60m<sup>3</sup>/s. The design guarantee of a safe water supply was set as P=85% of the volume. The results are shown in Tables 18 to 20 below.

**TABLE 18. WATER AVAILABILITY NAM YANG RIVER**

WATERSHED	WATERSHED AREA (KM <sup>2</sup> )	ANNUAL VOLUME OF WATER (M <sup>3</sup> /S)	VOLUME P=85 (M <sup>3</sup> )*10 <sup>6</sup>	METHOD
Nam Yang River	272.4	2.1	48.26	Average Monthly Rainfall

**TABLE 19. DETERMINATION OF ANNUAL SAFE WATER SUPPLY VOLUME**

ATTRIBUTE	AVE	50%	75%	80%	85%	90%	95%
KP MEAN		0.959	0.746	0.7	0.654	0.608	0.562
VOLUME (10 <sup>6</sup> M <sup>3</sup> )	217.9	209.0	162.6	152.6	142.5	132.5	122.5
WATER QUANTITY (M <sup>3</sup> /S)	6.9	6.6	5.2	4.8	4.5	4.2	3.9

**TABLE 20. DISTRIBUTION OF MONTHLY WATER FLOW IN THE YEAR (85%)**

ATTRIBUTE	DAYS	31	28	31	30	31	30	31	31	30	31	30	31
	MONTH	1	2	3	4	5	6	7	8	9	10	11	12
%		0.53	0.36	0.22	0.73	4.67	8.99	21.2	27.4	25.5	7.75	1.89	0.77
WATER QUANTITY Q: (M <sup>3</sup> /S)		0.28	0.21	0.12	0.40	2.49	4.94	11.28	14.58	14.02	4.12	1.04	0.41
WATER VOLUME W: 10 <sup>6</sup> (M <sup>3</sup> )		0.755	0.513	0.314	1.041	6.657	12.814	30.218	39.056	36.347	11.047	2.694	1.098

74. Table 21 to 23 presents the water requirements of rice and sweet corn and shows the summary of the water requirements for crops per season respectively. Table 24 shows the water balance.

75. Plate 4 shows the layout of the proposed Nam Yang 3 Irrigation System Sub-Project. Plate 5 shows the imagery of the location of Nam Yang 3 Irrigation System Sub-Project. Plate 6 presents the photos of the proposed sub-project area.

**TABLE 21. WATER REQUIREMENTS OF RICE**

DAY	30	30	30	28	30	30	30	30	30	30	30	30
MONTH	11	12	1	2	3	4	5	6	7	8	9	10
PRODUCTION SEASON	DRY SEASON						RAINY SEASON					
GROWTH PERIOD		SOIL PREPARATION SEEDING	GROWTH PERIOD	MID TERM	FINAL TERM		SOIL PREPARATION SEEDING	GROWTH PERIOD			MID TERM	FINAL TERM
SEASONAL KC COEFFICIENT/MONTH		1.10	1.23	1.18	1.00			1.10	1.10	1.20	1.15	1.00
EVAPORATION ETO CROP (MM/M)	-	33.29	44.23	58.77	29.75			52.30	43.34	41.55	36.95	14.55
SEEDING (MM)	40.00						40.00					
SOIL SATURATED WITH WATER (MM)	200.00						200.00					
WATER INFILTRATION RATE		114.00	228.00	228.00	228.00		114.00	228.00	228.00	228.00	228.00	228.00
WATER LEVEL (MM)		100.00						50.00				
USEFUL RAIN, PE (MM/M)					20.26		114.71	131.94	-	207.09	153.39	53.26
RIWR (MM/M)	240.00	247.29	272.23	286.77	237.49		239.29	198.36				
RIWR (MM/D)	8.00	8.24	9.07	9.56	7.92		7.98	6.61				
EFFICIENCY OF RECEIVING WATER	0.60	0.60	0.60	0.60	0.60		0.60	0.60	0.60	0.60	0.60	0.60
AWR (L/S/HA)	1.54	1.59	1.75	1.84	1.53		1.54	1.28	-			
EFFICIENCY OF SUPPLYING WATER IN THE SUB-CANAL	0.90	0.90	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.90
SUB-CANAL WATER REQUIREMENT (L/S/HA)	1.71	1.77	1.94	2.05	1.70		1.71	1.42				
EFFICIENCY OF SUPPLYING WATER IN THE MC	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
MC WATER REQUIREMENT (L/S/HA)	1.80	1.86	2.05	2.16	1.79		1.80	1.49				

**TABLE 22. SWEET CORN WATER REQUIREMENT**

DAY	30	30	30	28	30	30	30	30	30	30	30	30
MONTH	11	12	1	2	3	4	5	6	7	8	9	10
PRODUCTION SEASON			<b>DRY SEASON</b>						<b>RAINY SEASON</b>			
GROWTH PERIOD			IS	CDS	MSS	LSS						
SEASONAL KC COEFFICIENT/MONTH			0.53	0.98	1.05							
EVAPORATION ETO CROP (MM/M)	-	-	19.14	48.81	41.65	-	-	-	-	-	-	-
USEFUL RAIN, PE (MM/M)					20.26	63.36	114.71	131.94	214.69	207.09	153.39	53.26
CIWR (MM)	-	-	19.14	48.81	21.39		-	-				
CIWR (MM/D)	-	-	0.64	1.63	0.71		-	-				
EFFICIENCY OF RECEIVING WATER	0.90	0.90	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.90
AWR (L/S/HA)	-	-	0.12	0.31	0.14							
EFFICIENCY OF SUPPLYING WATER IN THE SUB-CANAL	0.90	0.90	0.90	0.90	0.90		0.90	0.90	0.90	0.90	0.90	0.90
SUB-CANAL WATER REQUIREMENT (L/S/HA)	-	-	0.14	0.35	0.15		-	-				
EFFICIENCY OF SUPPLYING WATER IN THE MC	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95	0.95
WATER REQUIREMENT THROUGH THE MC (L/S/HA)	-	-	0.14	0.37	0.16		-	-				

**TABLE 23. SUMMARY OF THE WATER REQUIREMENTS FOR CROPS PER SEASON**

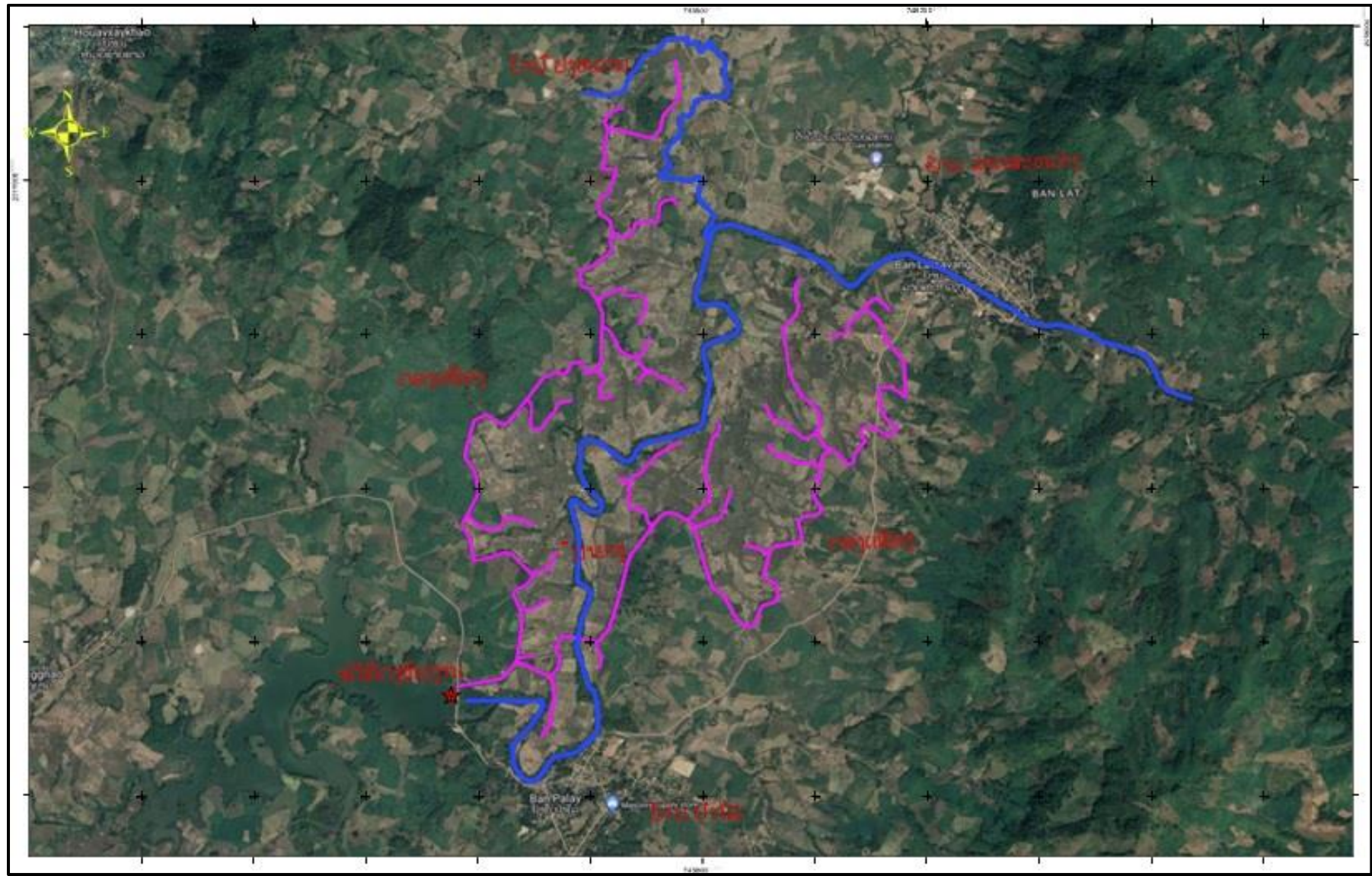
DRY SEASON RICE							
MONTHS	11	12	1	2	3	4	TOTAL
Rice Water Requirement RIWR (mm)	240.00	268.14	313.93	328.47	279.19		1429.737
Volume of water P (mm/m)	25.02	7.82	14.09	10.72	50.43		108.080
Water flowing coefficient	0.34	0.34	0.34	0.34	0.34		
Water flowing into basin (mm)	8.507	2.659	4.791	3.645	17.146		36.747
Water demand usage (mm)	231.49	265.49	309.14	324.83	262.05		1,392.99
Water demand usage (m <sup>3</sup> /ha)	2,314.93	2,654.86	3,091.39	3,248.25	2,620.46		13,929.89
WET SEASON RICE							
MONTHS	5	6	7	8	9	10	TOTAL
Rice Water Requirement RIWR (mm)	260.138	240.062			153.258	230.986	884.44
Volume of water P (mm/m)	195.813	181.213			222.990	97.830	697.85
Water flowing coefficient	0.34	0.34			0.34	0.34	
Water flowing into basin (mm)	66.577	61.613			75.817	33.262	237.27
Water demand usage (mm)	193.561	178.450			77.441	197.723	647.18
Water demand usage (m <sup>3</sup> /ha)	1935.615	1784.499			774.409	1977.233	6,471.76
OTHER CROP CULTIVATION IN DRY-SEASON							
MONTHS	1	2	3	4	5	6	TOTAL
Rice Water Requirement RIWR (mm)	19.136	48.809	21.392				89.337
Volume of water P (mm/m)	14.090	10.720	50.430				75.240
Water flowing coefficient	0.34	0.34	0.34				
Water flowing into basin (mm)	4.791	3.645	17.146				25.582
Water demand usage (mm)	14.346	45.164	4.246				63.755
Water demand usage (m <sup>3</sup> /ha)	143.456	451.641	42.458				637.555

**TABLE 24. WATER BALANCE**

DETAIL	AREA (HA)	WATER DEMAND PER SEASON (M <sup>3</sup> /HA)	VOLUME OF WATER USED	
			RAINY SEASON	DRY SEASON
Volume of water flowing into the basin			36.347.000.000	36.344.290.727
Dry season	419	6472	2.709.273	
Wet season	300	13930		4.178.967
HVC Plants	120	638		75.633
Calculate the water balance per area per year			36.344.290.727	36.340.036.127



PLATE 4. LAYOUT OF THE PROPOSED NAM YANG 3 RIVER IRRIGATION SYSTEM SUB-PROJECT





**PLATE 5. IMAGERY OF THE LOCATION OF NAM YANG 3 RIVER IRRIGATION SUB-PROJECT**





**PLATE 6. PHOTOS OF PROPOSED NAM YANG 3 RIVER IRRIGATION SYSTEM SUB-PROJECT**



## **5 DESCRIPTION OF THE ENVIRONMENT**

### **5.1 PHYSICAL RESOURCES**

76. Xayabury is the main town and seat of the provincial government in Xayabury Province. Xayabury District comprises 77 villages with 22 villages being currently served by the Provincial Nam Papa (PNP). An additional two villages have some existing pipelines, but with no service. The town lies about 100 km to the south-west of Luang Prabang and about 385 km by road northwest of Vientiane.

77. The province, which has a total land area of 16,389 square kilometres, borders Bokeo Province and Oudomxai Province to the north, Luang Prabang Province and Vientiane Province to the east, and (from the south clockwise) the Thai provinces of Loei, Phitsanulok, Uttaradit, Nan and Phayao. Xayabury is the only Laotian province that is completely to the west of the Mekong River. The province of Xayabury is mountainous with the Luang Prabang Range running in a north-south direction forming a natural border with the Thai highlands. Elevations in the mountainous areas of the Province reach 1,000 meters.

### **5.2 GEOLOGY AND NATURAL HAZARDS**

78. Xayabuly Province is not among the areas vulnerable to earthquake hazards. Eight rivers have been identified as being at particular risk of causing flooding throughout the country but the Nam Khaen and Nam Yang 3 Rivers are not included in the identified rivers that cause extreme flooding. The topography within the province is characterized by mountainous terrain and narrow river valleys and is typical of the northern uplands of Laos, however it is not prone to landslides.

### **5.3 AIR QUALITY AND NOISE**

79. Air quality in Xayabuly Province is generally good. There are no industries producing discharges/emissions which result in atmospheric pollution and pollution from vehicular exhaust emissions are not significant given the low levels of traffic and absence of any traffic congestion. The only detrimental effect on air quality is the dust arising from the passage of vehicles over unsealed roads during the dry season. This is an intermittent problem with a minor effect over a limited area of 5 to 10 meters either side of the road. The locations of the project components are relatively far from noise generating activities. There are no industries within the proposed sites so ambient noise levels can be considered very well.

### **5.4 CLIMATE**

80. The climate in the Xayabuly District is characterized by two seasons, the dry and wet seasons. The dry season occurs between November and March while the wet season occurs between April and October. Table 25 show the mean rainfall for the period 2007 to 2016 while Tables 26 to 28 presents the temperature regimes for the period 2010 to 2016 in Xayabuly District.

**TABLE 25. MEAN RAINFALL, XAYABULY DISTRICT, 2007-2016**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	MEAN
2007	0.9	2.0	20.4	119.5	222.8	150.4	79.0	170.5	204.2	256.7	18.3	2.0	103.9
2008	11.6	16.9	43.8	204.3	224.1	153.4	239.5	302.9	199.9	93.9	22.1	31.0	128.6
2009	NT	NT	19.4	151.0	193.2	205.9	189.0	247.7	329.9	45.1	14.7	0.7	139.7
2010	34.4	2.4	34.7	133.0	193.6	93.9	390.7	388.1	253.5	111.6	0.0	55.8	141.0
2011	3.0	8.8	139.5	86.2	190	394.8	212.8	286.8	313.1	45.2	1.0	18.6	141.7
2012	1.9	2.7	21.9	230.6	198.3	182.1	240.6	439.5	116.6	30.4	143.5	1.8	134.2
2013	48.5	NT	40.2	94.4	159.8	159	178.1	307.8	273.1	28.4	38.7	33.7	123.8
2014	0.7	1.0	10.5	120.5	211.6	198.6	234.9	343.6	322.0	88.1	45.1	2.7	131.6
2015	70.0	5.4	86.0	86.1	99.6	161.3	203.3	250.5	363.3	52.1	23.9	86.9	124.0
2016	77.7	1.1	24.0	53.6	290.9	113.5	291.3	427.7	313.6	152.3	46.5		162.9

Source: Department of Meteorology and Hydrology, Vientiane

**TABLE 26. MAXIMUM TEMPERATURE, XAYABURY DISTRICT, 2010-2016**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	MEAN
2010	29.7	33.6	33.6	36.6	34.8	33.4	32.1	30.6	31.5	30.3	29.4	27.9	32.0
2011	26.6	31.4	28.8	32.7	31.8	31.3	31.3	30.5	30.6	30.1	29.4	25.9	30.0
2012	28.6	32.5	33.3	34.0	32.3	31.9	30.7	30.9	31.6	31.9	30.8	29.0	31.5
2013	28.1	31.8	33.2	35.0	33.9	31.9	31.2	31.2	30.8	30.1	29.4	24.8	31.0
2014	26.4	31.8	34.6	34.2	33.8	28.6	31.6	31.2	31.7	31.2	30.4	27.9	31.1
2015	27.0	30.9	33.8	34.0	34.5	33.4	32.1	32.0	32.0	31.2	31.3	27.3	31.6
2016	26.4	28.7	34.2	37.5	34.4	32.9	31.6	31.4	31.4	32.3	30.7	28.6	31.7
MEAN	27.6	31.5	33.1	34.9	33.7	31.9	31.5	31.1	31.4	31.0	30.2	27.3	31.3

Source: Department of Meteorology and Hydrology, Vientiane

**TABLE 27. MINIMUM TEMPERATURE, XAYABURY DISTRICT, 2010-2016**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	MEAN
2010	17.1	15.0	18.4	22.6	24.5	24.8	34.2	24.1	23.8	14.5	17.7	17.6	21.2
2011	14.9	16.2	18.5	21.1	23.5	24.5	24.3	24.0	24.0	22.1	18.0	15.7	20.6
2012	16.0	16.7	18.5	21.8	23.9	24.7	24.2	24.0	23.7	22.2	21.7	18.5	21.3
2013	16.1	18.3	17.8	22.7	23.5	23.9	24.3	24.0	23.5	21.3	20.3	14.4	20.8
2014	13.0	14.9	18.5	21.6	23.5	24.8	24.5	24.1	23.8	21.9	20.2	16.5	20.6
2015	13.6	15.4	19.4	20.6	23.7	24.6	24.4	24.4	24.2	22.0	20.2	18.2	21.0
2016	15.4	15.1	18.5	22.5	24.4	24.5	24.3	24.3	24.0	22.9	21.2	16.8	21.1
MEAN	15.2	15.9	18.5	21.8	23.9	24.5	25.7	24.1	23.9	21.0	20.0	16.8	21.0

Source: Department of Meteorology and Hydrology, Vientiane

**TABLE 28. MEAN TEMPERATURE, XAYABURY DISTRICT, 2010-2016**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	MEAN
2010	23.4	24.3	26.0	29.6	29.7	29.1	33.2	27.4	27.7	22.4	23.6	22.8	26.6
2011	20.8	23.8	23.7	26.9	27.7	27.9	27.8	27.3	27.3	26.1	23.7	20.8	25.3
2012	22.3	24.6	25.9	27.9	28.1	28.3	27.5	27.5	27.7	27.1	26.3	23.8	26.4
2013	22.1	25.1	25.5	28.9	28.7	27.9	27.8	27.6	27.2	25.7	24.9	19.6	25.9
2014	19.7	23.4	26.6	27.9	28.7	26.7	28.1	27.7	27.8	26.6	25.3	22.2	25.9
2015	20.3	23.1	26.6	27.3	29.1	29.0	28.2	28.2	28.1	26.6	26.3	22.7	26.3
2016	20.9	21.9	26.3	30.0	29.4	28.7	28.0	27.9	27.7	27.6	25.9	22.7	26.4

Source: Department of Meteorology and Hydrology, Vientiane

## 5.5 WATER RESOURCES

81. The Nam Khaen and Nam Yang Rivers both have year-round flows as shown in Table 29 below. Nam Yang River is a large waterway and is one of the main rivers in Paklai District. The average flow of Nam Yang is 2 m<sup>3</sup>/s while the minimum flow rate is 1.7 m<sup>3</sup>/s. Nam Khaen River, also known locally as Huay Khaen, has a low flow rate of discharge at 0.9-0.5 m<sup>3</sup>/s with the average discharge of 0.2 m<sup>3</sup>/s. From the flow rates measured for the 2 waterways supplemented by the stored water from the reservoir, the water balance calculation showed that the water volume is sufficient for the designed irrigated areas for both sub-projects.

**TABLE 29. VOLUME OF DISCHARGE**

MONTH-YEAR	Q (M3/S)	
	NAM KHAEN RIVER	NAM YANG RIVER
Nov-21	0.19	1.95
Dec-21	0.15	1.93
Jan-22	0.13	1.66
Feb-22	0.11	1.72
Mar-22	0.10	1.66
Apr-22	0.09	1.69
May-22	0.10	1.74
Jun-22	0.13	1.87
Jul-22	0.34	2.78
Aug-22	0.45	3.00
Sep-22	0.49	2.63
Qav	<b>0.21</b>	<b>2.06</b>

## 5.6 ECOLOGICAL RESOURCES

82. There are no components of the proposed development that will be located within a protected, conservation or biodiversity area. The nearest bio-diversity/protected areas in the proposed sub-project area is the Nam Phouy National Biodiversity Conservation Area which is approximately 52.86 kilometres at the nearest point from the proposed Nam Khaen Irrigation System Sub-Project and 9.56 kilometres from the Nam Yang 3 Irrigation System Sub-Project. (See Plate 7 - Location Map of Nam Phouy National Biodiversity Conservation Area from Proposed Sub-Projects).

## 5.7 HISTORICAL AND ARCHAEOLOGICAL SITES

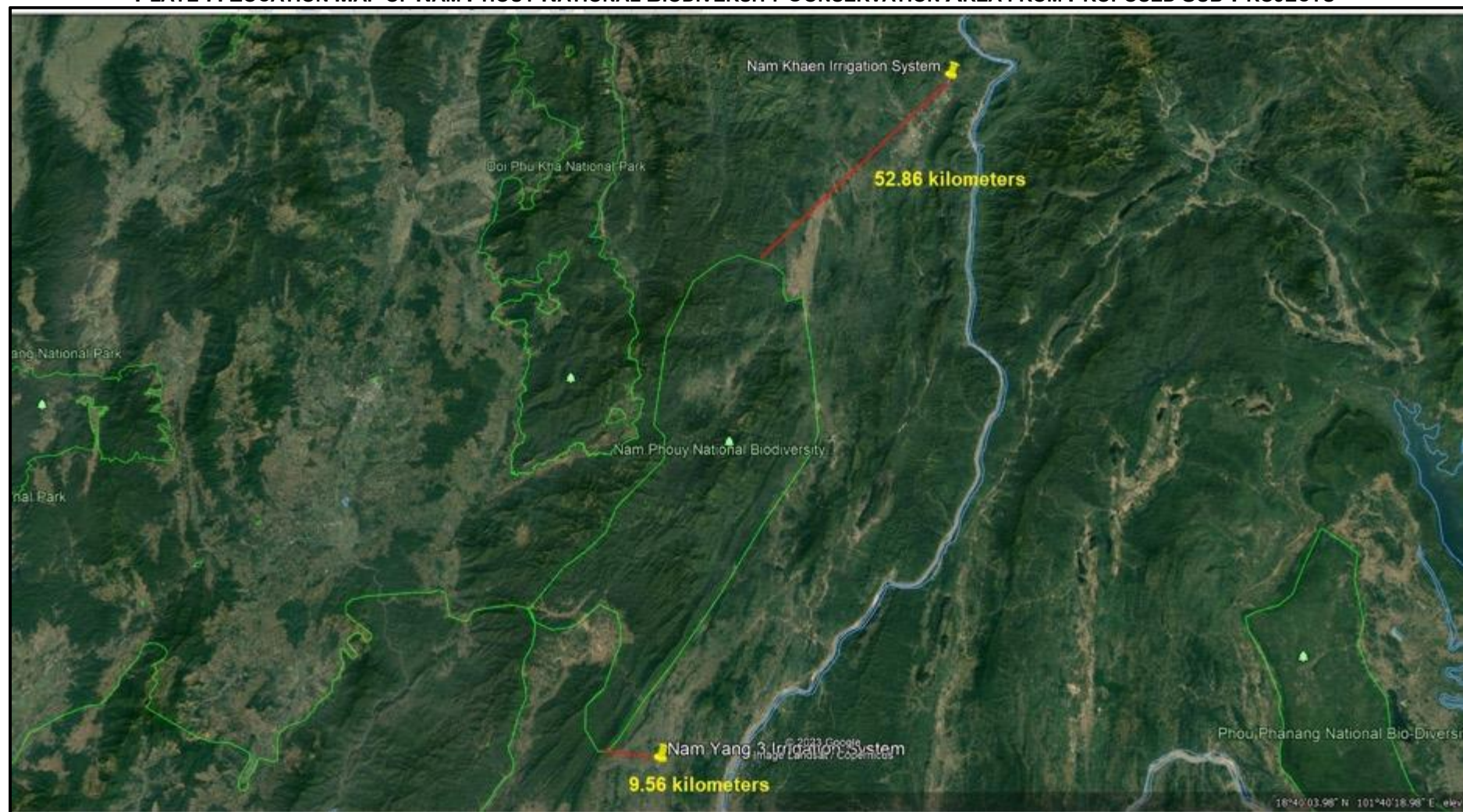
83. There are no sites of archaeological or cultural significance within and around the areas of the proposed development. The project components will not affect any historical and archaeological sites such as temples and burial sites.

## 5.8 UNEXPLODED ORDNANCE

84. The PAFO Xayabuly has commissioned a survey to be conducted on the presence of unexploded ordnance (UXO) in the proposed sub-project areas. The results of the survey conducted by the PAFO Xayabuly for UXO is attached here as Appendix C.



**PLATE 7. LOCATION MAP OF NAM PHOUY NATIONAL BIODIVERSITY CONSERVATION AREA FROM PROPOSED SUB-PROJECTS**



## 5.9 SOCIO-ECONOMIC CONDITIONS

### 5.9.1 Population and Ethnicity

85. From the social and economic survey conducted by the project in 2021, there are 890 households with a total population of 4,728 people in the proposed Nam Khaen Irrigation System Sub-Project area of which 2,334 are females. In the proposed Nam Yang 3 Irrigation System Sub-Project area, there are 882 households and a total population of 4,247 of which 2,125 are females.

86. The main ethnic group in the proposed Nam Khaen Irrigation System Sub-Project area is Yuan while in the proposed Nam Yang 3 Irrigation System Sub-Project area it is Lao-Tai. Tables 30 and 31 presents the population and ethnicity in the proposed sub-project areas.

**TABLE 30. POPULATION OF THE PROPOSED NAM KHAEN IRRIGATION SYSTEM SUB-PROJECT**

VILLAGE	ETHNIC	NO. OF HH	NO. OF FAMILY	POPULATION	FEMALE
Nala Village with 3 communities (Nala, Nakhoun and Nathorn)	Yuan	745	742	3,768	1,933
	Lao	131	131	814	339
	Khmu	8	8	69	27
	Hmong	6	6	62	26
	Leu	0	0	8	4
	Tai-dam	0	0	5	4
	I-mien	0	0	1	0
	Prai	0	0	1	1
<b>TOTAL</b>		<b>890</b>	<b>887</b>	<b>4,728</b>	<b>2,334</b>

Source: Socio Economic Survey, SRIWMSP 2021

**TABLE 31. POPULATION OF THE PROPOSED NAM YANG 3 IRRIGATION SYSTEM SUB-PROJECT**

VILLAGE	ETHNIC	NO. OF HH	NO. OF FAMILY	POPULATION	FEMALE
Pongvan	Lao-Tai	132	123	795	440
	Khmu	6	6	25	10
Ladsavang	Lao-Tai	367	332	1650	816
Palai	Lao-Tai	377	362	1,777	859
<b>TOTAL</b>		<b>882</b>	<b>823</b>	<b>4,247</b>	<b>2,125</b>

Source: Socio Economic Survey, SRIWMSP 2021

### 5.9.2 Income and Poverty Levels

87. The income of the communities in the sub-project areas are mainly sourced from the agricultural sector. The poverty level in the sub-project areas is low with only 5% of the total population of the sub-project areas below the poverty line as per UNDP standard. Table 32 presents the income sources in the sub-project areas while Tables 33 and 34 shows the occupation in the sub-project areas.

**TABLE 32. INCOME IN SUB-PROJECT VILLAGES**

VILLAGE	INCOME (LAK)			
	TOTAL INCOME/YR	FAMILY INCOME/YR	CAPITA/YR	PERSON/M
<b>NAM KHAEN IRRIGATION SYSTEM SUB-PROJECT</b>				
Nala	48,440,000,000	54,611,048	10,54,246	853,778
<b>NAM YANG 3 IRRIGATION SYSTEM SUB-PROJECT</b>				
Pongvan		64,000,000	16,000,000	1,300,000
Ladsavang		52,000,000	13,656,000	1,080,000
Palai		44,000,000	11,460,000	916,000



**TABLE 33. OCCUPATION IN THE SUB-PROJECT VILLAGES, NAM KHAEN IRRIGATION SYSTEM  
SUB-PROJECT**

NO	WORKING SECTOR	NO. OF FAMILY	PERCENT (%)
1	Cultivation and animal husbandry	593	66,85
2	Timber forest and fishery and others	107	12
3	Selling/business	65	7,32
4	Handicraft	5	0,56
5	Govt staff	117	13

**TABLE 34. OCCUPATION IN THE SUB-PROJECT VILLAGES, NAM YANG 3 IRRIGATION SYSTEM  
SUB-PROJECT**

NO	WORKING SECTOR	PONGYAN VILLAGE		LADSAYANG VILLAGE		PALAI VILLAGE	
		NO. OF FAMILY	%	NO. OF FAMILY	%	NO. OF FAMILY	%
1	Cultivation and animal husbandry	123	95.35	314	94.58	327	90.33
2	Selling/business	5	3.87	17	5.12	23	6.35
3	Govt staff	1	0.78	1	0.30	12	3.32

## **6 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

88. The environmental impacts were evaluated in the areas of influence at the subproject component sites. At the headworks, the area of influence includes the upstream and downstream sections from the headworks considering the potential effects to water quality, sustainability of the water supply source, and potential conflict on river water use. At the locations of the main and secondary canals, the affected area may extend to an average of 1-50 meters along the excavated area of the canals.

89. At the proposed sites, temporary disruption and nuisance impacts may be experienced, mainly during the construction and rehabilitation/upgrading period. These affected areas may experience direct impacts associated with temporary disturbance from construction activities. The potential environmental impacts were identified based on the project activities that may occur in each component and evaluation of the environmental and social baseline situation at the subproject area. The identification of environmental impacts was mainly based on the technical information related to project component design and operation, field visits, information from stakeholders, and feasibility study.

### **6.1 ENVIRONMENTAL IMPACTS RELATED TO LOCATION (PRE-CONSTRUCTION PHASE)**

#### **6.1.1 Impact on Community Assets**

90. There will be no land acquisition required for the development of the requisite project component facilities. Likewise, it is anticipated that there will be minimal acquisition required for temporary use of land or loss or damage to assets. The Compensation Plan for the subproject has been prepared separately to ensure that any loss of land, trees or damage to property will be subject to compensation in accordance with the existing regulations of the National Government and the safeguards requirements of the Bank.

### **6.1.2 Impact on Natural Resources and Protected Areas**

91. The location of the proposed sub-projects and its components will have no impact on any Biodiversity, Conservation or Protected Areas. The nearest bio-diversity/protected area is the Doi Phu Kha National Park which is an estimated 60 kilometres from the nearest proposed sub-project.

### **6.1.3 Impact on Historical and Archaeological Sites**

92. The proposed subprojects will not affect nor impact any historical, archaeological or culturally important sites as there are no historically/culturally/archeologically important areas within or around the proposed sub-project areas. Should there be accidental finds during the implementation of the works, all activities will be halted and the concerned Lao Government Agencies notified for proper disposition and handling of the artefacts and relics.

## **6.2 ENVIRONMENTAL IMPACTS DURING CONSTRUCTION, REHABILITATION/UPGRADING**

93. Construction and rehabilitation/upgrading activities that may be undertaken for the proposed subprojects would include land clearing, excavation, filling, disposal of excavated soil and movement of construction vehicles, operation of heavy equipment, and operation of worker camps. The works for the proposed sub-projects are expected to generate the following adverse impacts:

- Loss of vegetation as a result of clearing and grubbing
- Contamination of raw water source
- Generation of excavated material
- Runoff of silt
- Temporary loss of access to houses and establishments
- Occurrence of acute increase in ambient Noise
- Acute increase in generation of dust
- Generation of wastes, i.e. domestic wastewater, solid and hazardous wastes
- Community hazards as a result of open excavations
- Hazards to occupational health and safety.

94. It should be noted that during the conduct of the works, there will be no diversion or cutting of the water flow as this is not necessary. The mitigation measures to address the adverse environmental impacts during the construction phase of the subproject implementation are discussed in the succeeding sections. The Subprojects will conform to the Environmental, Health, and Safety General Guidelines of 30 April 2007 (IFC-WB).

### **6.2.1 Air Pollution**

95. The potential sources of air pollution during the construction and rehabilitation/upgrading activities stage include dust from earth works concentrated within a 50-meter radius of the work site; emissions from the operation of construction equipment and machineries; fugitive emissions from vehicles plying the area; fugitive emissions during the transport of construction materials; and localised increased traffic congestion in work areas. Most of the emissions will be in the form of coarse particulate matter and will settle down in close vicinity of the work sites. The impacts will be minor, local, short-term, direct and reversible. The best management practices will be adopted during conduct of the works to minimize dust and release of combustion emissions from operation of the requisite heavy equipment and machineries. Excavated material and stockpiles will be kept moist while transport vehicles will be required to install tarpaulin covers or other suitable material to prevent spillage of the hauled materials.

96. Furthermore, construction equipment and vehicles will, at all times, be well maintained and in good working condition to reduce fugitive emissions. Speed limits on areas will be imposed to minimize dust emission and to reduce the risk of traffic accidents in the work sites. Information about planned construction activities will be provided to residents in the area and will be planned to minimize public disturbance and nuisance.

97. Moreover, spraying of unpaved areas shall be undertaken at least twice a day or as required especially in areas where haul vehicles and heavy equipment operate and areas in close proximity to settlement areas. This is undertaken to minimize, or if at all possible, eliminate the generate of dust/suspended particulates.

### **6.2.2 Noise**

98. Construction and rehabilitation/upgrading activities may cause noise and vibration impacts for a short duration. The operation of equipment may cause nuisance to adjacent residential houses. Diesel generators will also be required during the works. Ambient Noise levels in these areas may reach 88dBA at a distance of about 15m away from the source or operation of equipment. Along the haul roads, the average ambient noise level will also experience an acute increase because of increased vehicular traffic.

99. As mitigation for the adverse impacts identified, work at the sites will be limited only during the daytime from 0700H to 1800H. There will no works that will be permitted beyond this period. Furthermore, the community will be provided with updated information about the schedule of the construction activities through billboards/sign. Stationary equipment like the diesel generators will be installed as far as practical from sensitive receptors. Buffers will also be established, especially in sensitive areas, as further mitigation.

### **6.2.3 Impact on Ecological Resources**

100. During the implementation of the construction activities, workers and labourers of the contractors may undertake hunting of wildlife and cutting of wood. The contractors will be instructed to orient their workers and staff that such activities are strictly prohibited. The contractors is responsible for the provision of the requisite kitchen facilities, food and cooking fuel for their workers and staff.

### **6.2.4 Clearing of Vegetation**

101. The construction and rehabilitation/upgrading works will require the clearing and grubbing of the sites. The impact of the clearing and grubbing works will be minimal because there will be minimal area that will be cleared as the works will mainly be in the existing headworks in the Nam Khaen and Nam Yang Rivers. The requisite roads and paths will be established with limited width enough only to accommodate vehicles and equipment for construction and operation. This is to minimize the impact on the receiving environment. The vegetative cover that will be cleared will be disposed in the existing disposal facility of the district. The volume of the cleared material is not expected to be substantial as the works will mainly be in the existing headworks in the Nam Khaen and Nam Yang Rivers. Upon completion of works, the exposed surfaces will be planted with the appropriate vegetation to prevent soil erosion.

## **6.2.5 Water Pollution**

### **6.2.5.1 Impacts of Sediment Runoff**

102. The construction and rehabilitation/upgrading of the facilities may result in erosion of unstable areas during earthworks, especially during heavy rainfall events. Sedimentation of nearby watercourses and channels from runoff heavily laden with material from the work sites may occur as a result of the works. These impacts are transient and short-term. As mitigation, the contractors will be required to implement proper measures which would include the provision of silt traps, ditches, and sump pits to intercept the flow silt laden runoff from the worksites into the nearby channels and watercourses. Moreover, activities, especially earthworks, will be scheduled during the dry season or be stopped during heavy rainfall.

### **6.2.5.2 Domestic Wastewater from Contractors Facilities and Worker's Camps**

103. The contractor and workers camps will generate domestic wastewater. Contamination of surface and groundwater sources and surrounding land is a potential risk that should be addressed accordingly by the contractor. Potential adverse impacts are minimal and temporal in duration and can be readily mitigated through measures established in the EMP. Proper management of the domestic wastewater from the contractor's facilities and workers camps should be undertaken at all times. Appropriate latrines shall be installed in the camps and facilities of the Contractors.

## **6.2.6 Generation of Construction Wastes**

### **6.2.6.1 Excavated Soil**

104. The construction and rehabilitation/upgrading works will require excavation and levelling works. Excavated materials will also be generated. The excavated materials will be utilized as backfill in the other work sites where required. Any surplus material will be disposed properly and given for free to interested villagers as backfill materials in coordination with the village authority. There is no anticipated need for spoil disposal sites.

### **6.2.6.2 Domestic Waste**

105. Solid waste will be generated at the work sites and the worker's camp. Wastes may include domestic solid waste, inert construction waste, and hazardous waste. Domestic waste is not anticipated to be a significant volume as only small temporary camps will be established at the sites. It is projected that the temporary camps will generate an estimated 0.4 to 0.5 kg/person/day and would consist mainly of plastic and glass bottles, paper, cardboard, food wastes, and packaging wastes. This will be collected and properly disposed in the approved disposal facility of the Townships.

### **6.2.6.3 Inert Construction Waste**

106. The inert waste that will be generated during the works will consist mainly of scrap wood and metal, cement bags, aggregates and concrete debris. These wastes are generally disposed of and/or land filled in appropriate sites and represents no direct danger to health. The scrap metal and wood can be collected for recycling.

### **6.2.7 Impact on Community Health and Safety**

107. During the works, the community may be exposed to the health and safety risks from increased vehicular movements in the area, open excavation and operation of heavy equipment. As mitigation and to prevent accidents and hazards to motorists, pedestrians and residents in the area of the worksites, barricades and wood/steel plate covers will be provided in open excavations during non-working time. The worksites will be properly secured with fences and access to the area restricted. The contractor is to ensure that all vehicles and transport equipment and materials that may be required to pass through villages are operated safely without endangering these communities. All loads are to be secured and all loads with fugitive materials (e.g. excavated soil and sand) are to be covered with tarpaulins. The contractor is to immediately remove any drivers that ignore any of the community safety requirements. The required warning signage will be installed in all the worksites.

### **6.2.8 Occupational Health and Safety**

108. During the construction and rehabilitation/upgrading phase, the implementation of the works may result in hazards to the safety of workers such as tripping, slippery surfaces, carrying heavy loads, and during operation of machines and equipment. The contractor will be required to prepare a site safety plan and designate a safety supervisor who will ensure that safety measures during construction are implemented. These safety measures include the use of personnel protective clothing and equipment, placing of hazard warning signs, and excavation covers and barriers. Arrangements for prompt medical attention in the event of accidents will also be made.

109. The contractor will be required to: (i) provide environmental health and safety training to all workers (ii) provide priority hiring of qualified skilled and 100% unskilled workers from the villages, (iii) consult with local people to avoid conflict if migrant workers will be brought to the site, (iv) installation of suitable toilets such as pit latrines and grey water drainage facilities such as soakage pits, (v) arrangement for the proper disposal of solid wastes, (vi) briefing of workers and the villagers on the dangers of communicable diseases, and (vii) assignment of responsibility to workers and local peoples' welfare to a senior member of the contractor's staff.

### **6.2.9 COVID 19 Risk Management**

110. Given the current situation with the COVID 19 Pandemic, a risk management plan for COVID 19 should be prepared and implemented by the Contractor during the construction period. The Contractor shall develop and implement a COVID-19 risk management plan in compliance with most relevant GOL regulations and policies, or in the absence thereof, in accordance with international good practice as issued by the World Health Organization. The Contractor shall implement an awareness and information dissemination campaign on COVID-19 risk management and provide training to workers on necessary risk mitigation and management measures/procedures.

## **6.3 ENVIRONMENTAL IMPACTS DURING OPERATION**

111. Impacts during the operation phase are characteristically spread over a longer period of time and means that environmental impacts can become progressively more significant if they are not adequately mitigated. Environmental mitigation in the operation period is principally the responsibility of the DAFO and the subproject beneficiaries represented by the WUG

### **6.3.1 Impacts of Water Offtake**

112. During operation of the facilities, an impact that may accrue relate to the volumes of water taken off the rivers, and the effects of downstream users and ecology. Disruption of downstream hydrological flows due to offtake from river may occur during the operation of the facilities. This impact is however low as water offtake will be fine-tuned and managed on the basis of environmentally allowable volumes. Once scheme operation commences, the gauged river flows and water offtake volumes must be reassessed. These, plus any complaints from downstream users, must be used to recalculate the allowable offtake. The scheme must then be revised accordingly.

### **6.3.2 Water Pollution**

113. Upstream land uses may cause a decline in the quality of water available for the irrigation scheme. Pro-soil conservation watershed management schemes will be implemented as part of the subproject implementation. This will mitigate deterioration of water quality of the waterway. Water quality will be improved through upper watershed management and within the command area the ability to control water movement will limit contamination risk and the proposed cropping agrichemical use is low. A catchment land use plan must be prepared and implemented to ensure that the scheme is safeguarded throughout its operational life. The primary objective of the plan is the upstream catchment protection to ensure that the subproject irrigation scheme is safeguarded in terms of water supply and limited sediment supply. Arrangements for implementation of the plan must be maintained.

### **6.3.3 Loss of Aquatic Biodiversity**

114. The aquatic resources may decline as a result of the operation of the facilities; however, the river is already a highly altered environment, the changes to the flow regime are expected to be modest and have been the subject of detailed assessment. In addition, long term monitoring and refinement is a required mitigation measure. Headworks weirs will be improved from the environmental perspective by the construction of fish passes.

### **6.3.4 Increased Utilization of Fertilizers and Pesticides**

115. The risk from increased fertilizer and pesticide use is considered to be very low in the short to medium term, however with increased areas and extent of vegetable crops pest populations may build up and require more direct intervention. This period of possible build up needs to be used to introduce the understanding of pests and pest population management through the LAO GAP certification best practice systems. Only agrichemicals approved by the Government of Lao PDR may be used. Strong extension support must be provided to encourage the responsible use of fertilizers and pesticides. The uses of agrichemicals by farmers must be monitored and action taken against anyone using banned substances.

## **7 ANALYSIS OF ALTERNATIVES**

### **7.1 ALTERNATIVES TO THE SUBPROJECT**

116. The beneficiary villages in and around Xayabuly and Paklai Districts have been selected as the site of the subproject. The selection process adopted for SRIWMSP involves screening and prioritizations, following which candidate projects were selected for the feasibility study. The feasibility study then confirms subproject eligibility. Prioritization, which was conducted during the Project Preparation phase, was based on a set of criteria as prescribed in the Project Administration Manual (PAM) aimed primarily at ensuring alignment with Government priority, maximizing impact in terms of number of populations to be served, maximizing the contribution to economic development and poverty alleviation and also.

117. Relative to safeguards requirements, identified sub-projects should comply with Government and ADB safeguard guidelines and involve minimal adverse environmental and resettlement impacts, i.e., only MONRE category 1 and ADB safeguard categories B or C will be considered. Preference where works are maintained within existing footprint or right of way to minimize land acquisition costs to Government.

## 7.2 ALTERNATIVES WITHIN THE SUBPROJECT

118. In the context of the selection and prioritization conducted during the project preparation phase, the Nam Khaen Irrigation System Sub-Project and Nam Yang 3 Irrigation System Sub Project were identified for Implementation. There were no other alternatives presented as these were the only proposed sub-projects that were deemed eligible.

## 7.3 “NO PROJECT” ALTERNATIVE

119. The “No Project” alternative would mean, inter alia, (i) that the opportunity to provide irrigation water to a significant rural population toward meeting GoL goals and priorities would not be realized, (ii) that an increase in market-oriented agricultural production would not take place; (iii) that watershed ecological services protected would not be realized.

# 8 INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

## 8.1 CONSULTATIONS AND INFORMATION DISCLOSURE DURING SUBPROJECT DESIGN

120. During the preparation of the IEE, Public/Stakeholder consultations were held in the the seven villages with the Provincial Agriculture and Forestry Office (PAFO) and Loan Implementation Consultants (LIC) from June 15 to 17, 2022, June 29 to July 02, 2022 and October 3, 2022. Stakeholders who participated during the public consultation process included villagers, local government officers and staff. The consultations were conducted to discuss with the stakeholders the proposed sub-projects to elicit the environmental concerns/issues of the community. In general, consultees were of the view that the proposed sub-projects would result in more benefits than negative impacts.

121. During project implementation, communities within the sub-project impact areas should be appropriately and in a timely manner, informed of the construction activities particularly those which are likely to cause noise and dust nuisance, disruption to roads and pathways. Table 35 shows the summary of the public consultations conducted for the proposed sub-projects.

**TABLE 35. SUMMARY OF PUBLIC/STAKEHOLDERS CONSULTATIONS**

DATE	LOCATION	AGENCY	PARTICIPANTS	
			TOTAL	FEMALE
NUM YANG 3				
Jun 15, 2022	Paklai District, DAFO	PAFO, DAFO	14	5
Jun 16, 2022	Ladsavang village	Ladsavanng and Pongvan Village	162	57
Jun 17, 2022	Palai Village	Villages /Community	51	23
NUM KHAEN				
Jun 29, 2022	Xayabouly, DAFO	PAFO, DAFO	15	6
Jun 30, 2022	Nala-Nala	Community	39	26
Jul 1, 2022	Nala-Nakhoun	Community	32	13
Jul 2, 2022	Nala-Nathorn	Community	35	19
PROVINCIAL AND DISTRICT LEVEL				
Oct 3, 2022	Project meeting room	Government	20	6

122. Prior to project implementation, the IEEs for the proposed sub-projects were prepared and the requisite Environmental Compliance Certificate (ECC) secured from PoNRE. The approved IEE shall be posted on the ADB and DOI website. During the consultations with the provincial and district authorities and stakeholders, suggestions, opinions and responses from the community on the proposed sub-project have recorded and noted and feedback from the LIC and DOI provided on how concerns and recommendations will be addressed.

123. The consultees were all in agreement that the proposed sub-projects would be beneficial to the community and interposed no objections. Table 36 summarizes the main comments that were raised during the village consultation meetings. Appendix D presents the proceedings of the Public Consultations.

**TABLE 36. SUMMARY OF MAIN CONCERNS RAISED DURING PUBLIC CONSULTATIONS**

<b>COMMENTS</b>	<b>RESPONSES OF PAFO/LIC-DOI</b>
Agreed and happy to have the project but worry about quality control	PAFO, LIC-DOI
Dust control properly	PAFO, LIC-DOI, Contractor
Learn from the past failure	PAFO, LIC-DOI, Contractor, O&M team

## **8.2 INFORMATION DISCLOSURE**

124. Prior to project implementation, a copy of the approved IEE and EMP will be submitted to the DoNRE. The IEE will also be posted on the ADB and DOI website. During construction and operation, communities within the impact area of the subproject area will be kept informed of construction activities through billboards or information boards about the construction activities and schedules.

## **9 GRIEVANCE REDRESS MECHANISM**

125. Article 13 of Decree 192/PM requires the subproject to establish an effective mechanism for grievance resolution. GoL legal requirements for this mechanism are further described in Part VI of the Decree's implementing regulations, and in detail in the Technical Guidelines. The loan covenants stipulate the GRM requirements of the ADB for the project. The mechanism to address any grievances on environmental safeguards issues is the same as that designed to address grievances related to compensation. The GRM committee will be established for each district with assignment of the GRM focal persons.

126. The objective of the grievance redress mechanism (GRM) is to resolve complaints as quickly as possible at the local level through a process of conciliation, and if that is not possible, to provide clear and transparent procedures for appeal. All affected persons will be made fully aware of their rights, and the detailed grievance redress procedures will be publicized through an effective public information campaign. An aggrieved affected person (AP) or affected household (AH) will be free from any fees in connection with the lodging and resolution of complaints, as the costs will be borne by the Executing Agency and the appointed contractors.

127. During construction and operation, communities within the impact area of the subproject area will be kept informed of construction activities through billboards or information boards about the construction activities and schedules. The details of the PAFO, PGT, GRM Focal Contact Persons and Construction Managers will be prominently displayed in the respective construction areas for the reference of the affected communities/persons. Consultations will be undertaken on a need basis with the date, time and venue to be agreed with the Village Heads and concerned government officials. Complaints and grievances can be directly filed, both written and verbal, to the concerned entities.



128. This will be an alternative to the village complaint system. All suggestions, opinions and responses from the community on the sub-project should be taken into account and feedback provided on how concerns and recommendations have been addressed.

## **9.1 TYPE OF GRIEVANCES**

129. 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 health and safety or pollution of the environment.
- Hazards due to construction activities (e.g. noise, dust, disruption of access, etc.)
- Impacts on social infrastructure.
- Failure to comply with standards or legal obligations.
- Improper conduct or unethical behaviour of contractor leading to nuisance of affected person(s).
- Misuse of funds and other irregularities.
- Grievances due to compensation and unaddressed losses.
- Complaints related to gender issues.

## **9.2 GRIEVANCE RESOLUTION PROCESS**

130. 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.

131. Grievances are issues, concerns, or complaints that may be raised by stakeholders about the implementation of the project. The GRM provides a systematic process for receiving, validating, and resolving complaints from AP and is designed to achieve the following:

- Serving as an open channel for effective communication of environmental and social issues arising from the project;
- Allowing prompt action or resolution of any complaint or adverse impacts that may occur during project construction and operation;
- Serving as a means to hear community suggestions on the project; and
- Promoting transparency in project implementation.

132. Any PAP may raise and submit a grievance if the activity has a detrimental impact on the environment, the community, or the quality of life of people. Examples of grievances are hazards to community health and safety; construction-related nuisances, such as noise and dust and improper disposal of wastes; adverse changes on way of life and livelihood; peace and order problems due to presence of migrant workers; and failure of the project to comply with environmental policies, safety clearance requirements, and other legal obligations.

### 9.2.1 Arbitration Committees

133. The sub-project's GRM will rely on the existing village arbitration units that have already been established in the villages. The Village Development Committee (VDC) generally consists of the village chief, deputy chief, village secretary, and village representative of the Lao Women's Union, Lao Front for National Construction, village elders, youth, and village land taxation unit. The VDC is responsible for settling disputes between villagers through conciliation and negotiation. In the absence of these units, the members of the village committee (if formed) or the village leaders will act as grievance officers.

134. The affected households (AHs) may present their complaints to the concerned local administrative officials and resettlement committees. The complaint can be filed first at the village level and can be elevated to the highest or provincial level if the affected persons (APs) are not satisfied with the decisions made by the VDC at village level. At the district and provincial levels, the district and provincial steering committees of the project will act on grievances or complaints that have not been resolved at the VDC.

### 9.2.2 Grievance Redress Procedures

135. All complaints and resolutions will be properly documented by the Village Development Committee (VDC) and be available for public review and for monitoring purposes. As a general policy, the PAFO and PGT will work proactively toward preventing grievances through the implementation of impact mitigation measures and community liaison activities that anticipate and address potential issues before they become grievances. Nonetheless, during construction and operation it is possible that unanticipated impacts may occur if the mitigation measures are not properly implemented, or unforeseen issues occur. The procedures for the grievance resolution process for the subproject are detailed in Table 37.

**TABLE 37. GRIEVANCE REDRESS PROCEDURES**

NO.	STAGES
1	<b>Stage 1 (Village – Subproject Area).</b> In the first instance, complainants will raise complaints or grievances to the Village Development Committee or other designated village grievance officers. The committee 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 open to other members of the community to ensure transparency. The VDC aims at clarifications and amicable solution with the complainant. This mediation aims at a village internal immediate solution agreed with the subproject. If the complaint cannot be solved at this stage, the next step will apply.
2	<b>Stage 2 (District Implementing Level).</b> If within 5 days of lodging the complaint and no understanding or amicable solution can be reached or no response is received from the Village Development Committee, the complainant can bring the complaint to the Provincial Agriculture and Forestry Office (PAFO). The PAFO will meet with the complainant to discuss the complaint and provide a decision within 10 days of receiving the appeal.
3	<b>Stage 3 (Provincial Implementing Level).</b> If the complainant is not satisfied with the decision of the PAFO or in the absence of any response, the complainant can appeal to the Project Governance Team (PGT) with contribution of authorities and village representative/s. The PGT will meet the complainant to clarify the complaint and will inform the complainant about its decision aiming to solve the complaint. The PGT will provide a decision on the complaint within 10 days.
4	<b>Stage 4 (Ministerial Project Executive Level).</b> If the AP is still not satisfied with the decision of the PGT, or in the absence of any response within the stipulated time, the complainant can submit his/her grievance to Department of Irrigation (DOI). The DOI might consider an independent external opinion in this matter. The DOI will render a decision within 10 days of receiving the complaint. Before the next stage is applied additional efforts should be made to find an agreement with the AP.
5	<b>Stage 5 (Country Level).</b> As a last resort, the complainant may submit his/her case to the Court of Law. The complaint will be lodged with the Court of Law. The Court will take note and register the case and will provide the final juristic decision. The DOI will be responsible for forwarding the complaint and ensuring its process in the courts.

136. Normally complaints related to construction and environmental issues are resolved at the VDC level wherein the conciliation and negotiation are promptly attended to by the PAFO and contractors. Complaints related to resettlement and land disputes are normally elevated to the district and provincial levels, and at times to the Court. At each stage of the grievance redress process, written records will be maintained.

137. The VDC will submit reports to the PAFO documenting: (i) complaints received; (ii) names and other pertinent information about complainants; (iii) dates of the original complaint, meetings and any other actions; and (iv) outcomes and/or resolution. The records of grievances with a full inventory of the complaints received will be incorporated in regular progress reporting, including the SAEMR, on the subproject.

138. If efforts to resolve complaints or disputes remain unresolved and unsatisfactory following the GoL GRM, the affected persons/households have the right to send their concerns or problems directly to ADB's Operations Department, i.e., Urban and Water Division, Southeast Asia Department (SERD) or through ADB Lao PDR Resident Mission. If the AP is still not satisfied with the responses of SERD, he/she can directly contact the ADB's Office of the Special Project Facilitator (OSPF) as outlined in the "Information Guide to the Consultation Phase of the ADB Accountability Mechanism". The Information Guide can be downloaded through this link: <https://www.adb.org/documents/information-guide-consultation-phase-adb-accountability-mechanism>. Those who want to make a complaint with the ADB can refer to the sample letter of complaint adapted from the Information Guide as shown in Figure 11.

**FIGURE 11. SAMPLE COMPLAINT LETTER**

Date:

Office of the Special Project Facilitator  
Asian Development Bank  
6 ADB Avenue, 1550 Mandaluyong City  
Metro Manila, Philippines

Tel: (+632) 632-4825

Fax: (+632) 636-2490

Email: [spf@adb.org](mailto:spf@adb.org)

Dear Special Project Facilitator,



We, \_\_\_\_\_ *[(name of your group) or name of representative authorized by your group]* \_\_\_\_\_, whose  
names and addresses are attached, live in \_\_\_\_\_ *[location and country]* \_\_\_\_\_.

We hereby present this complaint to the Special Project Facilitator. *[If the complaint is filed through a representative, please provide the names of the project-affected people with their addresses and evidence of authority to represent them.]*

1. We are currently experiencing problems due to an ADB-assisted project *[specify name and description of project, and specify the site and country where it is located]*.
2. The direct harm we experience is/are the following: *[describe the problem]*.
3. We seek the following outcomes and remedies through the help of the Special Project Facilitator: *[describe what you would like to happen, how the harm or problem can be resolved]*.
4. We have previously made efforts to address our problem with the EA/IA and ADB Operations Department concerned in the following manner: *[list and attach correspondence, details of meetings, emails, and other communications]*.
5. We do not request that our identities be kept confidential  
*[or]*  
We request that our identities be kept confidential for the following reason: *[state reason]*.
6. You can contact us at: *[specify directions how to set a meeting with you and/or your authorized representative]*.

Signatures: \_\_\_\_\_

Names:

Addresses:

Other contact information:

Tel:

Fax:

Email:

Attachments: *[complete list of complainants and addresses; representative's letter of authorization, if any]*

**Some matters not eligible for complaints/requests**

- Allegations of fraud and corruption
- Procurement of goods, services, and consulting services
- Projects with a project completion report
- ADB personnel matters



## 10 ENVIRONMENTAL MANAGEMENT AND MONITORING

139. The matrix of mitigation measures in Table 38 presents all the required measures and monitoring responsibilities corresponding to the impacts as assessed that are considered necessary through the environmental assessment process. The mitigation measures required cover all stages of the contract and are separated into pre-construction, construction and operation phases. This EMP is based on the type, extent and duration of the environmental impacts identified at the design stage. In the event that unexpected impacts occur during implementation, the EMP will be amended to take into account of unexpected impacts and mitigation measures will be amended as necessary.

140. The EMP will be included in the Bid Documents and Construction Contract as such the appointed construction contractor are contractually obligated to (i) allocate sufficient budget to implement the EMP; (ii) appoint an environmental health and safety (EHS) officer to support in EMP implementation; (iii) provide training to his workers on EHS; and (iv) prepare and submit a monthly report on EMP implementation.

**TABLE 38. ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN**

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
<b>I. PRE-CONSTRUCTION PHASE</b>				
<u>Impact on community assets</u>  Loss of community assets due to damage to properties.	Implement the compensation plan that was approved by the ADB for the subproject.  Design headworks, canals, and other related structures/facilities within the Right-of-Way when feasible.	External LACP monitoring report	c/o DOI operations cost	PGT
<u>Impact of location of headworks on other water users</u>  Downstream river uses such as irrigation, bathing, washing, and fishing will be affected if excessive water abstraction will occur.	There is minimal conflict with other water users of Nam Khaen and Nam Yang because there is still enough water in the river that will meet the other river uses at the downstream.	River level assessments at the headworks on a monthly basis	c/o PAFO operations cost	PGT
<u>Impact to Natural resources and protected areas</u>  Impact on natural resources and protected areas from cutting/clearing of trees and other vegetation.	Cutting of trees will be undertaken as per approved design and only upon approval. Avoid cutting of trees as much as possible and minimize damage to native vegetation. Trees that need to be cut in private land will be compensated in cash.	N/A	N/A	N/A
<u>Impact on Historical and Archaeological Sites</u>  Damage to relics and artifacts during the conduct of the works.	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.	Accidental finds	c/o PAFO operations cost	PGT
<b>II. CONSTRUCTION PHASE</b>				
<u>Temporary disruption of existing community roads.</u>	Walking access will be maintained to affected properties and access routes	Periodic monitoring and reporting by	Included in civil	PAFO, PGT Contractor

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
<p><u>pathways, and accesses</u></p> <p>Rehabilitation/ upgrading of headworks, canals and related structures, will cause temporary disruption of community services and access to properties.</p> <p>Particularly at road crossings, rehabilitation/ upgrading activities along narrow roads may lead to temporary blockage or closure of roads and hamper movement of vehicles and people in the community.</p> <p>Community access to areas in the vicinity of schools, temples, village offices, market places and meeting halls will be affected during rehabilitation/ upgrading works.</p>	<p>will be temporarily lined with timber or similar material. Particular attention will be given to ensuring safety along roads and paths used by pedestrians.</p> <p>Side street parking of construction vehicles on prolonged basis will not be allowed.</p> <p>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.</p> <p>Require the contractor to immediately rehabilitate the excavated areas and any damaged road and path sections.</p> <p>Enclose the facilities perimeters so that pathway use and stream access remains unimpeded.</p>	<p>Supervision Consultant</p> <p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>	works cost	
<p><u>Air pollution</u></p> <p>Dust and air emissions from earthworks and movement of vehicles can pose nuisance to nearby communities</p>	<p>Require the contractor to cover materials with tarpaulin or other suitable materials while in transit to avoid spillage of materials.</p> <p>Moisten earthen roads during dry and dusty conditions, particularly roads near residences and through the town core area.</p> <p>Impose speed limits on construction vehicles.</p> <p>Conduct regular maintenance on construction equipment and vehicles to control air emissions during vehicle operation.</p>	<p>Periodic monitoring and reporting by Supervision Consultant</p> <p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>	Included in civil works cost	PAFO, PGT Contractor
<p><u>Noise</u></p> <p>Operation of construction equipment such as jackhammer will cause excessive noise resulting in nuisance to communities.</p>	<p>Limit rehabilitation and upgrading activities, particularly operation of noise generating equipment at night.</p> <p>Position any stationary equipment that produce high noise levels such as diesel generators as far as practical from sensitive receptors.</p>	<p>Periodic monitoring and reporting by Supervision Consultant</p> <p>Report any complaint received from the community to PAFO and</p>	Included in civil works cost	PAFO, PGT Contractor

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
	<p>Erect temporary barriers around construction sites especially near schools, hospitals, and houses.</p> <p>Install noise suppression devices to noise generating equipment.</p> <p>Require drivers to minimize blowing of horn and to comply with speed limits.</p> <p>Provide information to community on schedule of rehabilitation and upgrading activities through billboard/signs.</p>	document in safeguard monitoring reports.		
<u>Impact on ecological resources</u>  Construction workers may undertake hunting of wildlife and cutting of wood.	The contractors will prohibit activities such as cutting wood for cooking, hunting, or wildlife trade.	Periodic monitoring and reporting by Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	Included in civil works cost	PAFO, PGT Contractor
<u>Clearing _____ of vegetation</u>  Poor planning and execution of tree clearing/vegetation removal at project facilities and along headworks, canals and related structures, result in loss of vegetation and general landscape	Cutting of trees will be undertaken as per approved design and only upon approval of relevant authorities. Avoid cutting of trees as much as possible and minimize damage to native vegetation. Trees that need to be cut in private land will be compensated in cash accordance with the approved Compensation Plan.  Roads and paths to the facilities will only be sufficiently wide to accommodate construction vehicles/equipment to minimize land take.  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.  Implement landscaping and planting of trees/vegetation at sites of the proposed facilities.	Periodic monitoring and reporting by Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	Included in civil works cost	PAFO, PGT Contractor
<u>Water pollution - Sediment runoff</u>	Construct silt traps, deviation channels, mounting barriers or	Periodic monitoring and reporting by	Included in civil	PAFO, PGT Contractor



ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
Sediment runoff undertaken during excavation, earthworks and grading in the rainy season will cause siltation of rivers	trenches around the stockpiles of materials.	Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	works cost	
<u>Water Pollution - Worker's camp</u>  Domestic wastewater from worker's camp would result to the discharge of sewage into drainage canals.  Unsanitary conditions at the worker's camp will occur without the provision of necessary sanitation arrangements.	Provide adequate water supply and temporary toilet facilities at the worker's camp.	Periodic monitoring and reporting by Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	Included in civil works cost	PAFO, PGT Contractor
<u>Generation of construction waste - Generation of excavated soil</u>  Generation of excavated materials during rehabilitation and upgrading of headworks, canals and related structures.	During rehabilitation and upgrading of headworks, canals and related structures, excavated material will be utilized to backfill the trench. The contractor will be required to properly reinstate the excavated trench after completion of works.  Surplus excavated material/cut soil from rehabilitation and upgrading of headworks, canals and related structures, will be used as backfill material for low-lying areas that have been identified by the village authority.	Periodic monitoring and reporting by Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	Included in civil works cost	PAFO, PGT Contractor
<u>Generation of construction wastes – Solid, Inert and Hazardous Wastes</u>  Solid wastes, inert construction wastes, and hazardous wastes during construction will result to pollution of land and receiving water bodies.	Provide appropriate segregation bins or areas for construction wastes.  Secure and control storage of all hazardous materials including fuels.  Reuse recyclable construction wastes such as wood, steel, and scaffoldings or sell to junk shops.  Solid waste to be collected and disposed in approved disposal site of the Townships.	Periodic monitoring and reporting by Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	Included in civil works cost	PAFO, PGT Contractor
<u>Community health and safety</u>	Install barricades/barriers and sturdy plate covers in open	Periodic monitoring and	Included in civil	PAFO, PGT Contractor

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
Community may be exposed to dangers of open excavation	excavations during non-working time.  Install warning signs in the area.	reporting by Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	works cost	
<u>Occupational health and safety</u>  Construction activities may pose hazards to workers because of the use of heavy equipment, lifting of heavy loads, and exposure to open excavations and chemicals.  Potential conflict with local people will occur if migrant workers will be brought to the site.	Require the contractor to implement the construction health and safety plan in accordance with the World Bank EHS Guidelines ( <a href="http://www.ifc.org/ehsguidelines">http://www.ifc.org/ehsguidelines</a> ) as a minimum standard. The contractor will appoint an environment, health and safety officer to ensure implementation of the plan. The plan will at minimum include:  <ul style="list-style-type: none"> <li>• Provision of first-aid facilities readily accessible by workers.</li> <li>• Provision of personal protective equipment (PPEs) such as hard hats, gloves, rubber boots, etc.,</li> <li>• Wearing of PPEs while working onsite 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>• Ensure that vehicle and equipment operators are properly licensed and trained.</li> <li>• Provide staff with communicable disease and HIV-and COVID 19 related awareness training.</li> </ul> The contractor will be required to provide priority hiring of qualified workers from the villages and to consult with the local to avoid conflict if migrant workers will be brought to the site.	Periodic monitoring and reporting by Supervision Consultant  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	Included in civil works cost	PAFO, PGT Contractor
<u>COVID-19 risk management</u>  Working Camp Siting and Management	Siting of Camps and Field Offices <ul style="list-style-type: none"> <li>• Not in area liable to flooding, landslide or other natural disaster</li> </ul>	Periodic monitoring and reporting by Supervision Consultant	Included in civil works cost	PAFO, PGT Contractor

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
	<ul style="list-style-type: none"> <li>• Not in area affected by construction dust, noise, sewage or other pollution</li> <li>• Not in a residential area</li> </ul> <p>Minimum housing standards</p> <ul style="list-style-type: none"> <li>• separate bed for each worker</li> <li>• beds should not be arranged in tiers of more than two;</li> <li>• separate accommodation of the sexes or to accommodate couples</li> <li>• adequate natural light during the daytime and adequate artificial light</li> <li>• adequate ventilation to ensure sufficient movement of air</li> <li>• adequate supply of safe potable water</li> <li>• adequate sanitary facilities</li> <li>• adequate drainage</li> <li>• adequate furniture for each worker to secure his or her belongings, such as a locker.</li> <li>• common dining rooms, canteens or mess rooms, located away from the sleeping areas</li> <li>• appropriately situated and furnished laundry facilities</li> <li>• reasonable access to plug sockets for charging telephones and other devices</li> <li>• rest and recreation rooms and health facilities, where not available in the community</li> </ul> <p>Minimum accommodation sizes</p> <ul style="list-style-type: none"> <li>• Sleeping space <ul style="list-style-type: none"> <li>□ inside dimensions over 198 centimetres by 80 centimetres;</li> </ul> </li> <li>• Sleeping room <ul style="list-style-type: none"> <li>□ headroom of over 203 centimetres allowing full free movement</li> <li>□ Beds minimum 2m apart for COVID-19 risk management</li> </ul> </li> </ul> <p>Sanitation Facilities</p> <ul style="list-style-type: none"> <li>• One toilet, one tap / basin, one toilet for every 6 people</li> <li>• Convenient location to accommodation</li> <li>• Provision of soap</li> <li>• Separate facilities for men and women</li> </ul>	<p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>		

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
	<ul style="list-style-type: none"> <li>Ventilation to open air</li> <li>Fresh cold running water</li> <li>Clean and hygienic</li> <li>Septic tank/sewage treatment facility, or pit latrines located at least 200m from surface waters, and in areas of suitable soil profiles and above the groundwater levels</li> </ul> <p>Health and Safety within worker accommodation</p> <ul style="list-style-type: none"> <li>Separate area for sick workers to prevent transmission of disease</li> <li>Smoke detector in sleeping area</li> <li>Fire safety throughout accommodation such as fire extinguishers, fire alarms, fire blankets</li> <li>Worker training in fire prevention and procedures</li> <li>Fire exit sign, adequate means of escape and clearly maintained exit</li> <li>Security lighting within camp and for sanitation block and lighting for route from sleeping area to sanitation block</li> <li>Electrical cables to be in safe condition, elevated and not in areas liable to flood</li> </ul> <p>Inspection</p> <ul style="list-style-type: none"> <li>2 weekly inspections to inspect for cleanliness, state of repair of building, accommodation and fire equipment</li> <li>Record inspection results and retain for review</li> </ul>			
<u>COVID-19 risk management</u>  <u>Construction site working conditions</u>	<p>Form a joint team to plan and organize commencement and/or return to work</p> <ul style="list-style-type: none"> <li>Develop or convene a joint occupational safety and health committee with members representing the employer and workers</li> <li>Train team members on the basic principles for the formulation and implementation of occupational safety and health preventive and control measures.</li> <li>Develop and communicate a work plan on safe working for COVID-19</li> <li>Such plan should be fully aligned with any</li> </ul>	<p>Periodic monitoring and reporting by Supervision Consultant</p> <p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>	Included in civil works cost	PAFO, PGT Contractor

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
	<p>government regulations and guidelines on COVID-19 prevention and control, or in the absence thereof, with international good practice guidelines as may be updated from time to time</p> <p>Risk assessment to decide when to work, who works and how</p> <ul style="list-style-type: none"> <li>Undertake a risk assessment to determine the preventive and control measures</li> <li>Ensure preventative measures are in place before resuming or beginning construction work</li> </ul> <p>Adopt engineering, organizational and administrative measures</p> <ul style="list-style-type: none"> <li>Avoid physical interaction and maintain physical distancing requirements as prescribed by national policy, or in the absence thereof, international good practice</li> <li>Ventilate enclosed workplaces including work camps and communal spaces</li> <li>Avoid concentration of workers - limit the capacity of common areas such as work camp dining rooms and changing rooms to allow the minimum separation of 2 meters and organize one-way systems. This includes sleeping areas which must be a minimum of 2 meters between</li> <li>beds</li> <li>Put in place training and information on COVID-19 and measures required for its management.</li> <li>The construction site is to be segregated to the extent possible in zones or other methods to keep different crews physically separated at all time</li> <li>Stagger break and lunch schedules to minimize the number of people in close proximity to one another</li> </ul>			

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
	<p>Regularly clean and disinfect</p> <ul style="list-style-type: none"> <li>• Increase the frequency of cleaning and disinfection, in particular heavily trafficked areas and common areas, including work camps</li> <li>• All door handles, railings, ladders, switches, controls, eating surfaces, shared tools and equipment, taps, toilets, and personal areas are wiped down at least twice a day with a disinfectant</li> <li>• Discourage the sharing of items such as cups, glasses, plates, tools</li> </ul> <p>Promote personal hygiene</p> <ul style="list-style-type: none"> <li>• Provide workers with the conditions and means necessary for frequent hand washing (soap, water or alcohol gel) with a posted hand washing protocol at site entries, exits, bathrooms, communal areas, offices, and any other areas with commonly touched surfaces</li> <li>• Inform workers of the need to avoid physical contact when greeting, and avoid touching eyes, nose and mouth</li> <li>• Inform workers of the need to cover the mouth and nose with a disposable handkerchief when coughing or sneezing or the crook of their arm</li> <li>• Dispose of tissues in a lined and covered waste bin and wash hands afterwards</li> </ul> <p>Provide personal protective equipment (PPE) and inform workers of its correct use</p> <ul style="list-style-type: none"> <li>• Identify appropriate PPE related to the tasks and health and safety risks faced by workers according to the results of risk assessment and the level of risk, and provide it to workers free of charge and in sufficient number, along with instructions, procedures, training and supervision</li> </ul>			

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
	<ul style="list-style-type: none"> <li>Non-medical face-coverings (such as homemade cloth masks) should be worn as mitigation for catching and transmitting the virus, but are not to be treated as substitutes for proper handwashing</li> </ul> <p>Health surveillance and insurance</p> <ul style="list-style-type: none"> <li>Before entering the site, staff and visitors must confirm that they are not currently exhibiting flu-like symptoms</li> <li>Monitor the health status of workers, develop protocols for cases of suspected and confirmed COVID-19. The protocol will state that:               <ul style="list-style-type: none"> <li>workers with symptoms or confirmed cases must be isolated within the construction camp or stay at home for 7 days after symptoms started                   <ul style="list-style-type: none"> <li>If symptoms persist after 7 days, the person must isolate until the symptoms stop</li> <li>People who have been in close contact with the person with confirmed COVID-19 be quarantined for 14 days</li> </ul> </li> </ul> </li> <li>All workers in quarantine or isolation must be provided with adequate food, water, medical assistance and sanitation</li> <li>Identify workers who have had close contact with people infected with COVID-19 and follow national medical guidance</li> <li>Communicate confirmed cases of COVID-19 infection to the appropriate authorities</li> <li>All workers should be provided with health insurance that includes COVID-19 treatment</li> </ul> <p>Consider other hazards, including psychosocial</p> <ul style="list-style-type: none"> <li>Promote a safe and healthy working environment free from violence and harassment.</li> </ul>			



ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
	<ul style="list-style-type: none"> <li>Encourage health promotion and wellbeing in the workplace through enough rest, balance of physical and mental activity and adequate work life balance</li> <li>Implement prevention and control measures for the use and storage of chemicals, particularly those used for disinfection during COVID-19</li> </ul> <p>Review emergency preparedness plans</p> <ul style="list-style-type: none"> <li>Develop an emergency plan adapted to COVID-19 and regularly review it</li> </ul> <p>Review and update preventive and control measures as the situation evolves</p> <ul style="list-style-type: none"> <li>Periodically monitor prevention and control measures to determine whether they have been adequate to avoid or minimize risk, and identify and implement corrective actions for continuous improvement</li> <li>Establish and maintain records related to work-related injuries, illnesses and incidents, worker exposures, monitoring of the work environment and workers' health</li> </ul>			
<b>III. OPERATION PHASE</b>				
<u>Impacts of Water Offtake</u>  Disruption of downstream hydrological flows due to offtake from river may occur.	Water offtake will be fine-tuned and managed on the basis of environmentally allowable volumes.	Weekly monitoring of water quantity and water offtake.	Part of DOI operations cost	PGT
<u>Water Pollution</u>  Upstream land uses may cause a decline in the quality of water available for the irrigation scheme.	A catchment land use plan must be prepared and implemented to ensure that the scheme is safeguarded throughout its operational life.	Weekly monitoring of water quality.	Part of DOI operations cost	PGT
<u>Loss of Aquatic Biodiversity</u>  Aquatic resources may decline as a result of the operation of the facilities.	Headworks weirs will be improved from the environmental perspective by the construction of fish passes.	Weekly monitoring of aquatic flora and fauna.	Part of DOI operations cost	PGT

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	BUDGET	RESPONSIBLE OFFICE
<u>Increased Utilization of Fertilizers and Pesticides</u>  Increased areas and extent of vegetable crops pest populations may build up and require more direct intervention	Only agrichemicals approved by the Government of Lao PDR may be used. Strong extension support must be provided to encourage the responsible use of fertilizers and pesticides.	Weekly monitoring of pesticide and fertilizer use of farmers.	Part of DOI operations cost	PGT
<u>Community health and safety</u>  Potential hazards to residents in affected communities.	Facilities properly fenced and secured.	Daily log of security personnel	Part of DOI operations cost	PGT

## 10.1 INSTITUTIONAL ARRANGEMENTS FOR IMPLEMENTATION OF ENVIRONMENTAL SAFEGUARDS

141. The Program Governance Team (PGT) will appoint a qualified environmental safeguards officer to supervise and co-ordinate implementation of environmental safeguard requirements with support of the LIC International and National Environment Specialists. The PGT Project Director will be responsible for submitting semi-annual environmental safeguard reports to ADB for clearance and disclosure. They will also carry out regular monitoring during implementation and prepare a summary of progress of EMP and GRM implementation for the quarterly project progress reports. They will participate in ADB loan review missions, ensure that semi-annual environmental safeguards monitoring reports are submitted to ADB on time and follow-up on agreed actions.

142. Each Provincial Project Implementation Team (PPIT) will nominate an environmental safeguards focal point to support LIC Environment Specialists and PGT with co-ordination at the province level. The PPIT environmental safeguards focal point will undertake joint site visits with subproject Supervision Staff and Contractors to review implementation of EMP and GRM and report issues to PGT and LIC. PPIT will co-ordinate environmental quality monitoring with PONRE and invite PONRE to join site visits and ADB loan review missions. To ensure compliance and to empower PONRE in oversight of the EMP requirements within the works contracts, the PGT and PAFO construction supervision experts will ensure that all findings are fully recorded and shared in the reports to the Provincial Steering Committee. The LIC environmental specialists will provide capacity building for PONRE on construction site reviews.

143. The project implementation consultant (PIC) will assist the executing agency (i.e., the PGT within DOI), the implementing agency (i.e. PAFO) and the other project stakeholders in the design and construction of the subproject. For this reason, the Program Governance Team will contract a LIC with two environmental specialists (9 months International Environment Specialist and 17 months National Environmental Specialist)- See PAM for detailed ToRs to support subproject designs and the preparation of IEE and for the supporting and monitoring of the EMP during subproject implementation.

144. The LIC environmental specialists work with the WUG, PAFO and DAFO and the contractors for the subproject, to ensure the IEE and EMP are properly implemented, with the required environmental mitigation measures incorporated into the final engineering designs and administrative arrangements. During the construction period, they must work with the

subproject implementation partners to ensure that all of the environmental management and mitigation measures are fully complied with, as agreed in each IEE and as outlined in every EMP. The LIC Environment Specialists will provide safeguards and GRM capacity development training for PGT, PPIT, LIC, Contractors and GRM focal points on EMP mitigation and monitoring measures, Contractor EMP preparation, templates for environmental monitoring and report.

145. All contract documents must include the EMP (category B) or Environmental Code of Conduct (category C) and an environment section in the terms of reference for bidders, and environmental contract clauses for contractors that include special conditions for the protection of the physical, biological and socio-economic environments. These will underpin the obligations towards the environment that must be upheld by all contractors. There is a need to ensure that contractors, as the stakeholders with the shortest-term involvement in the subproject, do not give rise to long term liabilities for the subproject owners and other stakeholders through reckless practices.

146. While the contractors themselves must fulfil their environmental responsibilities, in most cases success in this respect requires strict management and supervision of the contractor during site works: this is the responsibility of PAFO. Because of the competitive bidding process and the emphasis on engineering works, there is often a tendency for environmental safeguards to be delayed by contractors in the hope that costs can be saved and overlooked by management staff as being of lower importance than the primary functional infrastructure. This must not be allowed to happen, or it will mean that the subproject and therefore the overall SRIWSM is non-compliant with respect to both government and ADB safeguards.

147. Additional attention must be paid to subcontractors. It must be made clear to the main contractor at all times that they are fully responsible for the actions of his subcontractors, and that retention money is at risk if there is not full compliance with this plan. The contractor should be encouraged to start this process with an orientation for each subcontractor before they start work, and sub-contractual conditions to ensure that the subcontractor complies. The project implementation consultant should be able to assist the contractor in this process.

148. The Contractor will be required to develop a site-specific Construction Environmental Management Plan (CEMP) in accordance with the IEE/EMP and designate an environmental health and safety (EHS) Officer to supervise and train workers on occupational and community health and safety practices and to monitor and report on implementation of EMP/CEMP and corrective actions. A GRM focal point/community liaison officer should also be designated to ensure public disclosure of planned construction to affected persons and monitoring and reporting on GRM. Each works Contractor EHS Officer will prepare a monthly report on EMP/CEMP and GRM implementation for submission to PPIT, PGT and LIC.

149. The construction supervision consultants (CSC) will ensure a CEMP is prepared for each Category B subproject and an Environmental Code of Conduct for each Category C subproject. The CSC will be responsible for day-to-day monitoring of implementation of health and safety and EMP/Code of Conduct requirements and issuing instructions for corrective actions, as needed.

150. ADB will visit project sites and review project performance against the EMPs and legal agreements and as documented in periodic environment monitoring reports submitted by the PGT. If any of the safeguard requirements that are covenanted in the legal agreements are found not to be satisfactorily met, ADB will require the PGT to develop and implement an appropriate corrective action plan (CAP) agreed upon with ADB. If unanticipated environmental impacts become apparent during project implementation, ADB will require the

PGT with support of LIC ES to (i) assess the significance of such unanticipated impacts; (ii) evaluate the options available to address them; and (iii) prepare or update the IEE and EMPs.

## 10.2 TRAINING AND CAPACITY BUILDING

151. The LIC Environment Specialists will provide training and capacity building on environmental safeguards and GRM as set out in Table 39 below. At provincial, district and subproject levels, it will use formal seminars and training courses focused on the needs of the individuals working with each of the stakeholder organizations, as well as guided on-the-ground action learning-through-doing.

**TABLE 39. ENVIRONMENTAL SAFEGUARD CAPACITY STRENGTHENING PLAN**

TOPIC	TRAINEE	WHEN	TRAINING RESPONSIBILITY
Project Awareness	WUG Official DONRE assigned staff and Section Head  PAFO Safeguard Focal Point/Construction Supervision	Q1-2 Project year 1	PGT Project Management Advisor
ADB and Govt Environment Safeguard Requirements	DONRE	Q2 Py 1	LIC National Environmental Consultant and
	PONRE assigned staff and Section Head		
	PAFO Safeguard Focal Point/Construction Supervision  PPIT Director		National Project Management Advisor
Environmental Documentation – Additional Subproject Processing	WUG,  Assigned staff PONRE and DONRE  PAFO – construction supervision	Q2-3 PY 1	LIC Project Management Advisor –PGT  LIC International and National Consultant
Environmental Monitoring – RSP	WUG  Assigned staff PONRE and DONRE  PAFO – construction supervision	Q3 PY 1	LIC International and National Environmental Consultant  Lt National Construction Supervision Consultant
Environmental Reporting	Assigned staff PONRE and DONRE  PAFO – construction supervision  PPIT Project Management Advisor	Q4 PY1 and Q1 Py2	LIC International and National Consultant
Environmental Sampling and water Flow data analysis	Assigned staff PONRE and DONRE  PAFO – construction supervision  PPIT Project Management Advisor	Q1 Py 2Q2 PY 2	LIC International and National Consultant

### 10.3 REPORTING

152. **Pre-construction Phase.** The EMP monitoring during the pre-construction phase of the subproject will be undertaken by the LIC consultant (Appendix E - Template of Project Environmental Safeguards Monitoring Report). Semi-annual Integrated Safeguards Monitoring Reports will be prepared by the PAFO with support of the LIC and submitted to ADB for review and disclosed on the ADB project website. Appendix F shows the Semi-Annual Integrated Safeguards Monitoring Report.

153. **Construction Phase.** Throughout the construction period, the contractors will submit monthly environmental compliance progress reports to the PAFO, copy furnished to the PGT. The contractor should be able to highlight the summary of the progress of construction, activities undertaken within the reporting period to implement the measures outlined in the EMP, record any community complaints received and how the complaint was resolved.

154. The PAFO will consolidate the results of the monthly environmental monitoring through a quarterly progress report that will be submitted to the PGT which is based at the Department of Irrigation of the MAFF. The quarterly report will summarize the significant findings and measures undertaken to address any adverse environmental impacts during construction and also present any unforeseen environmental impacts and suggested remedial actions for the next monitoring period. PGT with support from the LIC will consolidate information from quarterly progress reports, compile and submit integrated safeguards monitoring report semi-annually to ADB.

155. Once the reports are received by the PGT, these will be reviewed relative to subproject compliance with the indicators defined in the EMP. The PGT will submit the quarterly reports to the Department of Irrigation of MAFF and other national agencies (MONRE, MOF, MOPC, etc.), and to ADB. The PGT with support from the LIC will also prepare the quarterly Project Progress Reports including the main points of environmental monitoring and Semi-annual Integrated Safeguards Monitoring Reports in English to be submitted to ADB.

156. **Operational Phase.** The EMP monitoring during the operational phase will be undertaken by the PAFO. Semi-annual reports will be submitted by the PAFO to the PGT. The PGT, with support from the LIC, will review the report and check the project's adherence to the EMP and then submit the Semi-annual Integrated Safeguards Monitoring Reports to ADB until the Project Completion Report (PCR) is prepared. The monitoring parameters during the operational phase is outlined in the EMP. Table 40 presents the EMP Reporting Plan.

**TABLE 40. EMP REPORTING PLAN**

TYPE OF REPORT	BASIC CONTENT	PREPARED BY	SUBMITTED TO	FREQUENCY
<b>PRE-CONSTRUCTION THROUGH OPERATIONAL PHASE</b>				
Progress Reports	Integrated Safeguards Monitoring Report including EMP implementation and monitoring	PAFO, PGT, Department of Irrigation	MAFF ADB	Semi-annual until project completion report (PCR)
<b>CONSTRUCTION PHASE</b>				
Construction Progress Report	Progress of construction, including EMP monitoring results, complaints received and actions taken	Contractor	PAFO copy furnished to PGT	Monthly

TYPE OF REPORT	BASIC CONTENT	PREPARED BY	SUBMITTED TO	FREQUENCY
Progress Report	Progress of construction, safeguards (EMP) implementation, complaints received and actions taken	PAFO, PGT, Department of Irrigation	MAFF, MONRE, and other national agencies ADB	Quarterly
<b>OPERATIONAL PHASE</b>				
Progress Report	Subproject progress report including EMP implementation and monitoring	PAFO	PGT	Semi-annual until project completion report (PCR)
Integrated Safeguards Monitoring Report	Subproject progress report including EMP implementation and compliance with ADB's policies and regulations	PAFO, PGT, Department of Irrigation	MAFF ADB	Semi-annual until project completion report (PCR)
Project Completion Report	Project evaluation, lessons learned and recommendations	PGT	MAFF ADB	After physical completion of the sub-project.

#### 10.4 ENVIRONMENTAL MANAGEMENT AND MONITORING COSTS

157. The cost for the environmental safeguard activities during rehabilitation and upgrading works, i.e., environmental management, review, and monitoring, for the subprojects will be primarily included in the civil works cost. The cost of environmental management and monitoring activities during the operational phase will be borne by the PGT, as part of operation and maintenance activities.

### 11 CONCLUSION AND RECOMMENDATIONS

158. This IEE for the Nam Khaen and Nam Yang 3 Irrigation Systems Sub-Projects in Xayabuly Province was undertaken to determine the environmental issues and concerns associated with the proposed irrigation system subproject. The assessment confirms that the subproject remains classified as Category B for environment based on ADB Safeguards Policy Statement (SPS, 2009). The subprojects will have beneficial impacts on the social and economic well-being of the people because of improved accessibility to irrigation.

159. Most of the environmental impacts are expected to occur during the rehabilitation/upgrading phase. The environmental impacts are not expected to cause irreversible and significant adverse environmental impacts and are easily controllable by appropriate and conventional mitigation measures. Based on the assessment of environmental impacts, the anticipated adverse impacts during project implementation are related to nuisances which may happen during the rehabilitation/upgrading works of the subproject components such as temporary alienation of access, temporary disruption of community facilities, noise, and sediment runoff, release of dust and engine gas emissions. Recommendations formulated in the EMPs, its inclusion in the contractual framework, and an effective inspection of construction sites will reduce these risks to an acceptable level.

160. Environmental mitigation measures have been designed as outlined in the subproject EMP to address any adverse impacts during the various phases of project implementation. The EMP also presents the institutional responsibilities for implementing the mitigation measures. All Subproject activities prior to construction, during construction and during

operation will be managed as provided in the EMP and the Contractor's compliance and implementation of the mitigation measures shall be monitored. An environmental monitoring plan has been provided to ensure water quality is maintained according to the prevailing Lao standards.

161. The IEE concludes that the subproject combined with available information on affected environment is sufficient to identify the scope of environmental impacts of the subproject. No further environmental assessment is therefore required.



# APPENDIX

**APPENDIX A**  
**RAPID ENVIRONMENTAL ASSESSMENT**  
**(REA) CHECKLIST**

## RAPID ENVIRONMENTAL ASSESSMENT (REA) CHECKLIST

### INSTRUCTIONS:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Sustainable Development and Environmental Safeguards (SDES) for endorsement by the Director, SDCC and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

### COUNTRY/PROJECT TITLE: LAO PDR: SUSTAINABLE RURAL INFRASTRUCTURE AND WATERSHED MANAGEMENT SECTOR PROJECT (SRIWMSP)

#### SECTOR DIVISION:

SCREENING QUESTIONS	YES	NO	REMARKS
<b>PROJECT SITE</b>			
<b>IS THE PROJECT AREA ADJACENT TO OR WITHIN ANY OF THE FOLLOWING ENVIRONMENTALLY SENSITIVE AREAS?</b>			
Cultural heritage site		X	Not applicable
Protected area		X	There is no protected area within the component sites and immediate vicinity.
Wetland		X	Not applicable
Mangrove		X	Not applicable
Estuarine		X	Not applicable
Buffer zone of protected area		X	Not applicable
Special area for protecting biodiversity		X	Not applicable
Underground utilities		X	Not applicable
<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>			
<b>WILL THE PROJECT CAUSE ...</b>			
Loss of precious ecological values (e.g. result of encroachment into forests/swamplands or historical/cultural buildings/areas, disruption of hydrology of natural waterways, regional flooding, and drainage hazards)?		X	Not applicable
Conflicts in water supply rights and related social conflicts?		X	Not applicable
Impediments to movements of people and animals?		X	Not applicable
Potential ecological problems due to increased soil erosion and siltation, leading to decreased stream capacity?		X	Not applicable
Insufficient drainage leading to salinity intrusion?		X	Not applicable
Over pumping of groundwater, leading to salinization and ground subsidence?		X	Not applicable. Groundwater abstraction is not included in the scheme.

SCREENING QUESTIONS	YES	NO	REMARKS
Impairment of downstream water quality and therefore, impairment of downstream beneficial uses of water?		X	Not applicable
Dislocation or involuntary resettlement of people?		X	Not applicable
Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		X	Not applicable
Potential social conflicts arising from land tenure and land use issues?		X	Not applicable
Soil erosion before compaction and lining of canals?		X	Not applicable
Noise from construction equipment?	X		Noise may be generated during the rehabilitation/upgrading of the subproject components (headworks, canals and gates). Mitigating measures are incorporated in the EMP.
Dust during construction?	X		Dust may be generated during the rehabilitation/upgrading of the subproject components (headworks, canals and gates). Mitigating measures are incorporated in the EMP.
Waterlogging and soil salinization due to inadequate drainage and farm management?		X	Not applicable
Leaching of soil nutrients and changes in soil characteristics due to excessive application of irrigation water?		X	Not applicable
Reduction of downstream water supply during peak seasons?		X	Not applicable
Soil pollution, polluted farm runoff and groundwater, and public health risks due to excessive application of fertilizers and pesticides?		X	Not applicable
Soil erosion (furrow, surface)?		X	Temporary silt runoff from excavation activities may be generated. Silt traps and other measures to control sediment flow into rivers are included in the EMP.
Scouring of canals?		X	Not applicable
Clogging of canals by sediments?		X	Canals will be maintained and cleaned regularly.
Clogging of canals by weeds?		X	Canals will be maintained and cleaned regularly.
Seawater intrusion into downstream freshwater systems?		X	Not applicable
Introduction of increase in incidence of waterborne or water related diseases?		X	Not applicable
Dangers to a safe and healthy working environment due to physical, chemical and biological hazards during project construction and operation?		X	Workers and staff will be properly inducted and oriented on the health and safety protocols in work sites.
Large population influx during project construction and operation that causes increased burden on social		X	Workers will be sourced from the affected communities minimizing/eliminating the need for migrant workers.

SCREENING QUESTIONS	YES	NO	REMARKS
infrastructure and services (such as water supply and sanitation systems)?			
Social conflicts if workers from other regions or countries are hired?		X	Workers will be sourced from the affected communities minimizing/eliminating the need for migrant workers.
Risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		X	Not applicable
Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., irrigation dams) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		X	Not applicable

## A CHECKLIST FOR PRELIMINARY CLIMATE RISK SCREENING

Country/Project Title: **LAO PDR: Sustainable Rural Infrastructure and Watershed Management Sector Project (SRIWMSP)**

Sector: **Irrigation**

Subsector:

Division/Department:

SCREENING QUESTIONS		SCORE	REMARKS
Location and Design of project	Is siting and/or routing of the project (or its components) likely to be affected by climate conditions including extreme weather-related events such as floods, droughts, storms, landslides?	0	The river has not dried up even during the dry months. The facilities will not be affected by extreme floods.
	Would the project design (e.g., the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?	1	Design of headworks needs to consider highest and lowest flows of the river and rainfall intensity. River level assessments will be undertaken as part of the monitoring plan.
Materials and Maintenance	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?	0	
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?	0	
Performance of project outputs	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of project output(s) (e.g. hydro- power generation facilities) throughout their design life time?	0	

Options for answers and corresponding score are provided below:

RESPONSE	SCORE
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk project. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the project will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response will be categorized as high-risk project.

Result of Initial Screening (Low, Medium, and High): Total score is 1 thus MEDIUM RISK Other  
Comments:

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Prepared by:



**APPENDIX B**  
**ENVIRONMENTAL COMPLIANCE**  
**CERTIFICATE (ECC)**



ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ  
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ແຂວງໄຊຍະບູລີ

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ 2840/ພຊສ.ຊຍ

ໄຊຍະບູລີ, ວັນທີ 25 ຕຸລາ 2022

ໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ

- ອີງຕາມ ກົດໝາຍ ວ່າດ້ວຍການປົກປັກຮັກສາສິ່ງແວດລ້ອມ (ສະບັບປັບປຸງ) ສະບັບເລກທີ 29/ສພຊ, ລົງວັນທີ 18 ທັນວາ 2012;
- ອີງຕາມ ດຳລັດ ວ່າດ້ວຍການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ສະບັບເລກທີ 21/ລບ, ນະຄອນຫຼວງວຽງຈັນ, ລົງວັນທີ 31 ມັງກອນ 2019;
- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງທ່ານເຈົ້າແຂວງໄຊຍະບູລີ ສະບັບເລກທີ 486/ຈຂ.ຊຍ, ລົງວັນທີ 16 ພຶດສະພາ 2022, ວ່າດ້ວຍການຈັດຕັ້ງ ແລະ ການເຄື່ອນໄຫວຂອງ ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງໄຊຍະບູລີ.

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຕົກລົງ:

1. ເຫັນດີຮັບຮອງເອົາ ບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE) ໂຄງການ ສ້ອມແປງຄອງເໝືອງຊົນລະປະທານ ຫ້ວຍແຄ້ມ ຢູ່ບ້ານນາຫຼາ ເມືອງໄຊຍະບູລີ ແຂວງໄຊຍະບູລີ ຂອງພະແນກກະສິກຳ ແລະ ປ່າໄມ້ ແຂວງໄຊຍະບູລີ ;
2. ມອບໃຫ້ ຂະແໜງສິ່ງແວດລ້ອມ, ນ້ຳ, ອຸຕຸນິຍົມ ແລະ ອຸທິກກະສາດ ແລະ ຫ້ອງການຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ເມືອງໄຊຍະບູລີ ສົມທົບກັບພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ເຮັດໜ້າທີ່ ຕິດຕາມກວດກາ ແລະ ຊຸກຍູ້ ການຈັດຕັ້ງປະຕິບັດ ບົດຄາມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນຜົນກະທົບ ຂອງໂຄງການດັ່ງກ່າວ ຕາມລະບຽບກົດໝາຍ;
3. ເຈົ້າຂອງກົດຈະການ ຕ້ອງປະຕິບັດຕາມເງື່ອນໄຂ ແລະ ພັນທະດ້ານສິ່ງແວດລ້ອມ-ສັງຄົມ ທີ່ໄດ້ລະບຸໄວ້ດ້ານຫຼັງຂອງໃບຢັ້ງຢືນສະບັບນີ້ ຢ່າງເຂັ້ມງວດ.

ໃບຢັ້ງຢືນສະບັບນີ້ກຳນົດນຳໃຊ້ໄດ້ ເຖິງວັນທີ 25 ຕຸລາ 2024 ແລະ ມີຜົນສັກສິດນັບແຕ່ວັນລົງລາຍເຊັນເປັນຕົ້ນໄປ.



ບຸນລັບ ແສງອາພອນ

**ບັນດາເງື່ອນໄຂ ແລະ ພັນທະດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ເຈົ້າຂອງກິດຈະການ ຕ້ອງໄດ້ປະຕິບັດ:**

1. ຕ້ອງປະຕິບັດຕາມທຸກມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນຜົນກະທົບ ທາງດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ໄດ້ລະບຸໄວ້ ໃນບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE) ສະບັບເດືອນ ຕຸລາ 2022 ຢ່າງເຂັ້ມງວດ. ໃນກໍລະນີມີບັນຫາທາງດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ເກີດຂຶ້ນທີ່ບໍ່ໄດ້ກໍານົດໄວ້ ໃນແຜນຄຸ້ມຄອງສິ່ງແວດລ້ອມ ຂອງໂຄງການດັ່ງກ່າວ ຕ້ອງຮັບຜິດຊອບເພີ່ມເຕີມ ໃນການກໍານົດມາດຕະການ ແກ້ໄຂ, ຫຼຸດຜ່ອນຜົນກະທົບເຫຼົ່ານັ້ນ ພ້ອມທັງກໍານົດງົບປະມານ ແລະ ວັນເວລາຈັດຕັ້ງປະຕິບັດ ຢ່າງຖືກຕ້ອງ ແລະ ຊັດເຈນ;
2. ເຈົ້າຂອງກິດຈະການ ຕ້ອງຮັບຜິດຊອບທຸກຂໍ້ມູນ ທີ່ໄດ້ກໍານົດໄວ້ໃນບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ, ແຜນຄຸ້ມຄອງ ແລະ ຕິດຕາມກວດກາສິ່ງແວດລ້ອມ ພ້ອມທັງມອບງົບປະມານ ຕິດຕາມກວດກາໃຫ້ ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ເປັນຜູ້ຄຸ້ມຄອງ;
3. ຕ້ອງເອົາໃຈໃສ່ເປັນພິເສດ ໃນການຄວບຄຸມບັນຫາ ກິ່ນເໝັນ-ຂີວ, ຝຸ່ນລະອອງ, ນ້ຳເປືອນ, ການຂົນສົ່ງ, ສຽງ ເນື່ອງນັ້ນ, ແຮງສັ່ນສະເທືອນ, ອັກຄີໄຟ, ເສດນ້ຳມັນ, ສິ່ງເສດເຫຼືອຕ່າງໆ ລວມທັງຊີວິດ ແລະ ຊັບສິນຂອງ ປະຊາຊົນ, ເພື່ອບໍ່ໃຫ້ມີຜົນກະທົບຮ້າຍແຮງຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ຢູ່ໃກ້ຄຽງ;
4. ໃນໄລຍະດຳເນີນກິດຈະການ ເຈົ້າຂອງກິດຈະການ ຕ້ອງເອົາໃຈໃສ່ ໃນການຕິດຕາມກວດກາ ແລະ ອຳນວຍ ຄວາມສະດວກໃຫ້ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ແລະ ພ້ອມທັງລາຍງານຜົນການຈັດຕັ້ງປະຕິບັດ ວຽກງານປະຈຳ ເດືອນ, ປະຈຳໄຕມາດ ແລະ ປີ ໃຫ້ຂະແໜງການຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຮັບຊາບ;
5. ຖ້າເຈົ້າຂອງກິດຈະການ ບໍ່ປະຕິບັດຕາມແຜນຄຸ້ມຄອງ ແລະ ຕິດຕາມກວດກາສິ່ງແວດລ້ອມ ທີ່ໄດ້ກໍານົດໄວ້, ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຈະຖອນໃບຢັ້ງຢືນ ຫຼື ສະເໜີໃຈໂຄງການ ດັ່ງກ່າວ ຕາມລະບຽບກົດໝາຍ;
6. ເຈົ້າຂອງກິດຈະການ ຕ້ອງປະກອບສ່ວນຊຸກຍູ້, ສົ່ງເສີມ ແລະ ປະຕິບັດຕາມພັນທະເງື່ອນໄຂອື່ນໆ ໃຫ້ແກ່ບ້ານ, ເມືອງ ແລະ ແຂວງ ຕາມຄວາມເໝາະສົມ;
7. ກ່ອນຈະຢຸດເຊົາ, ປ່ຽນຊື່, ປົກປ້າຍສະຖານທີ່ ແລະ ຂະຫຍາຍທຸລະກິດ ຕ້ອງແຈ້ງໃຫ້ພະແນກຊັບພະຍາກອນ ທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ ຮັບຊາບ;
8. ໃນການດຳເນີນກິດຈະການດັ່ງກ່າວ ຖ້າເຫັນວ່າໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ ໃກ້ຈະໝົດອາຍຸການນຳໃຊ້ເຈົ້າຂອງ ກິດຈະການ ຕ້ອງໄດ້ຂຽນໃບສະເໜີ ພ້ອມເອກະສານທີ່ກ່ຽວຂ້ອງ ເພື່ອຂໍຕໍ່ໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ, ຖ້າບໍ່ຂໍ ຕໍ່ຖ້ວນໃບຢັ້ງຢືນດັ່ງກ່າວ ໝົດອາຍຸການນຳໃຊ້ ຕາມໄລຍະເວລາທີ່ໄດ້ກໍານົດໄວ້;
9. ຖ້າໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ ສະບັບດັ່ງກ່າວ ໝົດອາຍຸການນຳໃຊ້ ທາງພະແນກຊັບພະຍາ ກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ ຈະບໍ່ຮັບຮູ້ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ເກີດຂຶ້ນຈາກການ ດຳເນີນກິດຈະການດັ່ງກ່າວ;
10. ຫ້າມມີການປອມແປງ ຫຼື ດັດແກ້ຂໍ້ຄວາມໃດໆ ໃນໃບຢັ້ງຢືນສະບັບນີ້ໂດຍເດັດຂາດ ຫ້າມບໍ່ໃຫ້ເອົາໃບຢັ້ງຢືນນີ້ ໃຫ້ຄົນອື່ນຢືມ, ປອມແປງ ແລະ ຂາຍສິດ ໃນການນຳໃຊ້ໃບຢັ້ງຢືນສະບັບນີ້ ຫຼື ກະທຳການຢ່າງອື່ນທີ່ເປັນການ ຜິດກົດໝາຍຂອງ ສ ປ ປ ລາວ.





ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ  
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນະຖາວອນ

ແຂວງໄຊຍະບູລີ

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ

ເລກທີ 2539 /ພຊສ.ຊຍ

ໄຊຍະບູລີ, ວັນທີ 25 ຕຸລາ 2022

ໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ

- ອີງຕາມ ກົດໝາຍ ວ່າດ້ວຍການປົກປັກຮັກສາສິ່ງແວດລ້ອມ (ສະບັບປັບປຸງ) ສະບັບເລກທີ 29/ສພຊ, ລົງວັນທີ 18 ທັນວາ 2012;
- ອີງຕາມ ດຳລັດ ວ່າດ້ວຍການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ສະບັບເລກທີ 21/ລບ, ນະຄອນຫຼວງວຽງຈັນ, ລົງວັນທີ 31 ມັງກອນ 2019;
- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງທ່ານເຈົ້າແຂວງໄຊຍະບູລີ ສະບັບເລກທີ 485/ຈຂ.ຊຍ, ລົງວັນທີ 16 ພຶດສະພາ 2022, ວ່າດ້ວຍການຈັດຕັ້ງ ແລະ ການເຄື່ອນໄຫວຂອງ ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງໄຊຍະບູລີ.

ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຕົກລົງ:

1. ເຫັນດີຮັບຮອງເອົາ ບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE) ໂຄງການ ກໍ່ສ້າງ-ສ້ອມແປງຊົນລະປະທານນ້ຳຢາງ 3 ຢູ່ບ້ານປ່າໄລ ເມືອງປາກລາຍ ແຂວງໄຊຍະບູລີ ຂອງພະແນກກະສິກຳ ແລະ ປ່າໄມ້ ແຂວງໄຊຍະບູລີ ;
2. ມອບໃຫ້ ຂະແໜງສິ່ງແວດລ້ອມ, ນ້ຳ, ອຸຕຸນິຍົມ ແລະ ອຸທິກກະສາດ ແລະ ຫ້ອງການຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ເມືອງປາກລາຍ ສົມທົບກັບພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ເຮັດໜ້າທີ່ ຕິດຕາມກວດກາ ແລະ ຊຸກຍູ້ ການຈັດຕັ້ງປະຕິບັດ ບົດຄາມກຳລັງປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນຜົນກະທົບ ຂອງໂຄງການດັ່ງກ່າວ ຕາມລະບຽບກົດໝາຍ;
3. ເຈົ້າຂອງກົດຈະການ ຕ້ອງປະຕິບັດຕາມເງື່ອນໄຂ ແລະ ພັນທະດ້ານສິ່ງແວດລ້ອມ-ສັງຄົມ ທີ່ໄດ້ລະບຸໄວ້ດ້ານຫຼັງຂອງໃບຢັ້ງຢືນສະບັບນີ້ ຢ່າງເຂັ້ມງວດ.

ໃບຢັ້ງຢືນສະບັບນີ້ກຳນົດນຳໃຊ້ໄດ້ ເຖິງວັນທີ 25 ຕຸລາ 2024 ແລະ ມີຜົນສັກສິດນັບແຕ່ວັນລົງລາຍເຊັນເປັນຕົ້ນໄປ.

ຫົວໜ້າພະແນກ



ບຸນລັບ ແສງອາພອນ

**ບັນດາເງື່ອນໄຂ ແລະ ພັນທະດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ເຈົ້າຂອງກິດຈະການ ຕ້ອງໄດ້ປະຕິບັດ:**

1. ຕ້ອງປະຕິບັດຕາມທຸກມາດຕະການປ້ອງກັນ ແລະ ຫຼຸດຜ່ອນຜົນກະທົບ ທາງດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ໄດ້ລະບຸໄວ້ ໃນບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE) ສະບັບເດືອນຕຸລາ 2022 ຢ່າງເຂັ້ມງວດ. ໃນກໍລະນີມີບັນຫາທາງດ້ານສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ເກີດຂຶ້ນທີ່ບໍ່ໄດ້ກຳນົດໄວ້ ໃນແຜນຄຸ້ມຄອງສິ່ງແວດລ້ອມ ຂອງໂຄງການດັ່ງກ່າວ ຕ້ອງຮັບຜິດຊອບເພີ່ມເຕີມ ໃນການກຳນົດມາດຕະການແກ້ໄຂ, ຫຼຸດຜ່ອນຜົນກະທົບເຫຼົ່ານັ້ນ ພ້ອມທັງກຳນົດງົບປະມານ ແລະ ວັນເວລາຈັດຕັ້ງປະຕິບັດ ຢ່າງຖືກຕ້ອງ ແລະ ຊັດເຈນ;
2. ເຈົ້າຂອງກິດຈະການ ຕ້ອງຮັບຜິດຊອບທຸກຂໍ້ມູນ ທີ່ໄດ້ກຳນົດໄວ້ໃນບົດລາຍງານ ການສຶກສາເບື້ອງຕົ້ນ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ, ແຜນຄຸ້ມຄອງ ແລະ ຕິດຕາມກວດກາສິ່ງແວດລ້ອມ ພ້ອມທັງມອບງົບປະມານ ຕິດຕາມກວດກາໃຫ້ ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ເປັນຜູ້ຄຸ້ມຄອງ;
3. ຕ້ອງເອົາໃຈໃສ່ເປັນພິເສດ ໃນການຄວບຄຸມບັນຫາ ກິ່ນເໝັນ-ຂີ້ວ, ຝຸ່ນລະອອງ, ນ້ຳເປື້ອນ, ການຂົນສົ່ງ, ສຽງເນື່ອງນັ້ນ, ແຮງສັ່ນສະເທືອນ, ອັກຄີໄຟ, ເສດນ້ຳມັນ, ສິ່ງເສດເຫຼືອຕ່າງໆ ລວມທັງຊີວິດ ແລະ ຊັບສິນຂອງປະຊາຊົນ, ເພື່ອບໍ່ໃຫ້ມີຜົນກະທົບຮ້າຍແຮງຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ຢູ່ໃກ້ຄຽງ;
4. ໃນໄລຍະດຳເນີນກິດຈະການ ເຈົ້າຂອງກິດຈະການ ຕ້ອງເອົາໃຈໃສ່ ໃນການຕິດຕາມກວດກາ ແລະ ອຳນວຍຄວາມສະດວກໃຫ້ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ແລະ ພ້ອມທັງລາຍງານຜົນການຈັດຕັ້ງປະຕິບັດ ວຽກງານປະຈຳເດືອນ, ປະຈຳໄຕມາດ ແລະ ປີ ໃຫ້ຂະແໜງການຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຮັບຊາບ;
5. ຖ້າເຈົ້າຂອງກິດຈະການ ບໍ່ປະຕິບັດຕາມແຜນຄຸ້ມຄອງ ແລະ ຕິດຕາມກວດກາສິ່ງແວດລ້ອມ ທີ່ໄດ້ກຳນົດໄວ້, ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຈະຖອນໃບຢັ້ງຢືນ ຫຼື ສະເໜີໃຈຂອງໂຄງການ ດັ່ງກ່າວ ຕາມລະບຽບກົດໝາຍ;
6. ເຈົ້າຂອງກິດຈະການ ຕ້ອງປະກອບສ່ວນຊຸກຍູ້, ສົ່ງເສີມ ແລະ ປະຕິບັດຕາມພັນທະເງື່ອນໄຂອື່ນໆ ໃຫ້ແກ່ບ້ານ, ເມືອງ ແລະ ແຂວງ ຕາມຄວາມເໝາະສົມ;
7. ກ່ອນຈະຢຸດເຊົາ, ປ່ຽນຊື່, ປົກຍ້າຍສະຖານທີ່ ແລະ ຂະຫຍາຍທຸລະກິດ ຕ້ອງແຈ້ງໃຫ້ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ ຮັບຊາບ;
8. ໃນການດຳເນີນກິດຈະການດັ່ງກ່າວ ຖ້າເຫັນວ່າໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ ໃກ້ຈະໝົດອາຍຸການນຳໃຊ້ເຈົ້າຂອງກິດຈະການ ຕ້ອງໄດ້ຂຽນໃບສະເໜີ ພ້ອມເອກະສານທີ່ກ່ຽວຂ້ອງ ເພື່ອຂໍຕໍ່ໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ, ຖ້າບໍ່ຂໍຕໍ່ຖືວ່າໃບຢັ້ງຢືນດັ່ງກ່າວ ໝົດອາຍຸການນຳໃຊ້ ຕາມໄລຍະເວລາທີ່ໄດ້ກຳນົດໄວ້;
9. ຖ້າໃບຢັ້ງຢືນດ້ານສິ່ງແວດລ້ອມ ສະບັບດັ່ງກ່າວ ໝົດອາຍຸການນຳໃຊ້ ທາງພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມແຂວງ ຈະບໍ່ຮັບຮູ້ ກ່ຽວກັບ ຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ ແລະ ສັງຄົມ ທີ່ເກີດຂຶ້ນຈາກການດຳເນີນກິດຈະການດັ່ງກ່າວ;
10. ຫ້າມມີການປອມແປງ ຫຼື ດັດແກ້ຂໍ້ຄວາມໃດໆ ໃນໃບຢັ້ງຢືນສະບັບນີ້ໂດຍເດັດຂາດ ຫ້າມບໍ່ໃຫ້ເອົາໃບຢັ້ງຢືນນີ້ ໃຫ້ຄົນອື່ນຢືມ, ປອມແປງ ແລະ ຂາຍສິດ ໃນການນຳໃຊ້ໃບຢັ້ງຢືນສະບັບນີ້ ຫຼື ກະທຳການຢ່າງອື່ນທີ່ເປັນການຜິດກົດໝາຍຂອງ ສ ປ ປ ລາວ.



National Symbol of Laos

Lao People's Democratic Republic  
Peace Independence Democracy Unity Prosperity

Xayabuly Province  
Natural Resource and Environment Section

No. 2840/NR&ES. XP  
Xayabuly, 25 October 2022

Environmental Certificate

- Pursuant to Law on Environmental Protection, No. 29/NA, dated 18<sup>th</sup> December 2012;
- Pursuant to Decree on Environmental Impact Assessment, No. 21/GL, dated 31<sup>st</sup> January 2019;
- Pursuant to the agreement of Xayabuly Governor No. 485/G. X dated 16<sup>th</sup> May 2022 pertaining to the organization and activities of Natural Resource and Environment Section of Province.

Natural Resources and Environment Section agrees:

1. Adoption of the preliminary study report on the environmental impact of the Huai Kan irrigation canal repair project in Na La Village, Xayyabuli District, Xayyabuli Province, of the Department of Agriculture and Forestry, Xayyabuli Province;
2. Assigned to the Environment, Water, Meteorology and Hydrology Department and the Office of Natural Resources and Environment in Xaybuli District in conjunction with relevant parties to monitor and encourage the implementation of measures to prevent and reduce the impact of the project in accordance with the law;
3. Business owners must strictly comply with the conditions and social environmental obligations listed on the back of this certificate.

This certificate is valid until October 25, 2024 and is effective from the date of signing.

Director of Section

Signed and sealed by  
Bounlab SENG-APHONE

The environmental and social conditions and obligations of the business owner must implement

1. Strictly follow all the measures to prevent and reduce environmental and social impacts as stated in the preliminary study report on environmental impacts in October 2020. In the case of environmental and social problems that are not specified in the environmental management plan of the project, additional responsibility must be taken in taking corrective measures, reducing those effects, as well as setting the budget and implementation date accurately and clearly;
2. The owner of the project must be responsible for all the information identified in the nature and the preliminary study report on the impact on the environment, the canal control plan and environmental monitoring as well as the monitoring budget to the Department of Natural Resources and Environment as the manager;
3. Special attention must be paid to control the problem of odors, dust, dirty water, transportation, noise, vibration, fire, fuel, waste, including people's lives and property, so as not to have a serious impact on the environment and society nearby;
4. During the operation, the project owner must pay attention to monitor and facilitate the relevant parties and also report the results of the implementation of the work on a monthly, quarterly and yearly basis to the natural resources and environment sector;
5. If the project owner does not comply with the environmental management and monitoring plan that has been set, the Department of Natural Resources and Environment will withdraw the certificate or propose to suspend the project in accordance with the law.;
6. The owner of the project must contribute to encourage, promote and fulfill other obligations to villages, districts and provinces as appropriate;
7. Before stopping, changing the name, transferring the location and selling the business, the Department of Natural Resources and Environment must be notified;
8. In carrying out such activities, if it is seen that the environmental certificate is about to expire, the owner of the activity must write a proposal along with relevant documents to request for the renewal of the environmental certificate, if not, it is considered that the certificate has expired according to the set period;
9. If the environmental certificate expires, the Department of Natural Resources and Environment will not recognize the impact on the environment and society arising from the operation of such activities;
10. Do not falsify or modify any text in this certificate. Do not lend this certificate to others, falsify and sell the right to use this certificate or act in any other way that is against the laws of the Lao PDR.



## National Symbol of Laos

Lao People's Democratic Republic  
Peace Independence Democracy Unity Prosperity

Xayabuly Province  
Natural Resource and Environment Section

No. 2839/NR&ES. XP  
Xayabuly, 25 October 2022

### Environmental Certificate

- Pursuant to Law on Environmental Protection, No. 29/NA, dated 18<sup>th</sup> December 2012;
- Pursuant to Decree on Environmental Impact Assessment, No. 21/GL, dated 31<sup>st</sup> January 2019;
- Pursuant to the agreement of Xayabuly Governor No. 485/G. X dated 16<sup>th</sup> May 2022 pertaining to the organization and activities of Natural Resource and Environment Section of Province.

Natural Resources and Environment Section agrees:

1. Adoption of the preliminary study report on the environmental impact of the Huai Kan irrigation canal repair project in Na La Village, Xayyabuli District, Xayyabuli Province, of the Department of Agriculture and Forestry, Xayyabuli Province;
2. Assigned to the Environment, Water, Meteorology and Hydrology Department and the Office of Natural Resources and Environment in Xaybuli District in conjunction with relevant parties to monitor and encourage the implementation of measures to prevent and reduce the impact of the project in accordance with the law;
3. Business owners must strictly comply with the conditions and social environmental obligations listed on the back of this certificate.

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Director of Section

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Bounlab SENG-APHONE

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1. Strictly follow all the measures to prevent and reduce environmental and social impacts as stated in the preliminary study report on environmental impacts in October 2020. In the case of environmental and social problems that are not specified in the environmental management plan of the project, additional responsibility must be taken in taking corrective measures, reducing those effects, as well as setting the budget and implementation date accurately and clearly;
2. The owner of the project must be responsible for all the information identified in the nature and the preliminary study report on the impact on the environment, the canal control plan and environmental monitoring as well as the monitoring budget to the Department of Natural Resources and Environment as the manager;
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4. During the operation, the project owner must pay attention to monitor and facilitate the relevant parties and also report the results of the implementation of the work on a monthly, quarterly and yearly basis to the natural resources and environment sector;
5. If the project owner does not comply with the environmental management and monitoring plan that has been set, the Department of Natural Resources and Environment will withdraw the certificate or propose to suspend the project in accordance with the law.;
6. The owner of the project must contribute to encourage, promote and fulfill other obligations to villages, districts and provinces as appropriate;
7. Before stopping, changing the name, transferring the location and selling the business, the Department of Natural Resources and Environment must be notified;
8. In carrying out such activities, if it is seen that the environmental certificate is about to expire, the owner of the activity must write a proposal along with relevant documents to request for the renewal of the environmental certificate, if not, it is considered that the certificate has expired according to the set period;
9. If the environmental certificate expires, the Department of Natural Resources and Environment will not recognize the impact on the environment and society arising from the operation of such activities;
10. Do not falsify or modify any text in this certificate. Do not lend this certificate to others, falsify and sell the right to use this certificate or act in any other way that is against the laws of the Lao PDR.

# **APPENDIX C**

## **UXO CERTIFICATION**

ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ  
ສັນຕິພາບ ເອກະລາດ ປະຊາທິປະໄຕ ເອກະພາບ ວັດທະນາຖາວອນ



ກະຊວງແຮງງານ ແລະ ສະຫວັດດີການສັງຄົມ  
ຫ້ອງການ ຄະນະກຳມະການຄຸ້ມຄອງແຫ່ງຊາດ ເພື່ອການແກ້ໄຂ  
ບັນຫາລະເບີດບໍ່ທັນແຕກທີ່ຕົກຕ້າງ ປຸ່ມ ສປປ ລາວ

ເລກທີ 811 / ຫຊກລ.ກຫ

ນະຄອນຫຼວງວຽງຈັນ, ວັນທີ 09/09/2016

**ໜັງສືແຈ້ງຕອບ**

ຮຽນ: ທ່ານ ຫົວໜ້າ ພະແນກແຮງງານ ແລະ ສະຫວັດດີການສັງຄົມ ແຂວງໄຊຍະບູລີ

ເລື່ອງ: ການປຶ້ງປິນເຂດເນື້ອທີ່ຂອງໂຄງການ ເຊິ່ງບໍ່ແມ່ນເຂດເປົ້າໝາຍເກັບກູ້ລະເບີດ

- ອີງຕາມຂໍ້ຕົກລົງຂອງລັດຖະມົນຕີກະຊວງແຮງງານ ແລະ ສະຫວັດດີການສັງຄົມ ວ່າດ້ວຍການຈັດຕັ້ງ ແລະ ການເຄື່ອນໄຫວຂອງຫ້ອງການ ຄະນະກຳມະການຄຸ້ມຄອງແຫ່ງຊາດ ເພື່ອແກ້ໄຂບັນຫາລະເບີດ ບໍ່ທັນແຕກທີ່ຕົກຕ້າງ ປຸ່ມ ສປປ ລາວ ສະບັບເລກທີ 3639 / ຣສສ, ລົງວັນທີ 21 ກັນຍາ 2018
- ອີງໃສ່ໜັງສືສະເໜີຂອງຫົວໜ້າພະແນກແຮງງານ ແລະ ສະຫວັດດີການສັງຄົມ ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ 1984/ ຣສສ, ລົງວັນທີ 11 ກັນຍາ 2019

ຫ້ອງການ ຄຊກລ ຂໍຖືເປັນກຽດ ແຈ້ງການມາຍັງທ່ານຊາບວ່າ: ໜ່ວຍງານສຳຫຼວດ-ກວດກູ້ ລບຕ ໄດ້ ສົມທົບກັບ ໜ່ວຍງານຖານຂໍ້ມູນ ຫ້ອງການ ຄຊກລ ສູນກາງ ເພື່ອສັງລວມຂໍ້ມູນ ໃບຖານຂໍ້ມູນການຖິ້ມລະເບີດຂອງ ສ.ອາເມລິກາ ໃນເຂດເນື້ອທີ່ໂຄງການຍ່ອຍ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ຄຸ້ມຄອງອ່າງໂດ່ງ ແບບບົນບິ່ງ ( ທີນ ADB ) ປຸ່ມແຂວງໄຊຍະບູລີ ຈຳນວນ 5 ໂຄງການ ໃນ 3 ເມືອງຄື: 1. ໂຄງການອ່າງເກັບນ້ຳຫ້ວຍ ແຄ່ນ ເມືອງໄຊຍະບູລີ, 2. ຝາບນ້ຳພຽງ 1-2 ເມືອງພຽງ, 3. ໂຄງການຝາບນ້ຳປຸ່ມ ບ້ານໃຫຍ່ບາແວນ ເມືອງພຽງ, 4. ໂຄງການນ້ຳປອນ ບ້ານວັງບາວ ເມືອງປາກລາຍ, 5. ໂຄງການອ່າງເກັບນ້ຳບາງ 3, ບ້ານປ່າໄລ່ ເມືອງປາກລາຍ ເຊິ່ງ ຜ່ານການວິເຄາະຂໍ້ມູນ ເຫັນວ່າ: ໃນເຂດເນື້ອທີ່ໂຄງການຍ່ອຍດັ່ງກ່າວ ແມ່ນບໍ່ພົບຂໍ້ມູນການຖິ້ມລະເບີດ ຂອງ ສ. ອາເມລິກາ ແຕ່ເພື່ອຄວາມປອດໄພໃນການດຳເນີນກິດຈະກຳຂອງໂຄງການ ຈຶ່ງແນະນຳໃຫ້ຈັດຫາງົບປະມານໃນການສຳ ຫຼວດລະເບີດຕົກຕ້າງປາງສົງຄາມ ຕາມດຳລັງຂອງນາຍົກລັດຖະມົນຕີ ເລກທີ 39/ນຍ, ລົງວັນທີ 28/09/2016 ເພາະ ຫ້ອງການ ຄຊກລ ມີແຕ່ຂໍ້ມູນການຖິ້ມລະເບີດທາງອາກາດ ແລະ ບໍ່ມີຂໍ້ມູນ ການຕໍ່ສູ້ທະຫານຕໍ່ສູ້ເທິງໜ້າດິນ ສະນັ້ນ, ຈຶ່ງແຈ້ງມາຍັງທ່ານເພື່ອຊາບ ແລະ ໃຫ້ການຮ່ວມມືໃນການປະສານໄປຍັງເຈົ້າໜ້າທີ່ ແລະ ອຳນາດການປົກຄອງທີ່ອ່ຽງຖິ່ນ ທີ່ກ່ຽວຂ້ອງ ( ລະອຽດມີຕຳລັງເລກທີ 39/ນຍ ຂັດຕິດມາພ້ອມນີ້ )

ດັ່ງນັ້ນ, ຈຶ່ງແຈ້ງຕອບມາຍັງທ່ານເພື່ອຊາບ

ສຳເນົາສົ່ງ:

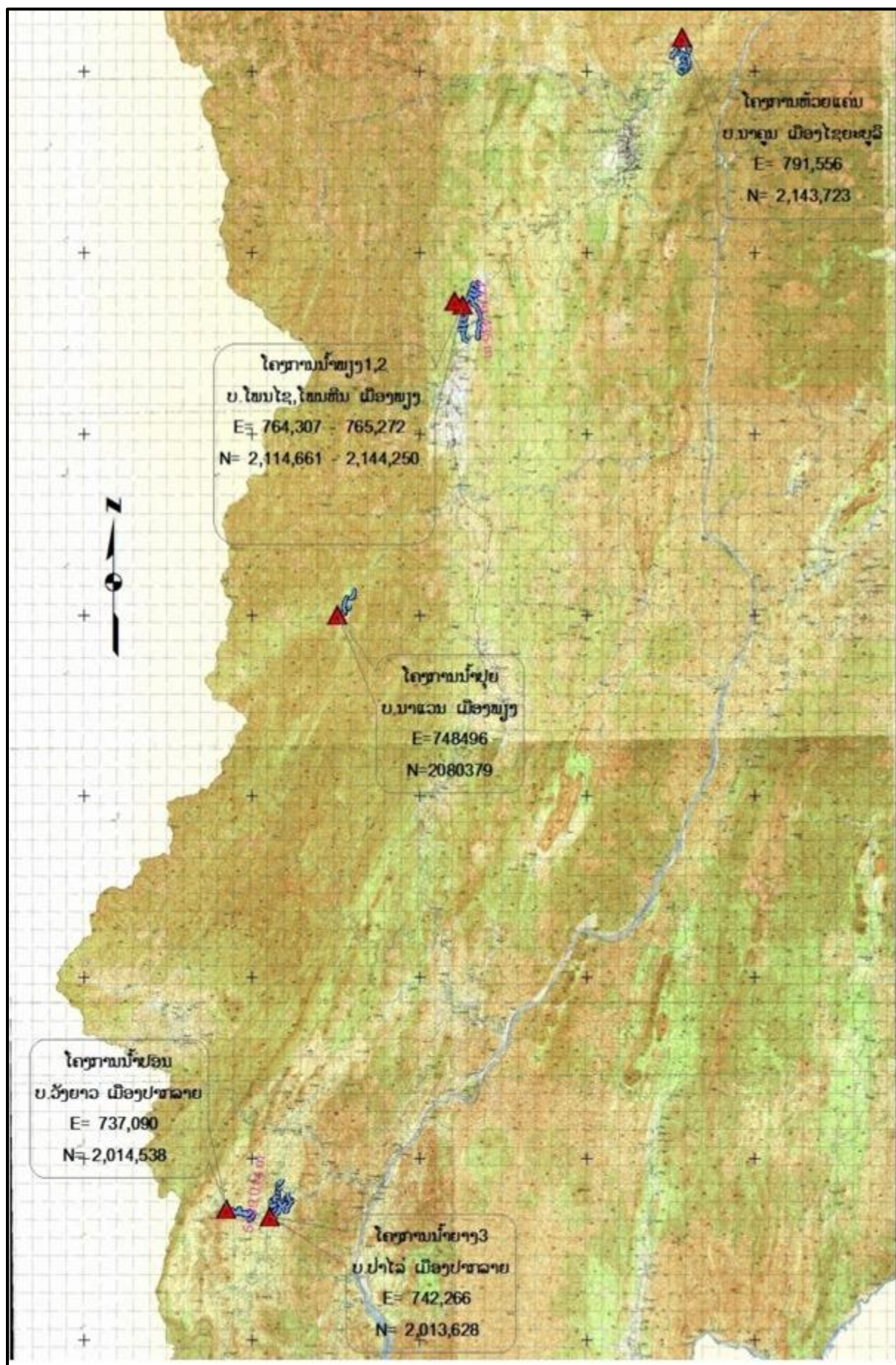
- ຫ້ອງວ່າການແຂວງໄຊຍະບູລີ ( ເພື່ອຊາບ )
- ຫ້ອງການແຮງງານ ແລະ ສະຫວັດດີການສັງຄົມ
- ເມືອງໄຊຍະບູລີ, ເມືອງພຽງ ແລະ ເມືອງປາກລາຍ ( ເພື່ອຊາບ )

ຫົວໜ້າຫ້ອງການ ຄຊກລ



ໄຈມແຂງ ແຫງຫອງສະຫວັດ





Lao People's Democratic Republic  
Peace Independence Democracy Unity Prosperity

Ministry of Labor and Social welfare  
Office of the National Management Committee  
to solve the problem of unexploded ordnance  
remaining in the Lao PDR

No. 811/  
Vientiane Capital, Dated .....

Replied Letter

To: Director General Office of Labor and Social Welfare of Xaiyabuly Province  
Subject: Verification of the project area which is not a target area for explosive clearance

- Pursuant to the agreement of Minister to Ministry of Labor and Social Welfare pertaining to the organization and activity of National Management Committee to solve the problem of unexploded ordnance remaining in the Lao PDR No. 3639/MLSW, dated 21<sup>st</sup> September 2018;
- With reference to Director General Proposal Letter of Labor and Social Welfare of Xaiyabuly province No. 1894/ Dated 11<sup>th</sup> September 2019.

The NRA office is pleased to inform you that: The unexploded ordnance survey unit has joined with the database unit of the central NRA office to compile information in the database of United States explosives in the sub-project area of the rural infrastructure development and sustainable watershed management project (ADB funding). There are 5 projects in Xayabuli province: 1. Nam Huay Khaen reservoir project, Xayabuli district, 2. Nam Phieng Weir 1 - 2, Phieng district, 3. Nam Pouiy Weir Project, Yai Nawen village, Phieng District, 4. Nam Pon Project, Vang Yao village, Pak Lai district, 5. Nam Yang reservoir project, 3. Pa Lai village, Pak Lai district. Through the analysis of the data, it can be seen that: in the area of the sub-project, there is no data on the dropping of bombs by the United States, but for the safety of the activities of the project, it is recommended to allocate a budget for the survey of explosive remnants of war according to the Prime Minister's statement No. 39/PM, dated September 28, 2016, because the NRA office only has information on dropping bombs air and there is no information about military combat on the ground, so I am informing you to inform and cooperate in coordinating with the relevant local authorities and authorities (details are attached with Prime Minister Order 39/PM).

Therefore, it is declared for acknowledgement.

Office of NRA

Copy:

- Governance office of Xaiyabuli (for acknowledgement)
- Labor and Social Welfare Office
- Xaiyabuli District, Phieng District and Pak Lai District  
(For acknowledgment)

Signed and sealed by

Chome Yaeng PHAENGTHONGSAVATH

**APPENDIX D**  
**PROCEEDINGS OF PUBLIC**  
**CONSULTATIONS**





**ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ**  
**ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ**

ແຂວງໄຊຍະບູລີ

ເມືອງໄຊຍະບູລີ

ໂຄງການ ພຊຄ-ຊກຂ (SRIWSM-PICSA)

ເມືອງໄຊຍະບູລີ, ວັນທີ 09/01/2022

**ບົດບັນທຶກ**

**ກອງປະຊຸມການລົງເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ  
ກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການກໍ່ສ້າງສ້ອມແປງ  
ຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ.**

- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ຄຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໃຕ້ແບບຍືນຍົງ ສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການແຕ່ງຕັ້ງພະນັກງານ ເພື່ອລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ 2365/ກປຂ.ຊຍ, ລົງວັນທີ 27 ມິຖຸນາ 2022.
- ອີງຕາມ ກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ ໃນວັນທີ 29 ມິຖຸນາ 2022.

ໃນຕອນແລງວັນທີ 29 ມິຖຸນາ 2022 ເວລາ 14 ໂມງ 30ນາທີ ທີ່ມີການຂຶ້ນແຂວງ, ຂັ້ນເມືອງ ພ້ອມດ້ວຍຂະແໜງການທີ່ກ່ຽວຂ້ອງ ຂອງເມືອງໄດ້ເປີດກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນຂຶ້ນ ທີ່ຫ້ອງປະຊຸມຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ ໂດຍເປັນປະທານ ຂອງທ່ານ ສັງຄົມສີມຸນ, ຮອງຫົວໜ້າຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ (ຜູ້ປະສານງານໂຄງການຂັ້ນເມືອງ) ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ 15... ຄົນ, ຍິງ ...6...ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຕັດຊ້ອນທ້າຍ) ກອງປະຊຸມໄດ້ຮັບຟັງການເຜີຍແຜ່ນະໂຍບາຍຂອງໂຄງການພຊຄ-ຊກຂ, ຈຸດປະສົງຂອງກອງປະຊຸມ ແລະ ແນະນຳການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ, ທາງທີ່ມີການງານຂັ້ນແຂວງ, ເມືອງໄດ້ ສຳພາດ, ເກັບກຳຂໍ້ມູນນຳແຕ່ລະຂະແໜງການຂອງເມືອງເຊິ່ງໄດ້ເຊີບເອົາຝາຍຂໍ້ມູນດ້ານຕ່າງໆນຳແຕ່ລະຂະແໜງການ(ແຜນການ5ປີ2021-2025 ແລະ ບົດສະຫຼຸບປີ 2021 ແລະ ແຜນການປີ2022), ພ້ອມເຮັດບົດບັນທຶກກອງປະຊຸມ ກອງປະຊຸມຍັງໄດ້ເປີດກ້ວາງໃຫ້ໄດ້ມີການປະກອບຄໍາຄິດເຫັນຂອງແຕ່ລະຂະແໜງການ ຫາລືກັນກ່ຽວກັບນະໂຍບາຍຕ່າງໆຈາກໂຄງການ ແລະ ກອງປະຊຸມສາມາດເປັນເອກະພາບສະຫຼຸບເນື້ອໃນໄດ້ດັ່ງນີ້:

1. ປະຊາຊົນຜູ້ເຂົ້າຮ່ວມແມ່ນມີຄວາມເຂົ້າໃຈຕໍ່ນະໂຍບາຍ ແລະ ແຜນວຽກຕ່າງໆຂອງໂຄງການທີ່ຈະຈັດຕັ້ງປະຕິບັດໄວ້ໆນີ້.
2. ແຕ່ລະຂະແໜງການຂອງເມືອງ ແມ່ນໄດ້ອໍານວຍຄວາມສະດວກ ໃນການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ.

ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ 22.9.. ມິຖຸນາ 2022 ເວລາ 4.15. ໂມງ, ດັ່ງນັ້ນຈິ່ງໄດ້  
ສ້າງບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.

ປະທານກອງປະຊຸມ



ສັງຄົມ ສັມມັນ

ທີມງານຂັ້ນແຂວງ



ຜູ້ບັນທຶກ





**ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ**  
**ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ**

ແຂວງໄຊຍະບູລີ

ເມືອງໄຊຍະບູລີ

ໂຄງການ ພຊຸດ-ຊກຂ (SRIWSM-PICSA)

ເມືອງໄຊຍະບູລີ, ວັນທີ..../..../ມິຖຸນາ 2022

**ບົດບັນທຶກ**

**ກອງປະຊຸມການລົງເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ  
ກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການກໍ່ສ້າງສ້ອມແປງ  
ຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ.**

- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ຄຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄັງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໃຕ້ແບບບິນບົງ ສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການແຕ່ງຕັ້ງພະນັກງານ ເພື່ອລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ2295/ກປຂ.ຊຍ, ລົງວັນທີ 14 ມິຖຸນາ 2022.
- ອີງຕາມ ຕາມກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳບາງ3 ບ້ານໃຫຍ່ນາຫຼາ(ຖົ່ມນາຫຼາ), ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ ໃນວັນທີ 30 ມິຖຸນາ 2022.

ໃນຕອນເຊົ້າວັນທີ ..../..../ ມິຖຸນາ 2022 ເວລາ 8 ໂມງ 30ນາທີ ທີ່ມງານຂັ້ນແຂວງ, ຂັ້ນເມືອງ ພ້ອມດ້ວຍອຳນາດການປົກຄອງ ບ້ານໃຫຍ່ນາຫຼາ(ຖົ່ມນາຫຼາ), ຄະນະກຸ່ມຊາວນາ ແລະ ຊາວນາທັງໝົດ ໄດ້ເປີດກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ທີ່ຫ້ອງປະຊຸມ ບ້ານນາຫຼາ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີໂດຍເປັນປະທານ ຂອງທ່ານ ສັງຄົມ ສີມຸນ, ຮອງຫົວໜ້າຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ (ຜູ້ປະສານງານໂຄງການຂັ້ນເມືອງ) ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ ..../..../ ຄົນ, ບົງ ..../..../ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຕັດຊັ້ນທ້າຍ) ກອງປະຊຸມໄດ້ຮັບຟັງການເຜີຍແຜ່ນະໂຍບາຍຂອງໂຄງການພຊຸດ-ຊກຂ, ຈຸດປະສົງຂອງກອງປະຊຸມ ແລະ ແນະນຳການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ, ທາງທີມງານງານຂັ້ນແຂວງ, ເມືອງໄດ້ ສຳພາດ, ເກັບກຳຂໍ້ມູນນຳອຳນາດການປົກຄອງບ້ານ, ສະມາຊິກຊາວນາ ທີ່ໄດ້ຮັບນຳຊົນລະປະທານຫ້ວຍແຄ່ນ ຂອງໂຄງການພັດທະນາ ພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໃຕ້ແບບບິນບົງ, ພ້ອມເຮັດບົດບັນທຶກກອງປະຊຸມນຳນາຍບ້ານ ໃຫຍ່ນາຫຼາກອງປະຊຸມຍັງໄດ້ເປີດກ້ວາງໃຫ້ໄດ້ມີການປະກອບຄໍາຄິດເຫັນຂອງຊາວບ້ານ ແລະ ອຳນາດການປົກຄອງບ້ານ ຫາລືກັນກ່ຽວກັບນະໂຍບາຍຕ່າງໆຈາກໂຄງການ ແລະ ກອງປະຊຸມສາມາດເປັນເອກະພາບສະຫຼຸບເນື້ອໃນໄດ້ດັ່ງນີ້:

1. ປະຊາຊົນຜູ້ເຂົ້າຮ່ວມແມ່ນມີຄວາມເຂົ້າໃຈຕໍ່ນະໂຍບາຍ ແລະ ແຜນວຽກຕ່າງໆຂອງໂຄງການທີ່ຈະຈັດຕັ້ງປະຕິບັດໄວ້ນີ້.
2. ປະຊາຊົນ ແມ່ນໄດ້ອຳນວຍຄວາມສະດວກ ໃນການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ.

ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ .໑໐. ມິຖຸນາ 2022 ເວລາ 4.໒໐ ໂມງ, ດັ່ງນັ້ນຈຶ່ງໄດ້  
ສ້າງບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.

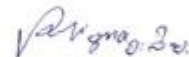
ປະທານກອງປະຊຸມ

ທີມງານຂັ້ນແຂວງ

ຜູ້ບັນທຶກ

  
ສົງຄົມ ສົມບູນ





ອຳນາດການປົກຄອງບ້ານ

ບ້ານໃຫຍ່ນາຫຼາ



ກຳມະການ ຄຸນຄຳແກ້ວ

- ແນວໂຮມບ້ານ.....
- ສະຫະພັນແມ່ຍິງບ້ານ.....
- ຕາງໜ້າກຸ່ມຊົມໃຊ້ນ້ຳ.....





**ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ**  
**ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ**

ແຂວງໄຊຍະບູລີ

ເມືອງໄຊຍະບູລີ

ໂຄງການ ພຊຄ-ຊກຂ (SRIWSM-PICSA)

ເມືອງໄຊຍະບູລີ, ວັນທີ. ໓/໙/໒໐. ກໍລະກົດ 2022

**ບົດບັນທຶກ**

**ກອງປະຊຸມການລົງເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ  
ກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການກໍ່ສ້າງສ້ອມແປງ  
ຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ.**

- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ຄຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໄຕ້ແບບຍືນຍົງ ສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການແຕ່ງຕັ້ງພະນັກງານ ເພື່ອລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ 2365/ກປຂ.ຊຍ, ລົງວັນທີ 27 ມິຖຸນາ 2022.
- ອີງຕາມ ຕາມກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ບ້ານໃຫຍ່ນາຫຼາ(ຄຸ້ມນາຄຸນ), ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີໃນວັນທີ 1 ກໍລະກົດ 2022.

ໃນຕອນເຊົ້າວັນທີ ໒.໗.໒໐. ກໍລະກົດ 2022 ເວລາ 8 ໂມງ 30ນາທີ ທີ່ມາງານຂັ້ນແຂວງ, ຂັ້ນເມືອງ ພ້ອມດ້ວຍອຳນາດການປົກຄອງ ບ້ານໃຫຍ່ນາຫຼາ(ຄຸ້ມນາຄຸນ), ຄະນະກຸ່ມຊາວນາ ແລະ ຊາວນາທັງໝົດ ໄດ້ເປີດກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ທີ່ຫ້ອງປະຊຸມ ຄຸ້ມນາຄຸນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ ໂດຍເປັນປະທານ ຂອງທ່ານ ສັງຄົມສີມຸນ, ຮອງຫົວໜ້າຫ້ອງການກະສິກໍາ ແລະ ປ່າໄມ້ເມືອງ (ຜູ້ປະສານງານໂຄງການຂັ້ນເມືອງ) ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ 39 ຄົນ, ຍິງ 11 ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຕັດຊ້ອນຫ້າຍ) ກອງປະຊຸມໄດ້ຮັບຟັງການເປີດແຜ່ນະໂຍບາຍຂອງໂຄງການພຊຄ-ຊກຂ, ຈຸດປະສົງຂອງກອງປະຊຸມ ແລະ ແນະນຳການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ, ທາງທີ່ມາງານຂັ້ນແຂວງ, ເມືອງໄດ້ ສຳພາດ, ເກັບກຳຂໍ້ມູນນຳສະມາຊິກຊາວນາທີ່ໄດ້ຮັບນຳຊົນລະປະທານຫ້ວຍແຄ່ນ ຂອງໂຄງການພັດທະນາ ພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໄຕ້ແບບຍືນຍົງ, ພ້ອມເຮັດບົດບັນທຶກກອງປະຊຸມນຳນາຍບ້ານ ໃຫຍ່ນາຫຼາ (ຄຸ້ມນາຄຸນ)ກອງປະຊຸມຍັງໄດ້ເປີດກ້ວາງໃຫ້ໄດ້ມີການປະກອບຄໍາຄິດເຫັນຂອງຊາວບ້ານ ແລະ ອຳນາດການປົກຄອງບ້ານ ຫາລືກັນກ່ຽວກັບນະໂຍບາຍຕ່າງໆຈາກໂຄງການ ແລະ ກອງປະຊຸມສາມາດເປັນເອກະພາບສະຫຼຸບເນື້ອໃນໄດ້ດັ່ງນີ້:

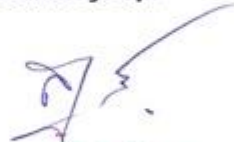
1. ປະຊາຊົນຜູ້ເຂົ້າຮ່ວມແມ່ນມີຄວາມເຂົ້າໃຈຕໍ່ນະໂຍບາຍ ແລະ ແຜນວຽກຕ່າງໆຂອງໂຄງການທີ່ຈະຈັດຕັ້ງປະຕິບັດໄວ້ງນີ້.
2. ປະຊາຊົນ ແມ່ນໄດ້ອຳນວຍຄວາມສະດວກ ໃນການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ.

ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ ໓.໙... ກໍລະກົດ 2022 ເວລາ 4.໔. ໂມງ, ດັ່ງນັ້ນຈຶ່ງໄດ້  
ສ້າງບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.

ປະທານກອງປະຊຸມ

ທີມງານຂັ້ນແຂວງ

ຜູ້ບັນທຶກ

  
ສົງຄົມ ສົມມະນ





ອຳນາດການປົກຄອງບ້ານ  
ບ້ານໃຫຍ່ນາຫຼາ  
  
ນາຍບ້ານ  
ສິງຄົມ  
ນາຫຼາ  
ເມືອງໄຊທອງ  
ກົມເພີດ ຍຸນຄຳແກ້

- ແນວໂຮມບ້ານ.....
- ສະຫະພັນແມ່ຍິງບ້ານ.....
- ຕາງໜ້າກຸ່ມຊົມໃຊ້ນໍ້າ.....



**ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ**  
**ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ**

ແຂວງໄຊຍະບູລີ

ເມືອງໄຊຍະບູລີ

ໂຄງການ ພຊຄ-ຊກຂ (SRIWSM-PICSA)

ເມືອງໄຊຍະບູລີ, ວັນທີ. 02.10.2022

**ບົດບັນທຶກ**

**ກອງປະຊຸມການລົງເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ  
ກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການກໍ່ສ້າງສ້ອມແປງ  
ຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ.**

- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ດຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການດຸ້ມຄອງອ່າງໄຕ່ງແບບບິນບົງ ສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການແຕ່ງຕັ້ງພະນັກງານ ເພື່ອລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ 2365/ກປຂ.ຊຍ, ລົງວັນທີ 27 ມິຖຸນາ 2022.
- ອີງຕາມ ຕາມກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ບ້ານໃຫຍ່ນາຫຼາ(ຄຸມນາທ່ອນ), ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ ໃນວັນທີ 2 ກໍລະກົດ 2022.

ໃນຕອນເຊົ້າວັນທີ 02.10.2022 ເວລາ 8 ໂມງ 30ນາທີ ທີ່ມຽນຂຶ້ນແຂວງ, ຂຶ້ນເມືອງ ພ້ອມດ້ວຍອຳນາດການປົກຄອງ ບ້ານໃຫຍ່ນາຫຼາ(ຄຸມນາທ່ອນ), ຄະນະກຸ່ມຊາວນາ ແລະ ຊາວນາທັງໝົດ ໄດ້ເປີດກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ທີ່ຕ້ອງປະຊຸມ ຄຸ້ມນານາທ່ອນ, ເມືອງໄຊຍະບູລີ, ແຂວງໄຊຍະບູລີ ໂດຍເປັນປະທານ ຂອງທ່ານ ສັງຄົມສີມຸນ, ຮອງຫົວໜ້າຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ (ຜູ້ປະສານງານໂຄງການຂຶ້ນເມືອງ) ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ 37 ຄົນ, ຍິງ 14 ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຄັດຊ້ອນທ້າຍ) ກອງປະຊຸມໄດ້ຮັບຟັງການເຜີຍແຜ່ນະໂຍບາຍຂອງໂຄງການພຊຄ-ຊກຂ, ຈຸດປະສົງຂອງກອງປະຊຸມ ແລະ ແນະນຳການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ, ທາງທີມງານຂຶ້ນແຂວງ, ເມືອງໄດ້ ສຳພາດ, ເກັບກຳຂໍ້ມູນນຳສະມາຊິກຊາວນາ ທີ່ໄດ້ຮັບນຳຊົນລະປະທານຫ້ວຍແຄ່ນ ຂອງໂຄງການພັດທະນາ ພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການດຸ້ມຄອງອ່າງໄຕ່ງແບບບິນບົງ, ພ້ອມເຮັດບົດບັນທຶກກອງປະຊຸມນຳນາຍບ້ານ ໃຫຍ່ນາຫຼາ (ຄຸມນາທ່ອນ) ກອງປະຊຸມຍັງໄດ້ເປີດກ້ວາງໃຫ້ໄດ້ມີການປະກອບຄໍາຄິດເຫັນຂອງຊາວບ້ານ ແລະ ອຳນາດການປົກຄອງບ້ານ ຫາລືກັນກ່ຽວກັບນະໂຍບາຍຕ່າງໆຈາກໂຄງການ ແລະ ກອງປະຊຸມສາມາດເປັນເອກະພາບສະຫຼຸບເນື້ອໃນໄດ້ດັ່ງນີ້:

1. ປະຊາຊົນຜູ້ເຂົ້າຮ່ວມແມ່ນມີຄວາມເຂົ້າໃຈຕໍ່ນະໂຍບາຍ ແລະ ແຜນວຽກຕ່າງໆຂອງໂຄງການທີ່ຈະຈັດຕັ້ງປະຕິບັດໄວ້ນີ້.
2. ປະຊາຊົນ ແມ່ນໄດ້ອຳນວຍຄວາມສະດວກ ໃນການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ.



ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ ໓.9. ກໍລະກົດ 2022 ເວລາ 11.໑໑ ໂມງ, ດັ່ງນັ້ນຈິ່ງໄດ້  
ສ້າງບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.

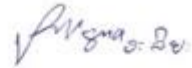
ປະທານກອງປະຊຸມ

ທີມງານຂັ້ນແຂວງ

ຜູ້ບັນທຶກ

  
ສັງຄົມ ສັງຄົມ





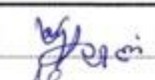




ອຳນາດການປົກຄອງບ້ານ  
ບ້ານໃຫຍ່ນາຫຼາ



ຈຳເພີດ ສຸນຄຳແກ້ວ

- ແນວໂຮມບ້ານ.....
- ສະຫະພັນແມ່ປົງບ້ານ.....
- ດາງໝ້າງມຸຊົມໃຊ້ນໍ້າ.....

ລ/ດ No	ຊື່ (Name)		ເພດ (Sex)		ຫນ້າທີ່/ຮິບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ (Lao)	ອັງກິດ (English)	ຍິງ (F)	ຊາຍ (M)	Role/Organization	Telephone	Signature
11	ທ. ສິນທິ		✓		ປ/ຊ.		
12	ທ. ສິນທິ ສິນທິ			✓	ປ/ຊ.		ທ. ສິນທິ
13	ທ. ບົວ ພັນ		✓		ປ/ຊ.	0309333682	ທ.
14	ທ. ສິນທິ			✓	ປ/ຊ.		ທ.
15	ທ. ສິນທິ ສິນທິ	Ms. Nonthasone Sanchay	✓		ທ. ສິນທິ ສິນທິ	55265286	ທ.
16	ທ. ສິນທິ ສິນທິ			✓	ທ. ສິນທິ	0305078951	ທ.
17	ທ. ສິນທິ ສິນທິ	Ms. Dorela Sengkhay	✓		ທ. ສິນທິ ສິນທິ	02592582	ທ.
18	ທ. ສິນທິ ສິນທິ	Ms. Soukavanh Phomsy	✓		ທ. ສິນທິ (ພາກສ່ວນ)	56358955	ທ.
19	ທ. ສິນທິ		✓		ທ. ສິນທິ	0304990163	ທ.
20	ທ. ສິນທິ ສິນທິ		✓		ທ. ສິນທິ ປ/ຊ.	02058721095	ທ.
21	ທ. ສິນທິ ສິນທິ		✓		ທ. ສິນທິ ສິນທິ	0309853360	ທ.
22	ທ. ສິນທິ		✓		ທ. ສິນທິ	52236078	ທ.
23	ທ. ສິນທິ			✓	ທ. ສິນທິ	0202374799	ທ.
24	ທ. ສິນທິ		✓		ທ. ສິນທິ	020	ທ.
25	ທ. ສິນທິ		✓		ທ. ສິນທິ (ພາກສ່ວນ)	0204621099	ທ.
26	ທ. ສິນທິ		✓		ທ. ສິນທິ	0205691923	ທ.

ລ/ດ No	ຊື່ (Name)		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ກ. ຊຽງຄຳ ພົມມະຄຳ	Mr. Viengkham		✓	ສະໜັບສະໜູນ	9999042	
12	ນ. ບຸນລຳ ພົມມະຄຳ		✓		ສະໜັບສະໜູນ	22113878	
13	ນ. ສຸກສະວາມ ພົມມະຄຳ	Ms Souksavanh Poksy	✓		ສະໜັບສະໜູນ (ພາກສ່ວນ)	56358555	
14	ນ. ສິນທິລາ ສິນທິລາ	Ms Sinthana		✓	ສະໜັບສະໜູນ (ພາກສ່ວນ)	5537253	
15	ນ. ສິນທິລາ ສິນທິລາ			✓	ສະໜັບສະໜູນ (ພາກສ່ວນ)		
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							



ຄົມມະນາ

Sustainable Rural Infrastructure and Watershed Management Sector Project  
ADB Loan 3817/ADB Grants 0659/EU Grant 0660 - LAO; Project 50236-002  
Department of Irrigation, Ministry of Agriculture and Forestry  
Loan Implementation Consultant - Luangprabang/Xayaboury  
Contract No. SRIWSM-OP5-CS02



ASIAN DEVELOPMENT BANK

ວັນທີ 20/6/2019

39 ຄົນ ວີ 26

### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: 30/6/2019 ຫົວຂໍ້/Topics: ສົງຄົມກຸ່ມ ພະແນກກໍ່ສ້າງລະບົບນໍ້າສະໜອງສາຍກະແສນໍ້າຂອງ ວິ.ກ.ກ.ພົມສັງຄົມກຸ່ມວັດພະເພັດສະຫວະນະທັດສະໄຊ (V.E.F.) ໂຮງກະບັດ

ສະຖານທີ່/Venue: ກະຊວງກະສິກຳ ແລະ ກະຊວງປ່າໄມ້ ແລະ ກະຊວງແຮງງານ ແລະ ສັງຄົມ

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຕຳນິບັດ/ຜູ້ເຊື່ອມຕໍ່/ອົງການ	ເບີໂທລະສັບ	ລາຍຊື່
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
1	ນາງ ສິນທິພອນ ພົມສະຫວະ		✓		ນາງ ສິນທິພອນ	090924639	ສິນທິພອນ
2	ນາງ ສິນທິພອນ		✓		ນາງ ສິນທິພອນ		ສິນທິພອນ
3	ນາງ ສິນທິພອນ		✓		ນາງ ສິນທິພອນ	0305315685	ນາງ ສິນທິພອນ
4	ນາງ ສິນທິພອນ		✓	✓	ນາງ ສິນທິພອນ	0305526624	ນາງ ສິນທິພອນ
5	ນາງ ສິນທິພອນ		✓		ນາງ ສິນທິພອນ	030550501	ນາງ ສິນທິພອນ
6	ນາງ ສິນທິພອນ		✓	✓	ນາງ ສິນທິພອນ		ນາງ ສິນທິພອນ
7	ນາງ ສິນທິພອນ		✓		ນາງ ສິນທິພອນ	55141766	ນາງ ສິນທິພອນ
8	ນາງ ສິນທິພອນ		✓		ນາງ ສິນທິພອນ	52436924	ນາງ ສິນທິພອນ
9	ນາງ ສິນທິພອນ		✓		ນາງ ສິນທິພອນ		ນາງ ສິນທິພອນ
10	ນາງ ສິນທິພອນ		✓		ນາງ ສິນທິພອນ		ນາງ ສິນທິພອນ



ລ/ດ No	ຊື່ (Name)		ເພດ (Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ (Lao)	ອັງກິດ (English)	ຍິງ (F)	ຊາຍ (M)	Role/Organization	Telephone	Signature
11	ຂ. ສິນ		✓		ປ/ຊ.		
12	ທ. ສິນ ຈິນທາ			✓	ປ/ຊ.		ທ. ສິນ
13	ຂ. ບົວ ພັນ		✓		ປ/ຊ.	0304333682	ທ.
14	ຂ. ສິນ			✓	ປ/ຊ.		ທ.
15	ຂ. ສິນທະສະໝັດ	Ms Nithasone Sanchay	✓		ທ່ານ ສິນທະສະໝັດ	55765886	ທ.
16	ທ. ສິນ ພິມມະຈັນ			✓	ທ່ານ ສິນ ພິມມະຈັນ	0305078951	ທ.
17	ທ. ສິນທະສະໝັດ	Ms. Sone La Sengkhay	✓		ທ່ານ ສິນທະສະໝັດ	22892882	ທ.
18	ຂ. ສິນທະສະໝັດ	Ms Somsavanh Phomsy	✓		ທ່ານ ສິນທະສະໝັດ	56358555	ທ.
19	ຂ. ສິນທະສະໝັດ		✓		ທ່ານ ສິນທະສະໝັດ	0304970163	ທ.
20	ຂ. ສິນທະສະໝັດ		✓		ທ່ານ ສິນທະສະໝັດ	02058721095	ທ.
21	ຂ. ສິນທະສະໝັດ		✓		ທ່ານ ສິນທະສະໝັດ	0309853360	ທ.
22	ຂ. ສິນທະສະໝັດ		✓		ທ່ານ ສິນທະສະໝັດ	52236078	ທ.
23	ຂ. ສິນທະສະໝັດ			✓	ທ່ານ ສິນທະສະໝັດ	0202374779	ທ.
24	ຂ. ສິນ		✓		ທ່ານ ສິນ	080	ທ.
25	ຂ. ສິນ		✓		ທ່ານ ສິນ	0204670199	ທ.
26	ຂ. ສິນທະສະໝັດ		✓		ທ່ານ ສິນທະສະໝັດ	0205619123	ທ.



Sustainable Rural Infrastructure and Watershed Management Sector Project  
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Department of Irrigation, Ministry of Agriculture and Forestry  
Loan Implementation Consultant - Luangprabang/Nayaboury  
Contract No. SRIWSM-OP5-CS02

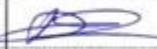
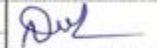
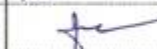


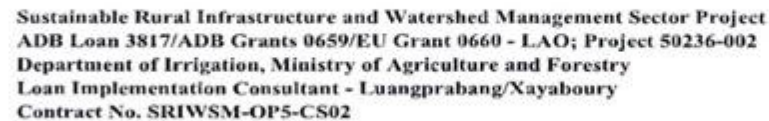
### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: ..... - ຫົວຂໍ້/Topics: .....

ສະຖານທີ່/Venue: .....

ລ/ດ No	ຊື່ (Name)		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ Role/Organization	ເບີໂທລະສັບ Telephone	ລາຍເຊັນ Signature
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)			
1	ນ. ສິວັນ		✓		ປ/ຊ		ນ. ສິວັນ
2	ນ. ວັນດີ		2		ປ/ຊ		ນ. ວັນດີ
3	ນ. ພິຍ		✓		ປ/ຊ		ນ. ພິຍ
4	ທ. ສອມສະ ພັນ			✓	ພ/ປ		ທ. ສອມສະ ພັນ
5	ນ. ສິວັນໃນ		✓		ປ/ຊ, ນັກວິຊາ	0942490000	ນ. ສິວັນໃນ
6	ທ. ສິນທິ		✓	✓	ປ/ຊ		ທ. ສິນທິ
7	ນ. ວັນ ບຸນວຽນ		✓		ປ/ຊ		ນ. ວັນ ບຸນວຽນ
8	ນ. ພຽງວັນ		✓		ປ/ຊ		ນ. ພຽງວັນ
9	ທ. ສິນທິ			✓	ປ/ຊ	30 8401014	ທ. ສິນທິ
10	ນ. ພິຍ ສິວັນ		✓		ປ/ທ. ພິຍ ສິວັນ	0302867441	ນ. ພິຍ ສິວັນ

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ທ. ສິມມະເວລ ສິມມະ	Mr Simasom		✓	ຄະນ.	84532235	
12	ທ. ສົມພິດ ສົມພິດ	Mr som khitsyphany		✓	ກະຊວງ ຂໍ້ ນຳ - ສຳນວນ	012 585552	
13	ທ. ສິມພອນ ສິມພອນ			✓	ພູມ: ສາມ ກວ	22439279	
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35 ఏ. 19.


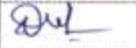

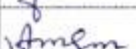

ວັນທີ/Date: 4/7/22 - ຫົວຂໍ້/Topics: ສະຖານະການການເຮັດວຽກຂອງພະນັກງານປະຈຳປະເພດໃນສະຖານທີ່ (SFE) ແບບປະຈຳປະເພດ

ឆ្នាំ/Year: ២០២២

ລ/ດ	ຊື່ (Name)		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
1	ຊົມ ວົງ			✓	ນາຍ		ຊົມ ວົງ
2	ແສງ ຄົງ			✓	ນາຍ		ແສງ ຄົງ
3	ທ້ວ ສິນ			✓	ນາຍ	0805615244	ທ້ວ ສິນ
4	ທາ ພູນີ ສິນ			✓	ນາຍ	0909925322	ທາ ພູນີ ສິນ
5	ທ.ສິນ ພິມມະສິນ			✓	ຊີເອັລ	0905078751	ທ.ສິນ ພິມມະສິນ
6	ສ. ສຸກສະຫວັນ ພິມມະສິນ	Suksakunth Phomy	✓		ຊີເອັລ (ພາກ. 2 ສິນ)	0205635896	ສ. ສຸກສະຫວັນ ພິມມະສິນ
7	ສ. ສິນ ສະຫວັນ ສະຫວັນ	Ms. Nithasone Senchay	✓		ພາກ. ຊີເອັລ	5576 5266	ສ. ສິນ ສະຫວັນ ສະຫວັນ
8	ທ. ຊິງ ລິດ			✓	ນາຍ	58114490	ທ. ຊິງ ລິດ
9	ທ. ທາ ສຸກ			✓	ນາຍ	28670879	ທ. ທາ ສຸກ
10	ທ. ສິນ			✓	ນາຍ	0909582332	ທ. ສິນ



12	မ. နီဝဲ	✓		✓/✓		မ. နီဝဲ
13	မ. မာရ်	✓		✓/✓		မ. မာရ်
14	မ. နီမာရ်	✓		✓/✓	0909274837	မ. နီမာရ်
15	မ. မာ	✓		✓/✓	0309991143	
16	မ. နီဝဲ	✓		✓/✓	0209588880	မ. နီဝဲ
17	မ. နီ	✓		✓/✓		မ. နီ
18	မ. မာရ်	✓		✓/✓	0209211551	မ. မာရ်
19	မ. မာ	✓		✓/✓		မ. မာ
20	မ. နီဝဲ	✓		✓/✓	0309925880	မ. နီဝဲ
21	မ. နီ	✓		✓/✓	0309470597	မ. နီ
22	မ. နီဝဲ	✓		✓/✓	0309929782	မ. နီဝဲ
23	မ. နီ	✓		✓/✓	0209335731	မ. နီ
24	မ. နီ	✓		✓/✓	5341496	မ. နီ
25	မ. မာရ်	✓		✓/✓	03094284655	မ. မာရ်
26	မ. မာ	✓		✓/✓	02093332912	မ. မာ
27	မ. မာရ်	✓		✓/✓	0305270811	မ. မာရ်
28	မ. မာရ်		✓	✓/✓	0302869505	မ. မာရ်
29	မ. မာရ်		✓	✓/✓	0309325833	မ. မာရ်
30	မ. မာရ်	✓		✓		မ. မာရ်

ລ/ດ	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ທ້າວ: ຂົມ ສິມມະ	Mr. Xi'moume		✓	ພະຍາຍາມ	01532234	
12	ທ້າວ: ສົມ ສິນ ສິນທິ	Mr. Samkhut Sp Phasoung		✓	ຊ່ວຍເຫຼືອ ສັງຄົມ - ສົງຄາມ	94585552	
13	ທ້າວ: ສົມ ສິນ ສິນທິ			✓	ຜູ້ປະສານງານ ສົງຄາມ		
14	ທ້າວ: ສົມ ສິນ ສິນທິ			✓	ທ້າວ: ສົມ ສິນ ສິນທິ	99169163	
15	ທ້າວ: ສົມ ສິນ ສິນທິ			✓	ຜູ້ປະສານງານ ສົງຄາມ	55989209	
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Sustainable Rural Infrastructure and Watershed Management Sector Project  
ADB Loan 3817/ADB Grants 0659/EU Grant 0660 - LAO; Project 50236-002  
Department of Irrigation, Ministry of Agriculture and Forestry  
Loan Implementation Consultant - Luangprabang/Xayaboury  
Contract No. SRIWSM-OP5-CS02



ASIAN DEVELOPMENT BANK

ຄູ່ມື ຂາດວນ

32 ວິ 13

### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

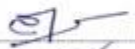
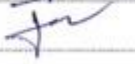
ວັນທີ/Date: 09/07/2019 - ຫົວຂໍ້/Topics: ສູນກາງກະສິກຳ ແລະ ກະຊວງກະສິກຳ ແລະ ກະຊວງປ່າໄມ້ ແລະ ກະຊວງອຸດສາຫະກຳ ແລະ ກະຊວງການຄ້າ (J.E.E.) ໂຄງການຂາດວນ

ສະຖານທີ່/Venue: ສູນກາງກະສິກຳ

ລ/ດ	ຊື່ (Name)		ເພດ(Sex)		ຕຳນານທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍຊື່
No	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
1	ທ. ນິ້			✓	ຫົວໜ້າ ເລັ່ມ/ເລີຍ	0309329210	ນິ້
2	ນ. ພິອາ		✓		ປ/ກ	4848555	ນ. ພິອາ
3	ອີ. ພິອາ		✓		ປ/ກ		ອີ. ພິອາ
4	ທ. ສິມ ພິມ ພິມ			✓	ຜູ້ເຝິກຈັດ	0305078951	ສິມ.
5	ນ. ສິມ ພິມ ພິມ	Ms. Donela Songthay	✓		ຜູ້ຊ່ວຍຈັດການໜີ້ສິນ ແລະ ປັບປຸງ	92892812	ນິ້
6	ນ. ສິມ ພິມ ພິມ	Ms. Nithasone Senchay	✓		ຫາລື ແລະ ຜູ້ຊ່ວຍຈັດ	55765266	ນິ້
7	ນ. ສິມ ພິມ ພິມ	Ms. Souksavanh Phommavong	✓		ວິຊາການ (ພາກສ. 2 ລຸ້ນ)	56558555	ນິ້
8	ນ. ສິມ ພິມ ພິມ	Mr. Xirima Nune		✓	ຜູ້ຊ່ວຍຈັດ	54554552	ນິ້
9	ນ. ສິມ ພິມ ພິມ	Mr. Sunkhit Siphonong		✓	ຜູ້ຊ່ວຍຈັດ	08785552	ນິ້
10	ນ. ສິມ ພິມ ພິມ			✓	ວິຊາການ ແລະ ຜູ້ຊ່ວຍຈັດ	99169163	ນິ້



12	သ.သစ်	✓			၄၄၃၇၇၈၀၀	သ.သစ်
13	စ. ဦးကျော်		✓		၄၄၇၅၂၃၄၆	စ.ဦးကျော်
14	စ. နီလ		✓	မ/၇	၇၂၈၇၇၃၇၃	စ.နီလ
15	စ. ဖုသက		✓	၇/၇		စ.ဖုသက
16	စ. ဖုသက	✓	✓	၇/၇	၄၄၀၂၆၅၀၂	စ.ဖုသက
17	စ. ဖုသက	✓		၇/၇	၀၀၀၂၂၈၇၇၇	စ.ဖုသက
18	စ. ဖုသက		✓	မ/၇	၂၂၃၈၅၇၀	စ.ဖုသက
19	စ. သီတ	✓		၇/၇	၇၇၇၀၈၈၃	စ.သီတ
20	စ. သီတ	✓		၇/၇	၄၄၅၇၇၇၇	စ.သီတ
21	စ. သီတ	✓		၇/၇		စ.သီတ
22	စ. သီတ		✓	မ/၇	၄၄၇၇၇၇၇	စ.သီတ
23	စ. သီတ	✓		၇/၇		စ.သီတ
24	စ. သီတ	✓		၇/၇		စ.သီတ
25	စ. သီတ		✓	မ/၇	၄၄၇၇၇၇၇	စ.သီတ
26	စ. သီတ		✓	မ/၇	၇၇၇၇၇၇၇	စ.သီတ
27	စ. သီတ		✓	၇/၇	၄၄၇၇၇၇၇	စ.သီတ
28	စ. သီတ		✓	၇/၇		စ.သီတ
29	စ. သီတ		✓	မ/၇	၇၇၇၇၇၇၇	စ.သီတ
30	စ. သီတ	✓		၇/၇	၄၄၇၇၇၇၇	စ.သီတ

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ທ. ສິນທິ ລ້ານ			✓	ອາຈານ - ຜູ້ປະສານງານ	55989409	
12	ທ. ສິນທິ ພິມທະວົງ			✓	ຜູ້ປະສານງານຂັ້ນສູງ		
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25							
26							

ເອກະສານຊ້ອນທ້າຍ 8: ຮູບພາບເພີ່ມເຕີມ





*ບ້ານບ້ານ ແລະ ທີມງານລົງເກັບກຳຂໍ້ມູນພາກສະໜາມ*





ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ

ແຂວງໄຊຍະບູລີ

ເມືອງປາກລາຍ

ໂຄງການ ພຊຸດ-ຊຸກຂ (SRIWSM-PICSA)

ເມືອງປາກລາຍ, ວັນທີ 15...ມິຖຸນາ 2022

### ບົດບັນທຶກ

### ກອງປະຊຸມການລົງເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ ກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການກໍ່ສ້າງສ້ອມແປງ ຊົນລະປະທານນ້ຳຍາງ3 ບ້ານປ່າໄລ່, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ.

- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ຄຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໄຕ່ງແບບບິນບົງ ສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການແຕ່ງຕັ້ງພະນັກງານ ເພື່ອລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ບ້ານປ່າໄລ່, ບ້ານລາດສະຫວ່າງ ແລະ ບ້ານປິ່ງຫວານ, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ 2295/ກປຂ.ຊຍ, ລົງວັນທີ 14 ມິຖຸນາ 2022.
- ອີງຕາມ ກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ບ້ານປ່າໄລ່, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ ໃນວັນທີ 15 ມິຖຸນາ 2022.

ໃນຕອນແລງວັນທີ 15 ມິຖຸນາ 2022 ເວລາ 1ໂມງ 30ນາທີ ທີ່ມຸງງານຂຶ້ນແຂວງ, ຂັ້ນເມືອງ ພ້ອມດ້ວຍ ອໍຣະແຫຼງການທີ່ກ່ຽວຂ້ອງຂອງເມືອງໄດ້ເປີດກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ທີ່ຕ້ອງປະຊຸມ ຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ ໂດຍເປັນປະທານ ຂອງທ່ານ ສຸລິຈັນ ສີປະມວນ, ຫົວໜ້າຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ (ຜູ້ປະສານງານໂຄງການຂັ້ນເມືອງ) ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ ໓໓... ຄົນ, ບົງ ...ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຄັດຊ້ອນທ້າຍ) ກອງປະຊຸມໄດ້ຮັບຟັງການເຜີຍແຜ່ນະໂຍບາຍຂອງ ໂຄງການພຊຸດ-ຊຸກຂ, ຈຸດປະສົງຂອງກອງປະຊຸມ ແລະ ແນະນຳການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ, ທາງທີ່ມຸງງານ ງານຂັ້ນແຂວງ, ເມືອງໄດ້ ສຳພາດ, ເກັບກຳຂໍ້ມູນນຳແຕ່ລະຂະແໜງການຂອງເມືອງເຊິ່ງໄດ້ເຊັນເອົາຝ່າຍຂໍ້ມູນດ້ານ ຕ່າງໆນຳແຕ່ລະຂະແໜງການ(ແຜນການ5ປີ2021-2025 ແລະ ແຜນການປີ2022), ພ້ອມເຮັດບົດບັນທຶກກອງ ປະຊຸມ ກອງປະຊຸມບັງໄດ້ເປີດກ້ວາງໃຫ້ໄດ້ມີການປະກອບຄໍາຄິດເຫັນຂອງແຕ່ລະຂະແໜງການ ຫາລືກັນກ່ຽວກັບ ນະໂຍບາຍຕ່າງໆຈາກໂຄງການ ແລະ ກອງປະຊຸມສາມາດເປັນເອກະພາບສະຫຼຸບເນື້ອໃນໄດ້ດັ່ງນີ້:

1. ປະຊາຊົນຜູ້ເຂົ້າຮ່ວມແມ່ນມີຄວາມເຂົ້າໃຈຕໍ່ນະໂຍບາຍ ແລະ ແຜນວຽກຕ່າງໆຂອງໂຄງການທີ່ຈະຈັດ ຕັ້ງປະຕິບັດໄວ້ນີ້.
2. ແຕ່ລະຂະແໜງການຂອງເມືອງ ແມ່ນໄດ້ອໍານວຍຄວາມສະດວກ ໃນການສະໜອງຂໍ້ມູນເຂົ້າ ແບບຟອມ.

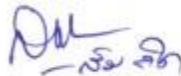
ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ 15..... ມິຖຸນາ 2022 ເວລາ 16.. ໂມງ, ດັ່ງນັ້ນຈຶ່ງໄດ້  
ສ້າງບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.

ປະທານກອງປະຊຸມ

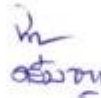


ສຸລິຈັນ ສີປະມວນ

ທີມງານຂັ້ນແຂວງ



ຜູ້ບັນທຶກ







ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ

ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ

ແຂວງໄຊຍະບູລີ

ເມືອງປາກລາຍ

ໂຄງການ ພຊຄ-ຊກຂ (SRIWSM-PICSA)

ເມືອງປາກລາຍ, ວັນທີ...17...ມິຖຸນາ 2022

### ບົດບັນທຶກ

**ກອງປະຊຸມການລົງເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ  
ກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການກໍ່ສ້າງສ້ອມແປງ  
ຊົນລະປະທານນ້ຳຍາງ3 ບ້ານປ່າໄລ່, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ.**

- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ດຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການດຸ້ມຄອງອ່າງໄຕ້ງແບບຍືນຍົງ ສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການແຕ່ງຕັ້ງພະນັກງານ ເພື່ອລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ບ້ານປ່າໄລ່, ບ້ານລາດສະຫວ່າງ ແລະ ບ້ານປັງຫວານ, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ 2295/ກປຂ.ຊຍ, ລົງວັນທີ 14 ມິຖຸນາ 2022.
- ອີງຕາມ ຕາມກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ບ້ານປ່າໄລ່, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ ໃນວັນທີ 17 ມິຖຸນາ 2022.

ໃນຕອນເຊົ້າວັນທີ ...17... ມິຖຸນາ 2022 ເວລາ 8 ໂມງ 30ນາທີ ທີ່ມຸງງານຂັ້ນແຂວງ, ຂັ້ນເມືອງ ພ້ອມດ້ວຍອຳນາດການປົກຄອງ ບ້ານປ່າໄລ່, ຄະນະກຸ່ມຊາວນາ ແລະ ຊາວນາທັງໝົດ ໄດ້ເປີດກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ທີ່ຫ້ອງປະຊຸມ ບ້ານປ່າໄລ່, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີໂດຍເປັນປະທານ ຂອງທ່ານ ສຸລິຈັນ ສີປະມວນ, ຫົວໜ້າຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ເມືອງ (ຜູ້ປະສານງານໂຄງການຂັ້ນເມືອງ) ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ 139 ຄົນ, ຍິງ 23 ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຕັດຊ້ອນທ້າຍ) ກອງປະຊຸມໄດ້ຮັບຟັງການເຜີຍແຜ່ນະໂຍບາຍຂອງໂຄງການພຊຄ-ຊກຂ, ຈຸດປະສົງຂອງກອງປະຊຸມ ແລະ ແນະນຳການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ, ທາງທີ່ມຸງງານຂັ້ນແຂວງ, ເມືອງໄດ້ ສຳພາດ, ເກັບກຳຂໍ້ມູນນຳສະມາຊິກຊາວນາ ທີ່ໄດ້ຮັບນ້ຳຊົນລະປະທານນ້ຳຍາງ3 ຂອງໂຄງການພັດທະນາ ພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການດຸ້ມຄອງອ່າງໄຕ້ງແບບຍືນຍົງ, ພ້ອມເຮັດບົດບັນທຶກກອງປະຊຸມນຳນາຍບ້ານ ປ່າໄລ່ ກອງປະຊຸມຍັງໄດ້ເປີດກ້ວາງໃຫ້ໄດ້ມີການປະກອບຄໍາຄິດເຫັນຂອງຊາວບ້ານ ແລະ ອຳນາດການປົກຄອງບ້ານ ຫາລືກັນກ່ຽວກັບນະໂຍບາຍຕ່າງໆຈາກໂຄງການ ແລະ ກອງປະຊຸມສາມາດເປັນເອກະພາບສະຫຼຸບເນື້ອໃນໄດ້ດັ່ງນີ້:

1. ປະຊາຊົນຜູ້ເຂົ້າຮ່ວມແມ່ນມີຄວາມເຂົ້າໃຈຕໍ່ນະໂຍບາຍ ແລະ ແຜນວຽກຕ່າງໆຂອງໂຄງການທີ່ຈະຈັດຕັ້ງປະຕິບັດໄວ້ນີ້.
2. ປະຊາຊົນ ແມ່ນໄດ້ອຳນວຍຄວາມສະດວກ ໃນການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ.
3. ກອງປະຊຸມໄດ້ເປັນເອກະພາບເຫັນດີ.

ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ 12... ມິຖຸນາ 2022 ເວລາ 11. ໂມງ, ດັ່ງນັ້ນຈຶ່ງໄດ້  
ສ້າງບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.


ປະທານກອງປະຊຸມ

  
ສຸລິຈັນ ສີປະມວນ

ທີມງານຂັ້ນແຂວງ



ຜູ້ບັນທຶກ

  
ອິນະອາທະ ພູຍາວົງ

ອຳນາດການປົກຄອງບ້ານ

ບ້ານປ່າໄລ

  
ແສງເພັດ ສິດທະວົງ

- ແນວໂຮມບ້ານ.....
- ສະຫະພັນແມ່ຍິງບ້ານ.....
- ດາງໝ້າກຸ່ມຊົມໃຊ້ນໍ້າ.....



**ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ**  
**ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ**

ແຂວງໄຊຍະບູລີ

ເມືອງປາກລາຍ

ໂຄງການ ພຊຄ-ຊກຂ (SRIWSM-PICSA)

ເມືອງປາກລາຍ, ວັນທີ.../.../...ມິຖຸນາ 2022

**ບົດບັນທຶກ**

**ກອງປະຊຸມການລົງເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ ກ່ຽວ  
 ກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້າງສ້ອມແປງຊົນລະປະທານ  
 ນ້ຳຍາງ3 ບ້ານລາດສະຫວ່າງ ແລະ ປຶງຫວານ,ເມືອງປາກລາຍ,ແຂວງໄຊຍະບູລີ.**

- ອີງຕາມ ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ຄຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໄຕ່ງແບບຍືນຍົງ ສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020.
- ອີງຕາມ ຂໍ້ຕົກລົງວ່າດ້ວຍການແຕ່ງຕັ້ງພະນັກງານ ເພື່ອລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3ບ້ານ ປາໄລ່, ບ້ານລາດສະຫວ່າງ ແລະ ບ້ານປຶງຫວານ, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີ, ສະບັບເລກທີ 2295/ກປຂ.ຊຍ, ລົງວັນທີ 14 ມິຖຸນາ 2022.
- ອີງຕາມ ຕາມກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ບ້ານລາດສະຫວ່າງ ແລະ ບ້ານປຶງຫວານ, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີໃນວັນທີ 16 ມິຖຸນາ 2022.

ໃນຕອນເຊົ້າວັນທີ .../.../... ມິຖຸນາ 2022 ເວລາ 8 ໂມງ 30ນາທີ ທີ່ມງານຂັ້ນແຂວງ, ຂັ້ນເມືອງ ພ້ອມດ້ວຍອຳນາດການປົກຄອງ ບ້ານລາດສະຫວ່າງ ແລະ ບ້ານປຶງຫວານ, ຄະນະກຸ່ມຊາວນາ ແລະ ຊາວນາທັງໝົດ ໄດ້ເປີດກອງປະຊຸມ ລົງສຳຫຼວດ ແລະ ເກັບກຳຂໍ້ມູນສ້າງບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ(IEE) ໂຄງການສ້ອມແປງຊົນລະປະທານນ້ຳຍາງ3 ທີ່ຫ້ອງປະຊຸມ ບ້ານລາດສະຫວ່າງ, ເມືອງປາກລາຍ, ແຂວງໄຊຍະບູລີໂດຍເປັນປະທານ ຂອງທ່ານ ສຸລິຈັນ ສີປະມວນ, ຫົວໜ້າຫ້ອງການກະສິກຳ ແລະ ປ່າໄມ້ ເມືອງ (ຜູ້ປະສານງານໂຄງການຂັ້ນເມືອງ) ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ .../.../... ຄົນ, ຍິງ .../.../... ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຕັດຊ້ອນທ້າຍ) ກອງປະຊຸມໄດ້ຮັບຟັງການເຜີຍແຜ່ນະໂຍບາຍຂອງໂຄງການພຊຄ-ຊກຂ, ຈຸດປະສົງຂອງກອງປະຊຸມ ແລະ ແນະນຳການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ, ທາງທີມງານງານຂັ້ນແຂວງ, ເມືອງໄດ້ ສຳພາດ, ເກັບກຳຂໍ້ມູນນຳສະມາຊິກຊາວນາ ທີ່ໄດ້ຮັບນ້ຳຊົນລະປະທານນ້ຳຍາງ3 ຂອງໂຄງການພັດທະນາ ພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໄຕ່ງແບບຍືນຍົງ, ພ້ອມເຮັດບົດບັນທຶກກອງປະຊຸມນຳນາຍບ້ານ ລາດສະຫວ່າງ ກອງປະຊຸມຍັງໄດ້ເປີດກ້ວາງໃຫ້ໄດ້ມີການປະກອບຄໍາຄິດເຫັນຂອງຊາວບ້ານ ແລະ ອຳນາດການປົກຄອງບ້ານ ຫາລືກັນກ່ຽວກັບນະໂຍບາຍຕ່າງໆຈາກໂຄງການ ແລະ ກອງປະຊຸມສາມາດເປັນເອກະພາບສະຫຼຸບເນື້ອໃນໄດ້ດັ່ງນີ້:

1. ປະຊາຊົນຜູ້ເຂົ້າຮ່ວມແມ່ນມີຄວາມເຂົ້າໃຈຕໍ່ນະໂຍບາຍ ແລະ ແຜນວຽກຕ່າງໆຂອງໂຄງການທີ່ຈະຈັດຕັ້ງປະຕິບັດໄວ້ໆນີ້.
2. ປະຊາຊົນ ແມ່ນໄດ້ອຳນວຍຄວາມສະດວກ ໃນການສະໜອງຂໍ້ມູນເຂົ້າແບບຟອມ.
3. ກອງປະຊຸມໄດ້ເປັນເອກະພາບເຫັນດີ.




ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ 16 ມິຖຸນາ 2022 ເວລາ 16:00 ໂມງ, ດັ່ງນັ້ນຈຶ່ງໄດ້ສ້າງ  
ບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.

ປະທານກອງປະຊຸມ



ສຸລິຈັນ ສີປະມວນ

ທີມງານຂັ້ນແຂວງ



ຜູ້ບັນທຶກ



ສິວ: 0202

ອຳນາດການປົກຄອງບ້ານ

ບ້ານລາດສະຫວ່າງ



ບົວ ແສງອາລຸນ

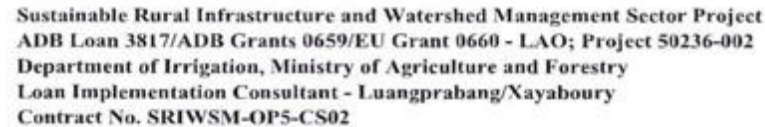
- ແນວໂຮມບ້ານ.....
- ສະຫະພັນແມ່ຍິງບ້ານ.....
- ຕາງໜ້າກຸ່ມຊົມໃຊ້ນໍ້າ.....

ອຳນາດການປົກຄອງບ້ານ




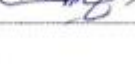
ບ້ານປິ່ງຫວານ



- ແນວໂຮມບ້ານ.....
- ສະຫະພັນແມ່ຍິງບ້ານ.....
- ຕາງໜ້າກຸ່ມຊົມໃຊ້ນໍ້າ.....



SYPAKOUANE

ລ/ດ	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ທ. ກຳມ ທອງ ພິມພົມ	Mr Kamthong Pimphon		✓	ຫົວໜ້າໜ່ວຍງານຄຸ້ມຄອງ	22988666	
12	ນ. ປິນ ວຽງ ນິມ ອຸ່ນທຸກ	Mis Pinvegngeun	✓		ອຳນວຍ	56919415	
13	ນ. ດອນລາ ສະ ກຸງ ພົມ	Ms. Donela Sengkhavy	✓		ພະແນກປ້ອງກັນຄວາມສະຫງົບ	22892872	
14	ທ. ສິ ສິນ ທຽນ ວຽງ						
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ລ/ດ	ຊື່ (Name)		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ທ້າວ ສິນທິ			✓	ທ່ານ ສິນທິ	0304715373	
12	ທ້າວ ສິນທິ			✓	S/ທ່ານ	0309122271	
13	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ ສິນທິ	03090581	
14	ທ້າວ ທ່ານ ສິນທິ			✓	ທ່ານ	0202819470	
15	ທ້າວ ສິນທິ		✓		ທ່ານ	0204580376	
16	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
17	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
18	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
19	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
20	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
21	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
22	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
23	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
24	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
25	ທ້າວ ທ່ານ ສິນທິ		✓		ທ່ານ		
26	ທ້າວ ທ່ານ ສິນທິ			✓	ທ່ານ	02895410	





Sustainable Rural Infrastructure and Watershed Management Sector Project  
ADB Loan 3817/ADB Grants 0659/EU Grant 0660 - LAO; Project 50236-002  
Department of Irrigation, Ministry of Agriculture and Forestry  
Loan Implementation Consultant - Luangprabang/Xayaboury  
Contract No. SRIWSM-OP5-CS02




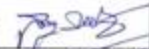




### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: 17/6/2022 - ຫົວຂໍ້/Topics: ລົດເມກົມເຕີມ ສູນລະບົບນໍ້າສະສົມ ສຳລັບເຂົ້າເຖິງດິນແດນກະເມີນ ແລະ ກະເມີນເຂົ້າເຖິງດິນແດນກະເມີນ (I.E.E.)

ສະຖານທີ່/Venue: ສູນລະບົບນໍ້າສະສົມ

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
1	ທ. ຂຸ້ນ			✓	✓/ ບ ບໍາ ນໍ້າ	954147424	ທ. ຂຸ້ນ
2	ທ. ປິ່ນ			✓	—	59469895	ທ. ປິ່ນ
3	ທ. ພອນ			✓	—	97319381	ທ. ພອນ
4	ທ. ສົມບູນ			✓	—	91335221	ທ. ສົມບູນ
5	ທ. ພິມ			✓	—	99418582	ທ. ພິມ
6	ທ. ອິນ			✓	—		ທ. ອິນ
7	ທ. ອິນ ພິມ			✓	—	020389388	ທ. ອິນ ພິມ
8	ທ. ອິນ ພິມ			✓	—		ທ. ອິນ ພິມ
9	ທ. ພິມ			✓	—		ທ. ພິມ
10	ທ. ອິນ ພິມ			✓	—	020389388	ທ. ອິນ ພິມ

ລ/ດ	ຊື່ (Name)		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ທ. ສົມຄຶດ ສີພອນຸຍົງ	Mr som khit syphaoungy		✓	ຊ່ວຍວຽກ ຮົງ ນອກສະໜອງ	96785552	
12	ທ. ສຸກສະໜາ ພົມມະ	Ms Souksantana Phomm	✓		ວິຊາການ ຊຶ່ງບວດລາວ	56358555	
13	ທ. ຊິນນະວະ ສີທະລາ	Ms xinnawone sithalath		✓	ວິຊາການ ຊຶ່ງບວດລາວ	5453233	
14	ທ. ສວນສິນ ສີປັນນະ	Mr soulichanh sipannane		✓	ຫົວໜ້າກຸ່ມ/ເອົາໃຈໃສ່	55235978	
15	ທ. ສິນສິດ ສີປັນນະ						
16	ທ. ສົມບູນ ກຸສົນ		✓		ຜູ້ຊ່ວຍວຽກບັນທຶກ/ຊ່ວຍການ	22892872	
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Department of Irrigation, Ministry of Agriculture and Forestry  
Loan Implementation Consultant - Luangprabang/Xayaboury  
Contract No. SRIWSM-OP5-CS02



ASIAN DEVELOPMENT BANK

ລາຍ: 010/01


### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: 16/04/2021 - ຫົວຂໍ້/Topics: ສົມທົບກັນໃນການສ້າງແຜນການປັບປຸງລະບົບນໍ້າໃນເຂດປ່າໄມ້ (I.F.F.)

ສະຖານທີ່/Venue: ຫ້ອງປະຊຸມ ສຳນັກງານ ສຳນັກງານ ສຳນັກງານ

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
1	ທ. ວັນທອງ ເພັດ			✓	ຄະນະ ຮັບຜິດຊອບ ນໍ້າ	0302608320	ວັນ
2	ນາງ ເສີງ		✓		ຄະນະ ລາ ຫາ ພັນ		ນາງ ເສີງ
3	ບ. ວັນ A		✓		ຫມໍ້ ຊາວ ນາ	93898100	ວັນ
4	ບ. ວັນ B		✓		ຫມໍ້ ຊາວ ນາ	0207200744	ວັນ
5	ນ. ຫົວ ສົມ		✓		ສຳນັກ ສຳນັກ	0309937448	ສົມ
6	ທ. ລິມ ສິ			✓	ຄະນະ ບາງ	89111150	ລິມ
7	ທ. ວັນ ສົມ			✓	ຫມໍ້ ຊາວ ນາ	0305672942	ວັນ
8	ນາງ ວັນ ສົມ		✓		ຫມໍ້ ຊາວ ນາ		ວັນ
9	ນາງ ສົມ ສົມ		✓		ຫມໍ້ ຊາວ ນາ		ນາງ ສົມ ສົມ
10	ທ. ສົມ ສົມ ສົມ			✓	ຫມໍ້ ຊາວ ນາ	0309460449	ສົມ

ລ/ດ No	ຊື່ (Name)		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ Role/Organization	ເບີໂທລະສັບ Telephone	ລາຍຊື່ Signature
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)			
11	ທ. ສິມພຸມ			✓	ກຸ່ມຊາວໜຸ່ມ	54973905	
12	ທ. ວັນທອງທິພອນ	ທ. ວັນທອງທິພອນ			ກຸ່ມຊາວໜຸ່ມ	0209542428	
13	ທ. ປິມ	ທ. ປິມ			ກຸ່ມຊາວໜຸ່ມ	93657869	
14	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	0304485565	
15	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	0304485565	
16	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	0304485565	
17	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	0304485565	
18	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	58504414	
19	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	0309783191	
20	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	0309634816	
21	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ		
22	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	02098509119	
23	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ		
24	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ		
25	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	99639231	
26	ທ. ສິມພຸມ	ທ. ສິມພຸມ		✓	ກຸ່ມຊາວໜຸ່ມ	58626904	

ລ/ດ	ຊື່ (Name)		ເພດ (Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ (Lao)	ອັງກິດ (English)	ຍິງ (F)	ຊາຍ (M)	Role/Organization	Telephone	Signature
11	ທ. ກຸ້ມ			✓	ບ. ລາດສະໂຫວງ	56691454	
12	ທ. ທອງພົນ			✓	ບ. ສາດສະໂຫວງ	—	ທອງພົນ
13	ນ. ສິນ				ບ. ລາດສະໂຫວງ	—	
14	ນ. ຍຸດທະ			✓	ລາດສະໂຫວງ		ນ. ຍຸດ
15	ນ. ຈິນຕະ			✓	ລາດສະໂຫວງ		ນ. ຈິນຕະ
16	ນ. ຈິນ			✓	ລາດສະໂຫວງ		ນ. ຈິນ
17	ນ. ຈິນຕະ			✓	ລາດສະໂຫວງ		
18	ນ. ຈິນຕະ			✓	ລາດສະໂຫວງ		
19	ນ. ຈິນຕະ			✓	ລາດສະໂຫວງ		
20	ນ. ຈິນຕະ			✓	ລາດສະໂຫວງ		
21	ນ. ຈິນຕະ			✓	ລາດສະໂຫວງ		
22	ທ. ທອງໃຈ			✓	ສາດສະໂຫວງ		
23	ນ. ສິນຕະ			✓	ສາດສະໂຫວງ		ນ. ສິນຕະ
24	ນ. ສິນຕະ			✓	ສາດສະໂຫວງ		ນ. ສິນຕະ
25	ນ. ສິນຕະ			✓	ສາດສະໂຫວງ		ນ. ສິນຕະ
26	ນ. ສິນຕະ			✓	ສາດສະໂຫວງ		ນ. ສິນຕະ
27	ທ. ກຸ້ມ			✓	ສາດສະໂຫວງ		ທ. ກຸ້ມ





Sustainable Rural Infrastructure and Watershed Management Sector Project  
ADB Loan 3817/ADB Grants 0659/EU Grant 0660 - LAO; Project 50236-002  
Department of Irrigation, Ministry of Agriculture and Forestry  
Loan Implementation Consultant - Luangprabang/Xayaboury  
Contract No. SRIWSM-OP5-CS02



### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: ..... - ຫົວຂໍ້/Topics: .....

ສະຖານທີ່/Venue: .....

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ Role/Organization	ເບີໂທລະສັບ Telephone	ລາຍເຊັນ Signature
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)			
1	ນ. ລຳວຽງ ກຸງທະນະ	Ms. Dorela Sengthany	✓		ສູນກາງ ອຸປະກອນປັບປຸງລະບົບນໍ້າ 22892872		
2	ນ. ຊິມມາວະ ວິທະຍາ	Mr Ximmaouie Vitaleth		✓	ອົງການ ນາງາ	51552233	
3	ນ. ສຸກສະໜາ ພົມສ	Ms Soutsananh Pomy	✓		— — —	56358555	
4	ນ. ສຸລິຈັນ ສົມພັນ	Mr soulichanh SYPANOUANE	✓		ຫົວໜ້າກົມ ການປັບປຸງລະບົບນໍ້າ	55235578	
5	ນ. ສົມພັນ ສົມພັນ					58447770	
6	ນ. ສົມພັນ ສົມພັນ	Mr somphith Siphany		✓	ສູນກາງ ອຸປະກອນປັບປຸງລະບົບນໍ້າ	5555552	
7							
8							
9							
10							



Sustainable Rural Infrastructure and Watershed Management Sector Project  
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Department of Irrigation, Ministry of Agriculture and Forestry  
Loan Implementation Consultant - Luangprabang/Xayaboury  
Contract No. SRIWSM-OP5-CS02



ASIAN DEVELOPMENT BANK

ປຶ້ມບັນທຶກ

### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: 16/6/2022 - ຫົວຂໍ້/Topics: ຈຸດປະສານການສື່ສານລະຫວ່າງກະຊວງກະສິກຳ ແລະ ກະຊວງປ່າໄມ້ ແລະ ກະຊວງອຸດສາຫະກຳ ແລະ ກະຊວງການຄ້າ ( I.E.E )

ສະຖານທີ່/Venue: ສະຖານີ ກະສິກຳ ແລະ ກະຊວງອຸດສາຫະກຳ ແລະ ກະຊວງການຄ້າ

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
1	ທ້າວ ສາວໄຊ			✓	ສ/ຊ	55928277	
2	ທ້າວ ສິດ			-	-	95951935	
3	ທ້າວ ສາວໄຊ			✓	ສ/ຊ	0304578212	
4	ທ້າວ ສິດ			✓	ສ/ຊ	91186967	
5	ທ້າວ ສິດ		✓		ສ/ຊ	55827298	
6	ທ້າວ ສິດ			✓	ສ/ຊ		
7	ທ້າວ ສິດ		✓		ສ/ຊ		
8	ທ້າວ ສິດ		✓		ສ/ຊ		
9	ທ້າວ ສິດ			✓	ສ/ຊ	58031611	
10	ທ້າວ ສິດ			✓	ສ/ຊ	0304787450	

ລ/ດ	ຊື່ (Name)		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
11	ປ. ພຸງ		ປ		ສ/ຈ	02091921558	
12	ປ. ບົວພັນ		ປ	ຊ	ສ/ຈ		
13	ທ. ໂສພາ			ຈ	ສ/ຈ	0209143736	
14	ທ. ສວຍ			ຈ	ສ/ຈ		
15	ທ. ເທີ			ຈ	ສ/ຈ		
16	ປ. ອຳໄພ			ຈ	ສ/ຈ	03024703290	
17	ທ. ມິດ		ຍ		ສ/ຈ		
18	ປ. ເກ						
19	ປ. ສິນ		ຍ		ສ/ຈ	0304488712	
20	ທ. ສາຍ			ຈ		0209872881	
21	ທ. ສະຫວັນ			ຈ		0304694111	
22	ທ. ສະຫວັນ			ຈ	ສ/ຈ	0303484898	
23	ທ. ສິນ ສາຍ			ຈ	ສ/ຈ	92820074	
24	ປ. ສິນ		ຍ		ສ/ຈ	0304283212	
25	ທ. ສິນ			ຈ	ສ/ຈ	92886515	
26	ທ. ສິນ			ຈ	ສ/ຈ	94110609	





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 Contract No. SRIWSM-OP5-CS02



ASIAN DEVELOPMENT BANK

ຂໍ້ຕົກລົງ

### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: 18/6/22... - ຫົວຂໍ້/Topics: ... ຈຸດປະສົງ ການສຶກສາ ກ່ຽວກັບ ການສ້າງແຮງມາດຕະຖານ ໃນການປະຕິບັດງານ (LSE).....

ສະຖານທີ່/Venue: .....

ລ/ດ No	ຊື່ (Name )		ເພດ(Sex)		ຫນ້າທີ່ຮັບຜິດຊອບ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
	ລາວ(Lao)	ອັງກິດ (English)	ຍິງ(F)	ຊາຍ(M)	Role/Organization	Telephone	Signature
1	ທ. ສົມຄຶດ ສິດາທາດ	Mr som khit sy Praseuth		✓	ຜູ້ອຸດສາຫະກຳ - ສຳນັກງານວິທະຍາສາດ	0658552	
2	ທ. ຊິນມາເກ ສິດາທາ	Mr Xinnakone Sihalath		✓	ຜູ້ອຸດສາຫະກຳ - ສຳນັກງານວິທະຍາສາດ	54531233	
3	ທ. ສົມສາວັນ ພົມສິ	Ms Souksavanh PHOMSY	✓		ສຳນັກງານວິທະຍາສາດ	0206358995	
4	ທ. ສົມສິດ ສິດາທາ	Mr Soulichanh SYPANOUKHE		✓	ສຳນັກງານວິທະຍາສາດ	55235978	
5	ທ. ສົມສິດ ສິດາທາ		✓		ສຳນັກງານວິທະຍາສາດ	22892872	
6	ທ. ສົມສິດ ສິດາທາ	Mr Sangkhom		✓	ບຸກຄົນ	58442290	
7							
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ເອກະສານຊ້ອນທ້າຍ 8: ຮູບພາບເພີ່ມເຕີມ





ບ້ານບ້ານ ແລະ ທີມງານລົງແກ້ບກຳຂໍ້ມູນພາກສະໜາມ





**ສາທາລະນະລັດ ປະຊາທິປະໄຕ ປະຊາຊົນລາວ**  
**ສັນຕິພາບ ເອກະພາບ ປະຊາທິປະໄຕ ເອກະລາດ ວັດທະນະຖາວອນ**

**ບົດບັນທຶກກອງປະຊຸມ**  
**ປະກອບຄໍາເຫັນຕໍ່ບົດລາຍງານສຶກສາເບື້ອງຕົ້ນ**  
**ກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE) ຂອງໂຄງການ**  
**ກໍ່ສ້າງສ້ອມແປງຊົນລະປະທານ ຫ້ວຍແຄ່ນ ເມືອງໄຊຍະບູລີ ແລະ ນ້ຳຍາງ3 ເມືອງ**  
**ປາກລາຍ**

- ອີງຕາມ ດໍາລັດ ວ່າດ້ວຍ ການປະເມີນຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ, ສະບັບເລກທີ 21/ລບ, ລົງວັນທີ 31/01/2019;
- ຂໍ້ຕົກລົງ ຂອງເຈົ້າແຂວງວ່າດ້ວຍການແຕ່ງຕັ້ງຄະນະກຳມະການ ຄຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໂຕ່ງແບບຍືນຍົງສະບັບເລກທີ 1444/ຈຂ.ຊຍ, ລົງວັນທີ 28 ທັນວາ 2020;
- ອີງຕາມ ໜັງສືແຈ້ງຕອບຈາກພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມກ່ຽວກັບການປະກອບຄໍາເຫັນຕໍ່ບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE) ຂອງໂຄງການກໍ່ສ້າງສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ເມືອງໄຊຍະບູລີ ແລະ ນ້ຳຍາງ3 ເມືອງປາກລາຍ ແຂວງໄຊຍະບູລີ ສະບັບເລກທີ 2318/ພຊສ.ຊຍ, ລົງວັນທີ 08 ກັນຍາ 2022.

ໃນຕອນແລງຂອງວັນທີ 03 ຕຸລາ 2022 ເວລາ 14 ໂມງ 00 ນາທີ, ທີ່ຫ້ອງປະຊຸມໂຄງການ ພຊຄ-ຊກຂ ຄະນະກຳມະການ ຄຸ້ມຄອງຈັດສັນພູມລຳເນົາ ແລະ ອາຊີບຄົງທີ່ ຂອງໂຄງການພັດທະນາພື້ນຖານໂຄງລ່າງຊົນນະບົດ ແລະ ການຄຸ້ມຄອງອ່າງໂຕ່ງແບບຍືນຍົງ “ພຊຄ” ຂຶ້ນແຂວງສົມທົບຊ່ຽວຊານດ້ານສິ່ງແວດລ້ອມຂອງໂຄງການ “ພຊຄ” ໄດ້ເປີດກອງປະຊຸມປະກອບຄໍາເຫັນຕໍ່ບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE)ຂອງໂຄງການກໍ່ສ້າງສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນເມືອງໄຊຍະບູລີ ແລະ ນ້ຳຍາງ3 ເມືອງປາກລາຍ ແຂວງໄຊຍະບູລີ ໂດຍເປັນປະທານ ຂອງທ່ານ ບຸນຫຼາຍ ຄຳພູມີ ຮອງຫົວໜ້າພະແນກກະສິກໍາ ແລະ ປ່າໄມ້ ແຂວງ ຜູ້ຊີ້ນຳໂຄງການ ພຊຄ-ຊກຂ ຂຶ້ນແຂວງ, ເຊິ່ງມີຜູ້ເຂົ້າຮ່ວມຈຳນວນ 20 ຄົນ, ຍິງ 6 ຄົນ (ລາຍລະອຽດມີລາຍຊື່ຕິດຕັ້ງຊ້ອນທ້າຍ).

ກອງປະຊຸມໄດ້ຮັບຟັງການມີຄໍາເຫັນກ່ຽວກັບຄວາມເປັນມາຂອງໂຄງການ, ເງື່ອນໄຂການຈັດຕັ້ງປະຕິບັດຂອງໂຄງການ “ພຊຄ” ແລະ ຈາກນັ້ນໄດ້ໃຫ້ຕາງໜ້າທີມງານວຽກປົກປ້ອງສັງຄົມ ແລະ ສິ່ງແວດລ້ອມ ຜ່ານບົດລາຍງານສຶກສາເບື້ອງຕົ້ນກ່ຽວກັບຜົນກະທົບຕໍ່ສິ່ງແວດລ້ອມ (IEE)ຂອງໂຄງການກໍ່ສ້າງສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ເມືອງໄຊຍະບູລີ ແລະ ນ້ຳຍາງ3 ເມືອງປາກລາຍ ແຂວງໄຊຍະບູລີ ທີ່ໄດ້ປັບປຸງຕາມການແນະນຳຂອງພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ຈາກນັ້ນປະທານໄດ້ສະເໜີໃຫ້ຜູ້ເຂົ້າຮ່ວມກອງປະຊຸມປະກອບຄໍາເຫັນສັງລວມ ແລະ ມີຜູ້ປະກອບຄໍາເຫັນທັງໝົດ 05 ທ່ານ ດັ່ງນີ້:

1. ການແລ່ນລົດໃນພື້ນທີ່ຊຸມຊົນແອອັດເຊັ່ນວ່າ: ເຂດໂຮງຮຽນ, ເຂດຕະຫຼາດ 20ກິໂລແມັດຕໍ່ຊົ່ວໂມງ ແມ່ນເປັນໄປບໍ່ໄດ້ໃຫ້ເຮັດຕາມກົດໝາຍວາງອອກ 30 ກິໂລແມັດຕໍ່ຊົ່ວໂມງ.

2. ດ້ານລະເບີດຕົກຄ້າງບໍ່ຈຳເປັນຕ້ອງໃສ່ບົດລາຍງານໄດ້ບໍ່ ເພາະວ່າແຂວງໄຊຍະບູລີບ່ອນໃນພື້ນທີ່ລະເບີດຕົກຄ້າງ.
3. ເຫັນດີຕໍ່ການກວດກາສຸຂະພາບຂອງແຮງງານກຳມະກອນກໍ່ສ້າງ ສະເໝີໃຫ້ ບໍລິສັດຮັບເໝົາກໍ່ສ້າງຮັບຜິດຊອບຄ່າໃຊ້ຈ່າຍ ໂດຍປະສານງານນຳຫ້ອງການສາທາລະນະສຸກເມືອງ ໃນການຈັດຕັ້ງປະຕິບັດຕົວຈິງ.
4. ສຳລັບການສົ່ງເສີມການນຳໃຊ້ແຮງງານໃນພື້ນທີ່ເຂດກໍ່ສ້າງ ແມ່ນເຫັນດີເພາະເປັນໄປຕາມແຜນພັດທະນາສີມືແຮງ ແລະ ສົ່ງເສີມວຽກເຮັດງານທຳຂອງຫ້ອງການແຮງງານ ແລະ ສະຫວັດດີການສັງຄົມ.
5. ສຳລັບວຽກການຕິດຕາມກວດກາວຽກປົກປ້ອງສັງຄົມ ແລະ ສິ່ງແວດລ້ອມ ແມ່ນໃຫ້ປະຕິບັດຕາມຂອບເຂດຂອງໂຄງການກຳນົດ ຂັ້ນແຂວງ 3 ເດືອນຕໍ່ຄັ້ງ ແລະ ຂັ້ນເມືອງ 1 ເດືອນຕໍ່ຄັ້ງ ໂດຍແມ່ນວິຊາການຂະແໜງສິ່ງແວດລ້ອມແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ ສົມທົບກັບວິຊາການຮັບຜິດຊອບວຽກປົກປ້ອງສັງຄົມ ແລະ ສິ່ງແວດລ້ອມ ຂອງໂຄງການ ພຊຄ.
6. ກອງປະຊຸມເຫັນດີເປັນເອກະພາບກັນໃຫ້ປັບປຸງບົດຕາມຄຳເຫັນຂອງຄະນະກຳມະການ ແລະ ລາຍງານໃຫ້ປະທານຄະນະຊີ້ນຳໂຄງການ “ພຊຄ” ຂັ້ນແຂວງ ແລະ ພະແນກຊັບພະຍາກອນທຳມະຊາດ ແລະ ສິ່ງແວດລ້ອມ, ອອກໃບຢັ້ງຢືນສິ່ງແວດລ້ອມ ຂອງໂຄງການສ້ອມແປງຊົນລະປະທານຫ້ວຍແຄ່ນ ເມືອງໄຊຍະບູລີ ແລະ ນ້ຳຍາງ 3 ເມືອງປາກລາຍ ແຂວງໄຊຍະບູລີ.

ກອງປະຊຸມໄດ້ປິດລົງໃນວັນດຽວກັນ ຂອງວັນທີ 03 ຕຸລາ 2022 ເວລາ 16 ໂມງ 30 ນາທີ, ດັ່ງນັ້ນຈຶ່ງໄດ້ສ້າງບົດບັນທຶກສະບັບນີ້ ໄວ້ເປັນຫຼັກຖານ ແລະ ເປັນບ່ອນອີງເຂົ້າໃນວຽກງານການຈັດຕັ້ງປະຕິບັດໃນຕໍ່ໜ້າ.

ປະທານກອງປະຊຸມ



ບຸນຫຼາຍ ຄຳພູມີ

Mr. Bounlay KHAMPHOUMY

ໄຊຍະບູລີ, ວັນທີ ຕຸລາ 2022

ຜູ້ບັນທຶກ







Sustainable Rural Infrastructure and Watershed Management Sector Project  
 ADB Loan 3817/ADB Grants 0659/EU Grant 0660 - LAO; Project 50236-002  
 Department of Irrigation, Ministry of Agriculture and Forestry  
 Loan Implementation Consultant - Luangprabang/Xayaboury  
 Contract No. SRIWSM-OP5-CS02




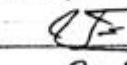
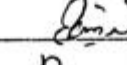
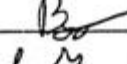
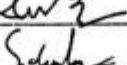


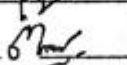


ASIAN DEVELOPMENT BANK

### ລາຍຊື່ຜູ້ເຂົ້າຮ່ວມປະຊຸມ ( Participant Names )

ວັນທີ/Date: 03/10/22 ຫົວຂໍ້/Topics: ກອງປະຊຸມເກັບມາດຕະການປ້ອງກັນພຽງພໍດີກັບພະລັງກະທົບ (MFE) ໃນລະຫວ່າງການປະຕິບັດງານ

ສະຖານທີ່/Venue: ກອງປະຊຸມ ອຳນາດການປົກຄອງ ເມືອງ ສະຫວັນນະເຂດ (ເມືອງ ສະຫວັນນະເຂດ)

ລ/ດ No	ຊື່ (Name) ລາວ (Lao)	ອັງກິດ (English)	ເພດ (Sex) ຍິງ (F) / ຊາຍ (M)	ຕຳນິຕິບັນຍັດ/ບາດສ່ວນ Role/Organization	ເບີໂທລະສັບ Telephone	ລາຍເຊັນ Signature
1	ທ້າຍ ພູ ເຂົ້າ	Ms. Phoukhae	✓	ຮອງ ບັນຍາຍ	54946845	
2	ທ້າຍ ບຸນ ພະລັງ		✓	ອຳນາດການປົກຄອງ	22363005	
3	ທ້າຍ ພູ ພະລັງ	Ms. Phoung Khamphe	✓	ຮອງ ບັນຍາຍ	55259799	
4	ທ້າຍ ພູ ພະລັງ	Mrs. Phoung Khamphe	✓	ຮອງ ບັນຍາຍ	9658552	
5	ທ້າຍ ພູ ພະລັງ	Dr. Phoung Khamphe	✓	BSE / LIC - DOT	56488161	
6	ທ້າຍ ພູ ພະລັງ	Mr. Phone Pacht	✓	ຮອງ ບັນຍາຍ	55130799	
7	ທ້າຍ ພູ ພະລັງ	Mr. Boumphany Matha	✓	ບໍລິຫານ	2236666	
8	ທ້າຍ ພູ ພະລັງ	Mr. Noupheo Xaiphay	✓	ຮອງ ບັນຍາຍ	55677995	
9	ທ້າຍ ພູ ພະລັງ	Ms. Sam Chantoddy	✓	ຮອງ ບັນຍາຍ	55728255	
10	ທ້າຍ ພູ ພະລັງ	Ms. Donela Senghany	✓	ຮອງ ບັນຍາຍ	22892532	

ລ/ດ	ຊື່ (Name)		ເພດ (Sex)		ໜ້າທີ່/ຮິດສະໜາ/ພາກສ່ວນ	ເບີໂທລະສັບ	ລາຍເຊັນ
No	ລາວ (Lao)	ອັງກິດ (English)	ຍິງ (F)	ຊາຍ (M)	Role/Organization	Telephone	Signature
11	ທ. ຄຳ ອີຍ ກຳ ອີຍ	Mr. Kham Aiy		✓	ຮອງ ແມ່ນ ອົງ ກຳ ອີຍ	95552877	
12	ທ. ບຸນ ບຸນ ບຸນ	Dr. Bounbouly		✓	ຮອງ ແມ່ນ ບຸນ ບຸນ	82348844	
13	ທ. ຄຳ ບຸນ ວົງ ສີ	MS Khmla VONGSY	✓		ທ່ານ ຄຳ ບຸນ ວົງ ສີ	55186350	
14	ທ. ບຸນ ບຸນ ບຸນ			✓	ຮອງ ແມ່ນ ບຸນ ບຸນ	58584440	
15	ທ. ບຸນ ບຸນ ບຸນ			✓	ຮອງ ແມ່ນ ບຸນ ບຸນ	59982660	
16	ທ. ບຸນ ບຸນ ບຸນ			✓	ຮອງ ແມ່ນ ບຸນ ບຸນ	22662029	
17	ທ. ບຸນ ບຸນ ບຸນ		✓		ຮອງ ແມ່ນ ບຸນ ບຸນ	23339270	
18	ທ. ບຸນ ບຸນ ບຸນ			✓	ຮອງ ແມ່ນ ບຸນ ບຸນ	28088843	
19	ທ. ບຸນ ບຸນ ບຸນ		✓		ຮອງ ແມ່ນ ບຸນ ບຸນ	94040555	
20	ທ. ບຸນ ບຸນ ບຸນ			✓	ຮອງ ແມ່ນ ບຸນ ບຸນ	54062334	
21							
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**APPENDIX E**  
**TEMPLATE OF PROJECT**  
**ENVIRONMENTAL SAFEGUARDS**  
**MONITORING REPORT**

# 1. INTRODUCTION AND PROJECT OVERVIEW

<b>PROJECT NUMBER AND TITLE:</b>	
<b>REPORTING PERIOD:</b>	<p>This section can include, among others, the following:</p> <ul style="list-style-type: none"> <li>• Activities of Proponent</li> <li>• Progress of Work (% physical completion)</li> <li>• Changes of Surrounding Environment</li> <li>• Status of Permits</li> </ul>
<b>MONITORING PERIOD COVERED</b>	
<b>KEY SUB-PROJECT ACTIVITIES IMPLEMENTED SINCE LAST REPORT:</b>	
<b>REPORT PREPARED BY:</b>	

## 2. ENVIRONMENTAL PERFORMANCE MONITORING

### A. STATUS OF COMPLIANCE WITH EMP REQUIREMENTS (ENVIRONMENTAL PERFORMANCE)

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
<b>I. PRE-CONSTRUCTION PHASE</b>			
<u>Impact on community assets</u>  Loss of community assets due to damage to properties.	Implement the compensation plan that was approved by the ADB for the subproject.  Design headworks, canals, and other related structures/facilities within the Right-of-Way when feasible.	External LACP monitoring report	
<u>Impact of location of headworks on other water users</u>  Downstream river uses such as irrigation, bathing, washing, and fishing will be affected if excessive water abstraction will occur.	There is minimal conflict with other water users of Nam Yang and Nam Khaen Rivers because there is still enough water in the river that will meet the other river uses at the downstream.	River level assessments at the headworks on a monthly basis	
<u>Impact to Natural resources and protected areas</u>  Impact on natural resources and protected areas from cutting/clearing of trees and other vegetation.	Cutting of trees will be undertaken as per approved design and only upon approval. Avoid cutting of trees as much as possible and minimize damage to native vegetation. Trees that need to be cut in private land will be compensated in cash in accordance with the approved Compensation Plan	N/A	
<u>Impact on Historical and Archaeological Sites</u>  Damage to relics and artifacts during the conduct of the works.	The Contractor will ensure that the workforce are 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.	Accidental finds	
<b>II. CONSTRUCTION PHASE</b>			
<u>Temporary disruption of existing community roads, pathways, and accesses</u>  Rehabilitation/ upgrading of headworks, canals and related structures will cause temporary disruption of community services and access to properties.  Particularly at road crossings, rehabilitation/ upgrading activities	Walking access will be maintained to affected properties and access routes will be temporarily lined with timber or similar material. Particular attention will be given to ensuring safety along roads and paths used by pedestrians.  Side street parking of construction vehicles on prolonged basis will not be allowed.	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in	

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
<p>along narrow roads may lead to temporary blockage or closure of roads and hamper movement of vehicles and people in the community.</p> <p>Community access to areas in the vicinity of schools, temples, village offices, market places and meeting halls will be affected during rehabilitation/ upgrading works.</p>	<p>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.</p> <p>Require the contractor to immediately rehabilitate the excavated areas and any damaged road and path sections.</p> <p>Enclose the facilities perimeters so that pathway use and stream access remains unimpeded.</p>	<p>safeguard monitoring reports.</p>	
<p><u>Air pollution</u></p> <p>Dust and air emissions from earthworks and movement of vehicles can pose nuisance to nearby communities</p>	<p>Require the contractor to cover materials with tarpaulin or other suitable materials while in transit to avoid spillage of materials.</p> <p>Moisten earthen roads during dry and dusty conditions, particularly roads near residences and through the town core area.</p> <p>Impose speed limits on construction vehicles.</p> <p>Conduct regular maintenance on construction equipment and vehicles to control air emissions during vehicle operation.</p>	<p>Periodic monitoring and reporting by Supervision Consultant..</p> <p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>	
<p><u>Noise</u></p> <p>Operation of construction equipment such as jackhammer will cause excessive noise resulting in nuisance to communities.</p>	<p>Limit rehabilitation and upgrading activities, particularly operation of noise generating equipment at night.</p> <p>Position any stationary equipment that produce high noise levels such as diesel generators as far as practical from sensitive receptors.</p> <p>Erect temporary barriers around construction sites especially near schools, hospitals, and houses.</p> <p>Install noise suppression devices to noise generating equipment.</p> <p>Require drivers to minimize blowing of horn and to comply with speed limits.</p> <p>Provide information to community on schedule of rehabilitation and upgrading activities through billboard/signs.</p>	<p>Periodic monitoring and reporting by Supervision Consultant..</p> <p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>	
<p><u>Impact on ecological resources</u></p>	<p>The contractors will prohibit activities such as cutting wood for cooking, hunting, or wildlife trade.</p>	<p>Periodic monitoring and reporting by</p>	



ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
Construction workers may undertake hunting of wildlife and cutting of wood.		Supervision Consultant..  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	
<u>Clearing of vegetation</u>  Poor planning and execution of tree clearing/vegetation removal at project facilities and along headworks, canals and related structures, can result in loss of vegetation and general landscape	Cutting of trees will be undertaken as per approved design and only upon approval of relevant authorities. Avoid cutting of trees as much as possible and minimize damage to native vegetation. Trees that need to be cut in private land will be compensated in cash accordance with the approved Compensation Plan.  Roads and paths to the facilities will only be sufficiently wide to accommodate construction vehicles/equipment to minimize land take.  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.  Implement landscaping and planting of trees/vegetation at sites of the proposed facilities.	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	
<u>Water pollution - Sediment runoff</u>  Sediment runoff undertaken during excavation, earthworks and grading in the rainy season will cause siltation of rivers	Construct silt traps, deviation channels, mounting barriers or trenches around the stockpiles of materials.	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	
<u>Water Pollution - Worker's camp</u>  Domestic wastewater from worker's camp would result to the discharge of sewage into drainage canals.  Unsanitary conditions at the worker's camp will occur without the provision of necessary sanitation arrangements.	Provide adequate water supply and temporary toilet facilities at the worker's camp.	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in	

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
		safeguard monitoring reports.	
<u>Generation of construction waste - Generation of excavated soil</u>  Generation of excavated materials during rehabilitation and upgrading of headworks, canals and related structures.	During rehabilitation and upgrading of headworks, canals and related structures, excavated material will be utilized to backfill the trench. The contractor will be required to properly reinstate the excavated trench after completion of works.  Surplus excavated material/cut soil from rehabilitation and upgrading of headworks, canals and related structures, will be used as backfill material for low-lying areas that have been identified by the village authority.	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	
<u>Generation of construction wastes – Solid, Inert and Hazardous Wastes</u>  Solid wastes, inert construction wastes, and hazardous wastes during construction will result to pollution of land and receiving water bodies.	Provide appropriate segregation bins or areas for construction wastes.  Secure and control storage of all hazardous materials including fuels.  Reuse recyclable construction wastes such as wood, steel, and scaffoldings or sell to junk shops.  Solid waste to be collected and disposed in approved disposal site of the Townships.	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	
<u>Community health and safety</u>  Community may be exposed to dangers of open excavation	Install barricades/barriers and sturdy plate covers in open excavations during non-working time.  Install warning signs in the area.	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	
<u>Occupational health and safety</u>  Construction activities may pose hazards to workers because of the use of heavy equipment, lifting of heavy loads, and exposure to open excavations and chemicals.  Potential conflict with local people will occur if migrant workers will be brought to the site.	Require the contractor to implement the construction health and safety plan in accordance with the World Bank EHS Guidelines ( <a href="http://www.ifc.org/ehsguidelines">http://www.ifc.org/ehsguidelines</a> ) as a minimum standard. The contractor will appoint an environment, health and safety officer to ensure implementation of the plan. The plan will at minimum include: <ul style="list-style-type: none"> <li>• Provision of first-aid facilities readily accessible by workers.</li> <li>• Provision of personal protective equipment (PPEs) such as hard hats, gloves, rubber boots, etc.,</li> </ul>	Periodic monitoring and reporting by Supervision Consultant..  Report any complaint received from the community to PAFO and document in safeguard monitoring reports.	

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
	<ul style="list-style-type: none"> <li>Wearing of PPEs while working onsite 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>Ensure that vehicle and equipment operators are properly licensed and trained.</li> <li>Provide staff with communicable disease and HIV-and COVID 19 related awareness training.</li> </ul> <p>The contractor will be required to provide priority hiring of qualified workers from the villages and to consult with the local to avoid conflict if migrant workers will be brought to the site.</p>		
<u>COVID-19 risk management</u>  Working Camp Siting and Management	<p>Siting of Camps and Field Offices</p> <ul style="list-style-type: none"> <li>Not in area liable to flooding, landslide or other natural disaster</li> <li>Not in area affected by construction dust, noise, sewage or other pollution</li> <li>Not in a residential area</li> </ul> <p>Minimum housing standards</p> <ul style="list-style-type: none"> <li>separate bed for each worker</li> <li>beds should not be arranged in tiers of more than two;</li> <li>separate accommodation of the sexes or to accommodate couples</li> <li>adequate natural light during the daytime and adequate artificial light</li> <li>adequate ventilation to ensure sufficient movement of air</li> <li>adequate supply of safe potable water</li> <li>adequate sanitary facilities</li> <li>adequate drainage</li> <li>adequate furniture for each worker to secure his or her belongings, such as a locker.</li> <li>common dining rooms, canteens or mess rooms, located away from the sleeping areas</li> <li>appropriately situated and furnished laundry facilities</li> <li>reasonable access to plug sockets for charging telephones and other devices</li> <li>rest and recreation rooms and health facilities, where not available in the community</li> </ul> <p>Minimum accommodation sizes</p> <ul style="list-style-type: none"> <li>Sleeping space</li> </ul>	<p>Periodic monitoring and reporting by Supervision Consultant..</p> <p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>	

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
	<ul style="list-style-type: none"> <li>□ inside dimensions over 198 centimetres by 80 centimetres;</li> <li>• Sleeping room               <ul style="list-style-type: none"> <li>□ headroom of over 203 centimetres allowing full free movement</li> <li>□ Beds minimum 2m apart for COVID-19 risk management</li> </ul> </li> </ul> <p>Sanitation Facilities</p> <ul style="list-style-type: none"> <li>• One toilet, one tap / basin, one toilet for every 6 people</li> <li>• Convenient location to accommodation</li> <li>• Provision of soap</li> <li>• Separate facilities for men and women</li> <li>• Ventilation to open air</li> <li>• Fresh cold running water</li> <li>• Clean and hygienic</li> <li>• Septic tank/sewage treatment facility, or pit latrines located at least 200m from surface waters, and in areas of suitable soil profiles and above the groundwater levels</li> </ul> <p>Health and Safety within worker accommodation</p> <ul style="list-style-type: none"> <li>• Separate area for sick workers to prevent transmission of disease</li> <li>• Smoke detector in sleeping area</li> <li>• Fire safety throughout accommodation such as fire extinguishers, fire alarms, fire blankets</li> <li>• Worker training in fire prevention and procedures</li> <li>• Fire exit sign, adequate means of escape and clearly maintained exit</li> <li>• Security lighting within camp and for sanitation block and lighting for route from sleeping area to sanitation block</li> <li>• Electrical cables to be in safe condition, elevated and not in areas liable to flood</li> </ul> <p>Inspection</p> <ul style="list-style-type: none"> <li>• 2 weekly inspections to inspect for cleanliness, state of repair of building, accommodation and fire equipment</li> <li>• Record inspection results and retain for review</li> </ul>		
<u>COVID-19 risk management</u>  <u>Construction site working conditions</u>	<p>Form a joint team to plan and organize commencement and/or return to work</p> <ul style="list-style-type: none"> <li>• Develop or convene a joint occupational safety and health committee with members</li> </ul>	Periodic monitoring and reporting by Supervision Consultant..	

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
	<p>representing the employer and workers</p> <ul style="list-style-type: none"> <li>• Train team members on the basic principles for the formulation and implementation of occupational safety and health preventive and control measures.</li> <li>• Develop and communicate a work plan on safe working for COVID-19</li> <li>• Such plan should be fully aligned with any government regulations and guidelines on COVID-19 prevention and control, or in the absence thereof, with international good practice guidelines as may be updated from time to time</li> </ul> <p>Risk assessment to decide when to work, who works and how</p> <ul style="list-style-type: none"> <li>• Undertake a risk assessment to determine the preventive and control measures</li> <li>• Ensure preventative measures are in place before resuming or beginning construction work</li> </ul> <p>Adopt engineering, organizational and administrative measures</p> <ul style="list-style-type: none"> <li>• Avoid physical interaction and maintain physical distancing requirements as prescribed by national policy, or in the absence thereof, international good practice</li> <li>• Ventilate enclosed workplaces including work camps and communal spaces</li> <li>• Avoid concentration of workers - limit the capacity of common areas such as work camp dining rooms and changing rooms to allow the minimum separation of 2 meters and organize one-way systems. This includes sleeping areas which must be a minimum of 2 meters between</li> <li>• beds</li> <li>• Put in place training and information on COVID-19 and measures required for its management.</li> <li>• The construction site is to be segregated to the extent possible in zones or other methods to keep different crews physically separated at all time</li> <li>• Stagger break and lunch schedules to minimize the number of people in close proximity to one another</li> </ul> <p>Regularly clean and disinfect</p>	<p>Report any complaint received from the community to PAFO and document in safeguard monitoring reports.</p>	



ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
	<ul style="list-style-type: none"> <li>• Increase the frequency of cleaning and disinfection, in particular heavily trafficked areas and common areas, including work camps</li> <li>• All door handles, railings, ladders, switches, controls, eating surfaces, shared tools and equipment, taps, toilets, and personal areas are wiped down at least twice a day with a disinfectant</li> <li>• Discourage the sharing of items such as cups, glasses, plates, tools</li> </ul> <p>Promote personal hygiene</p> <ul style="list-style-type: none"> <li>• Provide workers with the conditions and means necessary for frequent hand washing (soap, water or alcohol gel) with a posted hand washing protocol at site entries, exits, bathrooms, communal areas, offices, and any other areas with commonly touched surfaces</li> <li>• Inform workers of the need to avoid physical contact when greeting, and avoid touching eyes, nose and mouth</li> <li>• Inform workers of the need to cover the mouth and nose with a disposable handkerchief when coughing or sneezing or the crook of their arm</li> <li>• Dispose of tissues in a lined and covered waste bin and wash hands afterwards</li> </ul> <p>Provide personal protective equipment (PPE) and inform workers of its correct use</p> <ul style="list-style-type: none"> <li>• Identify appropriate PPE related to the tasks and health and safety risks faced by workers according to the results of risk assessment and the level of risk, and provide it to workers free of charge and in sufficient number, along with instructions, procedures, training and supervision</li> <li>• Non-medical face-coverings (such as homemade cloth masks) should be worn as mitigation for catching and transmitting the virus, but are not to be treated as substitutes for proper handwashing</li> </ul> <p>Health surveillance and insurance</p> <ul style="list-style-type: none"> <li>• Before entering the site, staff and visitors must confirm that they are not currently exhibiting flu-like symptoms</li> </ul>		

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
	<ul style="list-style-type: none"> <li>• Monitor the health status of workers, develop protocols for cases of suspected and confirmed COVID-19. The protocol will state that:</li> <li>• workers with symptoms or confirmed cases must be isolated within the construction camp or stay at home for 7 days after symptoms started               <ul style="list-style-type: none"> <li>□ If symptoms persist after 7 days, the person must isolate until the symptoms stop</li> <li>□ People who have been in close contact with the person with confirmed COVID-19 be quarantined for 14 days</li> </ul> </li> <li>• All workers in quarantine or isolation must be provided with adequate food, water, medical assistance and sanitation</li> <li>• Identify workers who have had close contact with people infected with COVID-19 and follow national medical guidance</li> <li>• Communicate confirmed cases of COVID-19 infection to the appropriate authorities</li> <li>• All workers should be provided with health insurance that includes COVID-19 treatment</li> </ul> <p>Consider other hazards, including psychosocial</p> <ul style="list-style-type: none"> <li>• Promote a safe and healthy working environment free from violence and harassment.</li> <li>• Encourage health promotion and wellbeing in the workplace through enough rest, balance of physical and mental activity and adequate work life balance</li> <li>• Implement prevention and control measures for the use and storage of chemicals, particularly those used for disinfection during COVID-19</li> </ul> <p>Review emergency preparedness plans</p> <ul style="list-style-type: none"> <li>• Develop an emergency plan adapted to COVID-19 and regularly review it</li> </ul> <p>Review and update preventive and control measures as the situation evolves</p> <ul style="list-style-type: none"> <li>• Periodically monitor prevention and control measures to determine whether they have been adequate to avoid or minimize risk, and identify and</li> </ul>		

ENVIRONMENTAL IMPACT	MITIGATION MEASURES	MONITORING	COMPLIANCE
	implement corrective actions for continuous improvement <ul style="list-style-type: none"> <li>Establish and maintain records related to work-related injuries, illnesses and incidents, worker exposures, monitoring of the work environment and workers' health</li> </ul>		
<b>III. OPERATION PHASE</b>			
<u>Impacts of Water Offtake</u>  Disruption of downstream hydrological flows due to offtake from river may occur.	Water offtake will be fine-tuned and managed on the basis of environmentally allowable volumes.	Weekly monitoring of water quantity and water offtake.	
<u>Water Pollution</u>  Upstream land uses may cause a decline in the quality of water available for the irrigation scheme.	A catchment land use plan must be prepared and implemented to ensure that the scheme is safeguarded throughout its operational life.	Weekly monitoring of water quality.	
<u>Loss of Aquatic Biodiversity</u>  Aquatic resources may decline as a result of the operation of the facilities.	Headworks weirs will be improved from the environmental perspective by the construction of fish passes.	Weekly monitoring of aquatic flora and fauna.	
<u>Increased Utilization of Fertilizers and Pesticides</u>  Increased areas and extent of vegetable crops pest populations may build up and require more direct intervention	Only agrichemicals approved by the Government of Lao PDR may be used. Strong extension support must be provided to encourage the responsible use of fertilizers and pesticides.	Weekly monitoring of pesticide and fertilizer use of farmers.	
<u>Community health and safety</u>  Potential hazards to residents in affected communities.	Facilities properly fenced and secured.	Daily log of security personnel	

Summary of EMP Compliance Status: \_\_\_\_\_

## B. RESULTS OF ENVIRONMENTAL MONITORING

- PAFO operational report
- Complaints resolution
- EMP implementation

## C. ISSUES FOR FURTHER ACTION

ISSUE	REQUIRED ACTION	RESPONSIBILITY AND TIMING	RESOLUTION
<b>OLD ISSUES FROM PREVIOUS REPORTS</b>			
List of EMP measures or activities not completed (last column of previous table)			
<b>NEW ISSUES FROM THIS REPORT</b>			

### **3. CONCLUSION**

- Important results from the implementation of EMP monitoring
- Recommendations to improve EMP management, implementation, and monitoring

### **4. ATTACHMENTS**

- Permits
- Monitoring data (water quality, etc.)
- Photographs
- Maps

**APPENDIX F**  
**SEMI-ANNUAL INTEGRATED**  
**SAFEGUARDS MONITORING REPORT**  
**TEMPLATE**



## Safeguards Monitoring Report

# Semiannual Report  
xxx {month} 20xx

Lao PDR: xxx {Project name}, xxx {sub-project name, if report covers only one sub-project}

Prepared by the Project Management Unit of {complete name of Implementing Agency} for the {complete name of the borrower} and the Asian Development Bank.

#### NOTE

In this report, "\$" refers to US dollars.

This safeguards monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

## 1. Executive Summary

{Read and delete: Provide short summary of the following items:

### Summary of EMP/RP Implementation

Description of monitoring activities carried out (e.g. field visits, environment effect monitoring, survey questionnaire, public consultation meetings, focus group discussions, etc)

Key issues, any corrective actions already taken, and any grievances

Key activities planned in the next reporting period

Recommendations

Use the paragraph numbering format provided below throughout the report}

1. xxx

2. xxx

## 2. Project Overview, General safeguard matters

### 2.1 Project Overview

{Read and delete: Briefly describe project objectives, scope and components – can be taken from PAM or other relevant document}

3. xxx

4. xxx

### 2.2 Project Progress

{Read and delete: Using most recent project progress report, describe status of project implementation, including full list of contracts, status of contract awarding and implementation, name of contractor, Engineer, Project Supervision Consultant.}

5. xxx

6. xxx

Table 1: Project Overview, Snapshot of Project Progress

Project Number and Title:		
Safeguards Category	Environment	
	Indigenous Peoples	
	Involuntary Resettlement	
Reporting period:		
Last report date:		
Key sub-project activities since last report:	{Read and delete: This section should include, among others, the following: Contract awarding Progress of Work (% physical completion) Status of Safeguard Approvals / Permits / Consents	
Report prepared by:		

## 2.3 Safeguard Plans Implementation Arrangements

{Read and delete: Describe institutional arrangements and responsibilities for EMP and RP implementation, internal and external monitoring, and reporting, defining roles of PMU, Engineer, Implementation Consultant, Contractors. (Table format as needed)}

7. xxx

8. xxx

#### 2.4 Updated EMPs and RPs, Incorporation of Safeguards Requirements into Project Contractual Arrangements

{Read and delete: Define manner by which EMP and RP requirements are incorporated into bidding documents, contracts.

Indicate when updated EMPs and RPs were submitted for approval to ADB (Table format appropriate).}

9. xxx

10. xxx

### 3. Environmental Performance Monitoring

#### 3.1 Status of EMP Implementation (Mitigation Measures)

{Read and delete: Summarize main mitigation/protection measures implemented in the reporting period (narrative section). Structure in accordance to phases (detailed design, construction preparation, construction, and operation).}

11. xxx

12. xxx

{Read and delete: Include EMP table or updated EMP table if applicable. Assess compliance of environmental management activities with the original or updated EMP. For that purpose, include additional columns entitled "Compliance Status", "Comment or Reasons for Non-Compliance", and "Issues for Further Action". Example is provided below.}

Table 2: Compliance with EMP Requirements (Environmental Performance)

EMP Requirements	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
Use environmental impact as main heading and EMP as listing (see example below)	Use EMP list as basis for rating/evaluating compliance (see example below)		
Rise of employment opportunities: Job openings of the project should give priority to local communities. Recruitment of local laborers should be stipulated in the contract for construction	Field inspections and interviews with communities - DONE Note each complaint case in the field – 3 COMPLAINTS RECEIVED Set up grievance centre and report as part of monitoring action plan – NOT DONE		


Table 3: Issues for Further Action

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
List of EMP measures or activities not completed (last column of previous table)			
New Issues from This Report			

### 3.2 Health and Safety

{Read and delete: Provide narrative of occupational and community health and safety issues that occurred during the reporting period. Any accident involving injury or death of workers or community members must be reported. Include investigation report of DOLISA as attachment to the report. Provide details in the Table below}.

13. xxx

14. xxx

Table 4: Health and Safety Issues

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
New Issues from This Report			

### 3.3 Environment Effect Monitoring

15. Monitoring plan. xxx {Read and delete: Present the environment effect monitoring plan as defined in the EMP or the updated monitoring plan. Refer to Table 4. Describe monitoring responsibilities}

16. Monitoring activities in the reporting period. Xxx {Read and delete: Describe the environment effect monitoring activities in the reporting period, including number of monitoring campaigns, number of samples, etc. Confirm compliance with the monitoring plan, or justify any deviation from the plan}

Table 4: Environment Effect Monitoring Results in the Reporting Period

{Read and delete: Present monitoring result in a Table (see example below, adjust as needed). Any non-compliance should be highlighted for attention and follow-up.}

Location	Parameter	Date	Monitoring value	Relevant government standard, standard value

17. Assessment. Xxx {Read and delete: Compare monitoring results with baseline conditions (if baseline data is available) and relevant government standards in qualitative terms. Additional explanatory comments should be provided as necessary. Possible reasons for non-compliance should be identified.}

### 4. Involuntary Resettlement Performance Monitoring

{Read and delete: Provide narrative of status of implementation of the RP(s), including but not limited to: status of RP or Resettlement Framework updating; number of households relocated during the reporting period; outstanding resettlement activities; etc}.

18. xxx

19. xxx



Table 6: Summary of Compliance with RP Requirements

RP Requirements	Compliance status Yes/No/Partial	Comment or Reasons for Compliance, Partial Compliance/Non- Compliance	Issues for Further Action <sup>2</sup>
Establishment of personnel in PMU/PIU			
Public consultation and socialization process		Provide information on: Public consultation, participation activities carried out Inclusive dates of these activities  To be elaborated on in Item 5	
Land area to be acquired is identified and finalized			
Resettlement plan(s) updated after detailed design			
Land acquisition completed			
Establishment of Resettlement Site(s)		Please state: Number of AHs to be relocated as per agreed RP Number of AHs already relocated Number of houses built Status of installation of community facilities to be provided as per agreed RP	
Compensation payments for affected assets is completed		Please state: Total Number of Eligible AHs and APs (as per agreed RP) Number of AHs and APs compensated as of this monitoring period Total Budget allocation as per agreed RP Total budget disbursed to AHs as of this monitoring period	

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<sup>2</sup> To be elaborated further in table 3.b (Issues for Further Action)

Transport assistance for relocating affected households		As above	
Additional assistance to vulnerable affected household		Please state: Total Number of vulnerable AHs and APs (as per agreed RP) Agreed forms of assistance as per RP Number of AHs and APs assisted as of this monitoring period	
Income Restoration Program		Please state progress per income restoration feature/activity and actual period of implementation	
Temporary impacts have been addressed (affected properties restored to at least pre-project conditions)		Please state: Total Number of AHs affected by temporary impacts as per agreed RP Actual Number of AHs and total area affected by temporary impacts (if this differs from the projected number, such as in cases of unforeseen project impacts) Status of restoring affected property	
Capacity building activities			

Table 7: Issues for Further Action

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
List of RP activities not completed (last column of previous table)			
New Issues from This Report			

5. Compliance with safeguards related project covenants

{Read and delete: List all environment and resettlement related loan covenants, and assess project's compliance with the covenants (Table format is appropriate, with concluding statement on compliance, partial compliance or non-compliance, and corrective actions as needed)}

Schedule	Para No.	Covenant	Remarks/Issues (Status of Compliance)
Schedule 5	xxx		Complied with / Partially complied with / Not complied with. {Identify reason for partial or non-compliance}

#### 6. Public consultation, Information Disclosure, Capability Building

{Read and delete: Describe public consultation activities during the reporting period. Confirm compliance with consultation plan defined in the IEE/EMP and the RP(s), or justify deviation from these plans. Present planned consultation activities in next reporting period. Use Tables as appropriate.}

Field Visits (sites visited, dates, persons met)

Public Consultations and meetings (Date; time; location; agenda; number of participants disaggregated by sex and ethnic group, not including project staff; Issues raised by participants and how these were addressed by the project team)

Training (Nature of training, number of participants disaggregated by gender and ethnicity, date, location, etc.)

Press/Media Releases

Material development/production (e.g., brochure, leaflet, posters)

Information disclosure

7. Grievance Redress Mechanism

{Read and delete: Describe mechanisms established to address and redress public complaints and grievances related to social and environment safeguards. Summarize grievances received, if any, and measures implemented to redress them.}

Number of new grievances, if any, since last monitoring period: \_\_\_\_\_

Number of grievances resolved: \_\_\_\_\_

Number of outstanding grievances: \_\_\_\_\_

Type of Grievance	Details (Date, address, person, contact details, etc.)	Required Action, Responsibility and Timing	Resolution
Old Issues from Previous Reports			
New Issues from This Report			

8. Conclusion

{Read and delete: Highlight important results from the implementation of EMP and RP monitoring; recommendations to improve EMP and RP management, implementation, and monitoring; key activities planned in next reporting period}.

20. xxx

21. xxx

9. Attachments

Consents / permits

Monitoring data (water quality, air quality, etc.)

Inspection checklists

Photographs

Others