



Lao People's Democratic Republic

Peace Independence Democracy Unity Prosperity

Ministry of Natural Resources and Environment

and

Ministry of Public Works and Transport

Lao Environmental and Waste Management Project (P175996)

SOCIAL IMPACT ASSESSMENT AND SOCIAL MANAGEMENT PLAN (SIA-SMP)

Volume I - Main Report

(Revised Draft)

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TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS	3
EXECUTIVE SUMMARY	6
1 PROJECT BACKGROUND AND DESCRIPTION	15
1.1 PROJECT BACKGROUND	15
1.2 PROJECT OBJECTIVE AND INDICATOR	15
1.3 PROJECT COMPONENTS	16
1.4 PROJECT LOCATIONS	19
1.5 SIA-SMP SCOPE AND OBJECTIVE	20
2 LEGAL AND INSTITUTIONAL FRAMEWORK	20
2.1 NATIONAL LEGAL FRAMEWORK	20
2.2 APPLICABLE WORLD BANK SOCIAL STANDARDS (SS)	22
3 BRIEF SOCIAL BASELINE PROFILE	24
3.1 OVERVIEW OF SOCIO-ECONOMIC PROFILE IN LAO PDR	24
3.2 BRIEF SOCIO-ECONOMIC PROFILE OF VIENTIANE CAPITAL	29
3.3 BRIEF SOCIO-ECONOMIC PROFILE OF VIENTIANE PROVINCE.....	30
3.4 BRIEF SOCIO-ECONOMIC PROFILE OF OUDOMXAY PROVINCE.....	32
3.5 BRIEF DESCRIPTION OF PROPOSED SITES TO BE INVESTED UNDER C3	33
3.5.1 <i>Brief Description of the KM32</i>	33
3.5.2 <i>Brief Description of the KM16 Facility</i>	37
3.5.3 <i>Brief Description of the Naxaythong Site</i>	39
4 POTENTIAL SOCIAL RISKS, IMPACTS AND PROPOSED MITIGATION MEASURES.....	40
4.1 POSITIVE SOCIAL BENEFITS	41
4.2 SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES OF C1, 2 AND 4.....	42
4.3 SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES OF C3.....	54
5 SOCIAL MANAGEMENT PLAN (SMP)	74
5.1 LABOR MANAGEMENT PROCEDURES (LMP)	74
5.2 COMMUNITY HEALTH AND SAFETY PLAN (CHSP)	74
5.3 CODE OF CONDUCT (CoC) ON SEXUAL EXPLOITATION AND ABUSE (SEA), SEXUAL HARASSMENT (SH), AND VIOLENCE AGAINST CHILDREN (VAC)	75
5.4 RESETTLEMENT POLICY FRAMEWORK (RPF)	75
5.5 ETHNIC GROUP ENGAGEMENT FRAMEWORK (EGEF)	75
6 SMP IMPLEMENTATION ARRANGEMENTS AND CAPACITY BUILDING	76
7 CONSULTATION AND STAKEHOLDER ENGAGEMENT	77



7.1	OBJECTIVES	77
7.2	CONSULTATIONS DURING PROJECT PREPARATION	78
7.3	CONSULTATIONS DURING PROJECT IMPLEMENTATION	80
7.4	REPORTING BACK TO STAKEHOLDERS	80
8	GRIEVANCE REDRESS MECHANISM	80
9	MONITORING AND REPORTING	81
10	BUDGET	81
11	LIST OF ESMF ANNEXES AND ATTACHMENTS.....	81

List of Tables

Table 1-1	C1 Subcomponents (reference: Report No: PAD4795).....	16
Table 1-2	C2 Subcomponents (reference: Report No: PAD4795))	17
Table 1-3	C3 Subcomponents (reference: Report No: PAD4795).....	18
Table 1-4	C4 Subcomponents (reference: Report No: PAD4795).....	19
Table 2-1	Key Lao PDR social legislations applicable to the project	21
Table 4-1	Summary of the Social Risks and Impacts and proposed Mitigation Measures for C1,2&4	44
Table 4-2	Summary of the Social Risks and Impacts and proposed Mitigation Measures for C3	57

List of Figures

Figure 3-1	Map of Vientiane Capital (JICA, 2011a).....	30
Figure 3-2	Map of Vientiane Province (Pre-FS Report, June 2022).....	31
Figure 3-3	Map of Oudomxay Province (Pre-FS Report, June 2022).....	33
Figure 3-4	The Conceptual Landfill Design (Pre-FS Report, June 2022).....	35
Figure 3-5	Location of Xaythany District, Vientiane Capital	36
Figure 3-6	Surrounding of the KM32 Landfill (Sub-project Site)	37
Figure 3-7	Surrounding of the KM32 Landfill (Sub-project Site)	37
Figure 3-8	Operational Diagram of the waste transfer station at KM16.....	39



ABBREVIATIONS AND ACRONYMS

3R	Reduce, Reuse and Recycle
ARAP	Abbreviated Resettlement Action Plan
ASEAN	Association of Southeast Asian Nations
BKX	Bolikhamxay province
C1, 2, 4	Components 1, 2, and 4
C3	Component 3
CERC	Contingency Emergency Response Component
CHSP	Community Health and Safety Plan
CMU	Component Management Unit
COC	Code of conduct on
COVID19	Corona Virus 19
DCC	Department of Climate Change
DHUP	Department of Housing and Urban Planning
DINE	Department of Inspection on Natural Resources
DPF	Department of Planning and Finance
DOE	Department of Environment
DOP	Department of Planning
DONRE	District Offices of Natural Resource and Environment
DPWT	Department of Public Works and Transport
ECC	Environmental Compliance Certificate
ECOP	Environment Code of Practice
EDPD/PTI	Environmental Research and Disaster Prevention Division
EGEF	Ethnic Group Engagement Framework
EGEP	Ethnic Group Engagement Plan
EHSG	Environmental, Health and Safety Guidelines of WB Group
EIA	Environmental Impact Assessment
EPF	Environmental Protection Fun
EPFO	Environment Protection Fund
E&S	Environmental and Social
ES COP	Environmental and Social Code of Practice
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environment and Social Impact Assessment
ESMF	Environment and Social Management Framework
ESMP	Environment and Social Management Plan
ESS	Environmental and Social Standards
EWMP	Environmental Waste Management Project
EXRI	EX Research Institute Ltd
FGD	Focused Group Discussion
FPIC	Free Prior and Informed Consent



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GBP	Green Business Plan
GBV	Gender Based Violence
GCB	Green Clean and Beautiful Lao PDR
GCBP	Green, Clean, and Beautiful Plan
GDP	Gross Domestic Product
GGGI	Global Green Growth Institute
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
IEE	Initial Environmental Examination
IFC	International Finance Corporation
KHM	Khammouane province
KM	Kilometer
LEMGP	Laos Environmental Matching Grant Program
LFND	Lao Front for National Development
LMP	Labour Management Procedures
LWU	Lao Women's Union
MAF	Ministry of Agriculture and Forestry
MGA	Matching Grant Agreement
MOIC	Ministry of Industry and Commerce
MOF	Ministry of Finance
MONRE	Ministry of Natural Resource and Environment
MPWT	Ministry of Public Works and Transport
MEM	Ministry of Energy and Mine
MPI	Ministry of Planning and Investment
NGO	Non Government Organization
NRERI	Natural Resources and Environmental Research Institute
NPAP	National Plastic Action Plan
OHS	Occupational Health and Safety
ODX	Oudomxay province
PAD	Project Appraisal Document
PAP	Project Affected People
PIU	Project Implementation Unit
PCU	Project Coordination Unit
PMU	Project Management Unit
PONRE	Provincial Offices of Natural Resource and Environment
PPE	Personal Protective Equipment
PRC	Provincial Resettlement Committee
Pre-FS	Pre-Feasibility Study
Pre-ESIA	Preliminary Environmental and Social Impact Assessment
PSMEB	Participating small and medium size enterprises and businesses
PTI	Public Works and Transport Institute



Lao PDR Environmental and Waste Management Project (P175996)

RAP	Resettlement Action Plan
RDF	Refuse-Derives Fuel
RPF	Resettlement Policy Framework
SCOC	Social Code of Conduct
SEA/SH	Sexual Exploitation and Abuse and Sexual Harassment
SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SIA-SMP	Social Impact Assessment and Social Management Plan
SIA	Sub-component Implementing Agency
SMEs	Small and Medium-sized Enterprises
SMEB	Small and medium size enterprises and businesses
SMP	Social Management Plan
SWM	Solid Waste Management
SVK	Savannakhet province
UDAAs	Urban Development Administrative Authorities
US\$	United States dollar
UXO	Unexploded Ordnance
VAC	Violence Against Children
VCOMS	Vientiane City Office for Management and Service
VTC	Vientiane Capital
VTP	Vientiane Province
WB	The World Bank
WBG	World Bank Group



EXECUTIVE SUMMARY

E1. Project Background

In Lao People's Democratic Republic (Lao PDR,) rapid development during the past 10 years (pre-Covid-19) has resulted in degradation of natural resources and environmental quality and increase generation of solid wastes while the Government of Lao PDR (GOL) through the Ministry of Natural Resources and Environment (MONRE), the Ministry of Public Works and Transport (MPWT), and the Environment Protection Fund (EPF) has been preparing a project, namely Environment and Waste Management Project (EWMP), for possible financing by the World Bank (WB). The project will be implemented in 2023 to 2029 with a total budget cost of \$ 45.08 million. Project objectives and activities are provided in Chapter 2 and Annex 1 of the ESMF.

The WB's Environmental and Social Framework (ESF) will be applied to the project. With support from the WB on-going project, a team of international and national consultants have been mobilized to prepare ESF documents are necessary for the project comprising an Environment and Social Commitment Plan (ESCP), a Stakeholders Engagement Plan (SEP), and Environment and Social Management Framework (ESMF), a Social Impact Assessment and Social Management Plan (SIA-SMP), and a Pre-ESIA (PESIA) for selected site. Scope of the ESCP, SEP, ESMF, and SIA-SMP will cover all components while Pre-ESIA will cover only Component 3. This document is the SIA-SMP of the EWMP which will cover all project components.

E2. Project Objectives and Activities

Main Project Development Objectives (PDO) of EWMP is to strengthen environmental protection systems, improve municipal solid waste management in selected cities in Lao PDR, and provide immediate and effective response in case of an Eligible Crisis or Emergency. Achievement of the PDO will be measured by the following indicators :

- Environmental protection system (practices) improved (score)
- Increase coverage of municipal waste collection from households and businesses in Vientiane Capital (percentage)
- Solid waste recycled, composted and/or treated to reduce waste disposal volumes (percentage)
- Net greenhouse emissions reduction (metric tons/year)

The project activities will be implemented through the following 5 components:

- ***Component 1: Policy Implementation and Capacity Enhancement (\$12.12 Million).***
This component will strengthen the policies, institutional framework, and capacities of central government agencies (particularly MONRE and MPWT) responsible for



various technical and administrative aspects of environmental, pollution, solid waste, and plastics management, including initiating a matching grant mechanism with selected private sector. The activities will be implemented by responsible agencies through the following five subcomponents: Sub-component C1A: (Policy and capacity support for national institutions on EIA/IEE/SEA, solid waste management, and toxic and hazardous waste (THW); Sub-component C1B: (Capacity and Financial Support to SMEs on environmental and waste management); Sub-component C1C: (ECC compliance and pollution monitoring framework) ; Sub-component C1D (Policy and Capacity support on Climate change and low carbon resilient development); and Sub-component C1E: (Policy and capacity support on plastics policies and legislation). **The Matching Grant (LEMGP)**: The proposed matching grant activities (called Lao Environmental Matching Grant Program or LEMGP) seeks to initiate active engagement with a selected small-and medium-size enterprises and businesses (SMEBs) that can provide resources or practical solutions for solving the most pressing issues related to effective use of natural resources, waste generation, environmental quality, and pollution control challenges taking into account the needs and opportunities for selected SMEBs to continue with their businesses after Covid-19 pandemic and contribute to economic growth toward green growth direction.

- **Component 2: Integrated Support and Capacity Building for Local Government and Municipalities (\$4.5 Million)**. This component aims to enhance the capacity of local government and institutions to address the policy implementation of waste, plastic and pollution management. This component will support local governments to better prepare for investments under Component 3. Three subcomponents are: Sub-component C2A: (*Support and Capacity Building for Local Governments on waste and pollution data and information systems and waste services*); Sub-component C2B: (*GCB and 3R projects plus capacity building for NPAP/plastic policies implementation in targeted districts*); and Sub-component C2C: (*Support to private-public partnerships and enhancing output-based waste service delivery and cost recovery capacity*).
- **Component 3: Waste and plastics management Infrastructure Investments (\$24.62 Million)**. This component will finance waste management and recycling infrastructure investments in Vientiane Capital including provision of goods, services, and consulting services required to carry out detailed design, preparation of bidding document taking into account climate change considerations, and supervision of construction and rehabilitation works. Component 3 will finance waste management and recycling infrastructure investments in Vientiane Capital including (i) a new waste transfer station in Naxaythong district; (ii) upgrading material recovery facility at the km16n in Xaythany district; and (iii) partial rehabilitation of the existing landfill at the km32 in Xaythany district.



- **Component 4: Project coordination and reporting (\$3.81 Million).** This component will focus on inter-ministerial coordination, progress reporting, and monitoring and evaluation. Strengthening implementation and management capacity will involve support for monitoring and evaluation systems for the proposed program, enhancing stakeholder's collaboration at all levels. Two subcomponents are: Sub-component C4A: (Project management and administration) and Sub-component C4B: (Communication, Engagement, and EPF Capacity building).
- **Component 5. Contingent Emergency Response Component (CERC).** This component will provide an immediate response to an Eligible Crisis or Emergency, as needed by enabling the GOL to request the World Bank to reallocate project funds to support emergency response and recovery.

Under Component 1, the project activities will be implemented nationwide on the part related to policy, regulations, and technical assistance (TA) while some activities such as those related to the matching grant (C1A) and the National Plastic Actions Plan (NPAP) (C1E). However, given limited budget, it is expected that these activities will be conducted in Vientiane Capital and nearby provinces. Under Component 2, the project activities will be conducted in specific areas to be identified during project implementation according to the objective and scope of the Subcomponent activities (C2A, C2B, and C2C). The activities areas will be limited to Vientiane Capital, Vientiane Province and Oudomxay Province,

Component 3 will finance waste management and recycling infrastructure investments in Vientiane Capital in Xaythany District and Naxaythong district. In Xaythany district, there are two specific sites: one at the km 32 (the existing landfill) and another at the existing waste facilities at km16. In Naxaythong, specific sites and activities are being considered. More details can be found in Pre-ESIA and SIA-SMP. Environmental and Social (E&S) baseline conditions of Vientiane Capital, Vientiane Province and Oudomxay Province, and 3 sites to be invested under C3 are provided in Section 3.

E3. Purpose and Scope of the SIA-SMPs

The Social Impact Assessment (SIA) provides information and analysis to be used in the preparation of other ESF instruments. The SIA covers all project Components, including Component 1,2 &4 (C1,2 & 4) to be implemented through EPF and Component 3 (C3) to be implemented by MPWT. The SIA (i) describes the general national social background that is relevant to C1,2 & 4 as well as the brief social baseline for KM32 (while the details are provided in the Pre-ESIA study); (ii) identifies and assesses project-related social risks and impacts; and (iii) proposes mitigation measures. Based on the findings of the Project SIA, the Social Management Plan (SMP) was prepared to manage the identified risks and impacts and pay special attention to impacts on disadvantage and vulnerable groups including women, children, and ethnic groups. The Social Management Plan (SMP) sets out management and mitigation measures for risks identified in the SIA as well as



recommendations for maximizing social inclusion and social benefits. The SMP is considered part of the Environment and Social Management Framework (ESMF) and the SMP and its monitoring and capacity building plan will be implemented as part of the ESMF implementation. The SMP includes the following ESF instruments:

- Annex 1A Labour Management Procedures (LMP) with Worker Grievance Procedure for C3;
- Annex 1B Labour Management Procedures (LMP) with Worker Grievance Procedure for C1,2 &4;
- Annex 2 Community Health and Safety Plan (CHSP) for all Components;
- Annex 3A Code of Conduct on SEA/SH and VAC for C3;
- Annex 3A Code of Conduct on SEA/SH and VAC for C1,2 &4;
- Annex 4 Resettlement Policy Framework (RPF) (including livelihoods restoration); and
- Annex 5 Ethnic Group Engagement Framework (EGEF).

E4. Positive and Potential Social Risks and Negative Impacts

The project social impacts are broken down into positive social impacts and social risks and negative impacts as presented below.

Positive Social Impacts

The project will support GOL ongoing efforts to strengthen environmental protection systems, improve municipal solid waste management in selected cities in Lao PDR, and provide immediate and effective response in case of an Eligible Crisis or Emergency building on key outcomes of existing and/or recent projects financed by WB as well as initiate policy, regulations, and capacity building to address priority issues related to solid waste and plastics in Lao PDR. The project will seek to comprehensively support capacity building and stakeholder collaboration across priority aspects of key sector agencies of MONRE, MPWT, EPF, and selected local governments responsible for solid waste management.

Key benefits from project intervention through the efforts to improve policy and regulations related to environmental prevention measures (EIA, IEE, SEA, 3R, GCB, and the Laos Environmental Matching Grant Program (LEMGP) to be implemented under Component 1 and capacity building of local authorities to be implemented under Component 2 will clearly support urban cleanliness and overall environmental management and pollution control. This will indirectly impact the quality of health of residents, which will lead to healthy long lives, money savings on health medication and support for urban poverty alleviation. Implementation of SEA regulations as well as other tools related ISP-LUP and pollution control measures will contribute to minimize risk and impacts and promote positive impacts



and participation of the sector agencies and local authorities on ways to implement them. Implementation of Component 4 will continue to strengthen EPFO capacity to engage key stakeholder and tap more funding support form national and international sources.

The EWMP Project investments proposed under Component 3 aim at significantly improving waste management in Vientiane Capital through an integrated waste management approach comprising upgrading the existing waste management and disposal facilities at the existing Km 32 landfill, establishment of Integrated Waste Management Facilities at the existing Km16 transfer station, and at a new transfer station to be established in Naxaythong District.

Direct and indirect beneficiaries of the project are expected to be the approximately 1 million inhabitants of Vientiane Capital who will benefit from improvement to the waste management system, and an additional 820,000 inhabitants in Oudomxay and Vientiane provinces who will benefit from improved policies, regulations, monitoring and enforcement, legislation, strengthened institutions, and increased capacities of SWM departments as included under Components 1 and 2.

The 264 waste-pickers at the KM-32 landfill will benefit directly from improved working conditions at the landfill, training and skills development provided through the project, and opportunities for work at the waste management facilities planned for Naxaythong and KM16. Women and vulnerable groups currently involved in informal (and formal) waste collection, sorting, and disposal networks will be specifically targeted to ensure they benefit from re-skilling and training opportunities, with the objective of incorporating informal workers into formal waste management systems and identifying alternative and/or substitute livelihood operations.

The poor and near poor, on average 10 percent of the population, are likely to experience significant positive impacts of collected waste, decreased waste burning, decreased pollution, and sanitary disposal of waste.

Overall Negative Impacts/Risk and Proposed Mitigations

Overall, the project is classified a high-risk project. Project components have differing risk profiles. Social risks and impacts of the Component 1, 2 and 4 are classified as low to moderate while the Component 3 risks and impacts are classified as substantial to high mainly due to the on-going significant pollution at Km32 landfill site and risk if E&S considerations and implementation during each phase of activities including Detailed Design is inadequate.

With effective implementation of appropriate ESF Instruments and adequate design measures for solid waste management facilities as proposed in the Pre-ESIA, social risks and negative impacts from the project's activities is expected to be at acceptable level.

E&S Risks for Components 1, 2, and 4



Social risk for Component 1, 2, and 4 is considered low to moderate. Activities to be implemented under Component 1, 2 and 4 will be limited to technical assistance (TA); procurement of equipment and other goods/supplies; policy development; training, workshops, and other capacity building; and probable construction and/or rehabilitation of small and/or very small civil works; SMEs and Matching Grant. The proposed activities under the C1 and C2 will create positive impacts on GOL efforts to improve overall environmental and waste management. However, there are possible social risks and negative impact as summarized below:

- Risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker¹. This will be addressed through the implementation of LMP (Attachment 1 of the SIA-SMPs);
- Inappropriate behaviour by Project Worker during training, consultation workshops and working in communities or field data collection. This can be managed through the implementation of a simple Code of Conduct on SEA/SH and VAC (Attachment 3B of the SIA-SMPs);
- Temporary risks and disturbances related to OHS, CHS and dust and noise generation due to construction and/or rehabilitation of small and/or very small civil works as well as installation of environmental quality monitoring stations. This will be mitigated by simple ESCOP (Annex 6 of the ESMF)
- The risks and negative impacts of the implementation of the Laos Environmental Matching Grant Program (LEMGP) to be implemented under C1B and 2B are low and associated to working conditions, labour disputes transmission of infectious disease and temporary disturbances related to OHS and CHS due to construction and/or rehabilitation of small and/or very small civil works. This will be mitigated through a list of ineligible items to be applied to the program as well as specific requirements (as part of the site-specific mitigation measures and/or preparation of an environmental management plan (ESMP) of the proposed activities. Similar approach will be made for those related to 3R, GCB, and NPAP related activities to be implemented in selected areas and the activities will be planned and conducted in close consultation with local authorities and local community.

Social Risks for Component 3:

¹ The World Bank ESS2 defines four categories of project workers are grouped into direct workers, contracted workers, primary supply workers, community workers and civil services. The definition of project workers is provided in the Attachment 1 LMP of the SIA-SMP.



Component 3 will finance waste management and recycling infrastructure investments in Vientiane Capital including (i) a new waste transfer station in Naxaythong district; (ii) upgrading material recovery facility at the km16n in Xaythany district; and (iii) partial rehabilitation of the existing landfill at the km32 in Xaythany district.

The overall risks and impacts of C3 are classified as substantial to high taking into account limited regulations, institutional capacity, and the on-going significant social issues. To ensure that the social risks and impacts from the project will be at an acceptable level, a Pre-ESIA has been prepared for project activities at the Km 32 landfill based on the preliminary design and feasibility study. The Pre-ESIA has found that the KM 32 landfill currently has significant social issues such as poor health and safety and sanitation, etc as. With the Project intervention, the impacts from the future incoming waste are expected to be reduced compared to a “without the project” scenario due to better management of future coming waste and upstream segregation at Km16 and Naxaythong facilities.

However, as the currently available project budget can only cover partial rehabilitation of Km 32 landfill, the pre-project social impacts to the surrounding communities at KM 32 will not be addressed. In terms of the proposed project activities at the Km 32 landfill described in the preliminary design and feasibility study, the Pre-ESIA has identified several shortcomings in the proposed design which according to the Pre-ESIA must be improved to ensure that the E&S risks and impacts are at an acceptable level. The identified inadequate designs pose a risk of high cumulative negative impacts from pre-project unsanitary waste disposal practices and the project supported activities, thus deteriorating the environment and surrounding communities. These impacts are likely to be continuous and long-term, and exacerbated by contextual environmental risks (e.g. unusual high temperature, flood, etc.) and institutional risks (e.g. capacity constraints pertaining to the operation of waste management facilities and budget deficiency). To ensure that E&S risks and impacts from the project identified in the Pre-ESIA will be properly addressed and reduced to an acceptable level, the preliminary design will be revised and developed into a conceptual design taking into account the necessary design improvements outlined in the Pre-ESIA. The project design will then be ready for detailed design and will be subject to a full-scale ESIA also covering the proposed project activities at the waste transfer stations in Naxaythong District and at Km16.

The key social risks and impacts and proposed mitigation measures of the C3 are provided in Section 4.3 while the details are provided in the standalone Pre-ESIA.

E6. Social Management Plans (SMPs)

The SMPs sets out management and mitigation measures for risks identified in the SIA as well as recommendations for maximizing social inclusion and social benefits.



The SMPs include the following documents: Labor Management Procedures (LMP), with a Worker Grievance Procedure; Community Health and Safety Plan (CHSP); Code of Conduct (COC) on Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) and Violence Against Children (VAC); Resettlement Policy Framework (RPF) (including livelihoods restoration); and Ethnic Group Engagement Framework (EGEF).

The overall procedure for SMP is part of procedure provided in the ESMF (Section 5).

E7. Consultation and Stakeholder Engagement

During preparation of the ESF instruments, Key Informant Interviews (KII) and Focused Group Discussion (FGD) with key concerned departments and local communities were carried out during 9 to 16 August 2022. Specific objectives of the consultation were to:

- Collect relevant information from the key project implementing entities to assess institutional arrangements and capacity;
- Present the main objective of the EWMP and its brief project description;
- Seek their support on the project development and implementation;
- Collect their opinions on the potential positive and negative impacts of the EWMP as well as their suggestions and recommendations.

The Focused Group Discussion (FGD) was carried out on 11 August 2022 by the EPF consultants together with technical staffs from EPFO, NRERI and PTI in Ban Naphasouk village, the KM32 landfill and Nahai village (KM16 Transfer Station) with a total of 82 participants including 52 females. Key Informant Interview was undertaken during 09 to 16 August 2022 with a total of 22 key representatives (9 women) from DOE, DINE, NRERI, PTI, DHUPD, VCOMS, Small B, and Xaythany district hospital (Table 7-1). The PONRE of VTE capital postponed its interview but provided written responses to the consultant team. The summary results of KII and FGD are provided in Section 7 while list of participants is provided in SEP including details on the survey including the questionnaires used.

E8. Grievance Redress

The grievance mechanism seeks to resolve concerns promptly, using an understandable process that is culturally appropriate and readily accessible at no cost. Grievances can be submitted if someone believes the Project is having a detrimental impact on the community, the environment, or on their quality of life. Stakeholders may also submit comments and suggestions. The GRM is described in full in the project's SEP.

In the EWMP it is envisaged there could be five types of grievances:

- Grievances relating to land acquisition, that follow the Resettlement Action Plan's GRM (detailed in the project's RPF).



- Grievances related to ethnic groups who may be excluded from project activities, attachment to land, different cultural practices, low literacy levels, lack of Lao language.
- Grievances related to Gender-Based Violence (GBV), Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH); and Violence Against Children (VAC).
- Grievances related to project implementation (including relating to environmental and social impacts, health, worker's camp, pollution and waste, etc.). Some of these may be specific to ethnic groups.
- Job-related disputes (detailed in the project's LMP).

More details are provided in the SEP.

E9. Monitoring, Reporting and Budget

Social monitoring and report is provided as part of the ESMF (Section 9) while the SMP implementation cost is included in the ESMF cost (Section 10).



1 PROJECT BACKGROUND AND DESCRIPTION

1.1 PROJECT BACKGROUND

1. In Lao People's Democratic Republic (Lao PDR,) rapid development during the past 10 years (pre-Covid-19) has resulted in degradation of natural resources and environmental quality and increase generation of solid wastes. In response, the Government of Lao PDR (GOL), through the Ministry of Natural Resources and Environment (MONRE) and Ministry of Public Works and Transport (MPWT), has prepared the Environment and Waste Management Project (EWMP) for possible financing by the World Bank (WB) to be implemented in 2023 to 2029 with a budget of about \$45.08 million.

2. The WB's Environmental and Social Framework (ESF) will be applied to the project.

3. This ESMF sets out the principles, rules, guidelines and procedures to assess and mitigate the environmental and social risks and impacts of the project based on the project design, prefeasibility study of investments under Component 3, and further information collected to support preparation of ESF instruments in August 2022. The ESMF also provides technical guidance on the E&S screening, the Guideline for preparation of ESF instruments to be required to mitigate potential E&S risks and negative impacts.

1.2 PROJECT OBJECTIVE AND INDICATOR

4. Main development objective of EWMP is to strengthen environmental protection systems, improve municipal solid waste management in selected cities in Lao PDR, and provide immediate and effective response in case of an Eligible Crisis or Emergency. The activities will support policy development and institutional strengthening at the national level to enhance regulatory oversight and planning of the solid waste sector, supporting environmental risk management and climate change actions, and enhance monitoring and regulation of key types of pollution in the country.

5. At the provincial and district levels, the Project will focus on supporting improved solid waste services and increasing the financial and environmental sustainability of solid waste management operations through technical assistance and investments in infrastructure and equipment. The project will facilitate the creation of models for solid waste management in selected cities that can demonstrate improved and cost-effective performance and serve as inspirations for other cities.

6. The project will seek to comprehensively support stakeholder collaboration across all aspects of the sector, most notably MONRE, MPWT, EPF, as well as local governments responsible for solid waste management.

7. The project will measure its success by the following indicators:

- (a) Environmental protection system (practices) improved (score)



- (b) Increase coverage of municipal waste collection from households and businesses in Vientiane Capital (percentage)
- (c) Solid waste recycled, composted and/or treated to reduce waste disposal volumes (percentage)
- (d) Net greenhouse emissions reduction (metric tons/year)

1.3 PROJECT COMPONENTS

8. The project activities will be implemented through the following 5 components (Please see Annex 1 of the ESMF for Details Project Description) :

- **Component 1 (C1): Policy Implementation and Capacity Enhancement.** This component will strengthen the policies, institutional framework, and capacities of central government agencies (particularly MONRE and MPWT) responsible for various technical and administrative aspects of environmental, pollution, solid waste, and plastics management, including initiating a matching grant mechanism with selected private sector. The activities will be implemented by responsible agencies through the following five subcomponents as presented in Table 1-1:

TABLE 1-1 C1 SUBCOMPONENTS (REFERENCE: REPORT NO: PAD4795)

Component	Lead Implementing Agency	Total Budget (US\$ millions)
Component 1. Policy Implementation and Capacity Enhancement (PICE)	MONRE	12.12
Subcomponent 1A. Policy and capacity support on EIA/IEE/SEA, solid waste management, and Toxic and Hazardous Waste (THW)	DOE/DWR-MONRE	2.72
Subcomponent 1B. Capacity and Financial support to SMEs on environmental and waste management	EPF	2.36
Subcomponent 1C. Policy and capacity support on ECC compliance and pollution monitoring framework	DNEI/NRERI/DWR-MONRE	3.65
Subcomponent 1D. Policy and Capacity support on Climate change: low carbon resilient development	DCC-MONRE/ DOP-MPI	1.5
Subcomponent 1E. Policy and capacity support on plastics policies and legislation	DOE/DPF-MONRE	1.59

- **The Matching Grant (LEMGP):** The proposed matching grant activities (called Lao Environmental Matching Grant Program or LEMGP) seeks to initiate active engagement with a selected small-and medium-size enterprises and businesses (SMEBs) that can provide resources or practical solutions for solving the most pressing issues related to effective use of natural resources, waste generation, environmental quality, and pollution control challenges taking into account the needs and opportunities for selected SMEBs to continue with their businesses after



Covid-19 pandemic and contribute to economic growth toward green growth direction. Eligible applicants include SMEs per the SME law and small/medium size businesses including local authorities and local communities that are committed and capable of planning and implementation of a Green Business Plan (GBP) or Green, Clean, and Beautiful Plan (GCBP) in line with GOL regulations and located in the target/project areas. Total cost for LEMGP is estimated at \$1.5M. With a maximum matching grant of \$100,000 per one PSMEB who can sign a Sub- grant Agreement with EPFO (as suggested by WB), it is expected that 10-15 green plans will be prepared and implemented. The activities to be implemented within 1-2 year time frame.

- **Component 2 (C2): Integrated Support and Capacity Building for Local Government and Municipalities.** This component seeks to address primary constraints to improving sector performance including the technical, organizational, and financial capacity of local governments to efficiently provide solid waste services. This component will support local governments to better prepare for investments under Component 3. The activities will be implemented by responsible agencies through the following three subcomponents as presented in Table 1-2:

TABLE 1-2 C2 SUBCOMPONENTS (REFERENCE: REPORT NO: PAD4795))

Component	Lead Implementing Agency	Total Budget (US\$ millions)
Component 2. Integrated Support and Capacity Building for Local Government and Municipalities	MONRE	4.54
Subcomponent 2A. Support and Capacity Building for Local Gov't on waste and pollution data and information systems and waste service	DNEI/NRERI-MONRE	0.09
Subcomponent 2B. GCB and 3R projects + capacity building for NPAP/plastic policies implementation in targeted districts	DOE-MONRE	3.92
Subcomponent 2C. Support to private-public partnerships and enhancing output-based waste service delivery and cost recovery capacity	TBD	0.53

- **Component 3 (C3): Infrastructure investments for solid waste and plastic management.** This component will finance waste management and recycling infrastructure investments in Vientiane Capital to improve the effectiveness and efficiency of waste and plastics management to enhance services and environmental sustainability in three selected locations in Vientiane Capital including (i) in Naxaythong district for installing a new waste transfer station; (ii) at the Km 16 in Xaysettha district for upgrading a material recovery facilities and support waste collection and transportation equipment; and (iii) at the Km32 (existing landfill) in in Xaysettha district for partial rehabilitation and construction of waste cells and



Lao PDR Environmental and Waste Management Project (P175996)

leachate treatment facility, temporary hazardous waste storage facility, waste reception area, upgrading waste recycling facilities and associated facilities. Potentially, investments in riverine plastics collection technologies will be provided under this Component, including support on setting up viable operations and disposal systems and integration into general SWM system. This will be combined with the establishment of plastics pollution monitoring stations and provide citizen science and reporting possibilities for monitoring of impacts. The activities will be implemented by responsible agencies through the following two subcomponents as presented in Table 1-3:

TABLE 1-3 C3 SUBCOMPONENTS (REFERENCE: REPORT NO: PAD4795)

Component	Lead Implementing Agency	Total Budget (US\$ millions)
Component 3. Waste and plastics management Infrastructure Investments	MPWT	24.62
<p>The investments will be divided into three locations strategically selected in Vientiane Capital to maximize the waste-to-resource opportunity, minimize the waste volume that will be landfilled at Km32, and mitigate the negative environmental and social impacts from waste management. The three sites are as follows:</p> <ul style="list-style-type: none"> • At Naxaythong district in north-west of Vientiane Capital will install a new waste transfer station with material recovery facility, waste collection and transportation equipment with waste transfer function. • At Km 16 in Xaysettha District, upgrade to a material recovery facility and support waste collection and transportation equipment. • At the current landfill at Km32 will be partially rehabilitated to extend the lifetime of the landfill and also to install the waste reception area, upgrading of waste recycling facility, ensure a safe and healthy working environment of informal waste pickers, improve the leachate treatment and regulation facility to mitigate the direct discharge of leachate to the surrounding area and also install the storage for hazardous waste to safely store the toxic and hazardous materials. 	DHUP	24.62



- **Component 4: Project coordination and reporting.** This component will focus on inter-ministerial coordination, progress reporting, and monitoring and evaluation. Strengthening implementation and management capacity will involve support for project management and monitoring and evaluation systems across the implementing agencies at all levels. The activities will be implemented by responsible agencies through the following two subcomponents as presented in Table 1-4:

TABLE 1-4 C4 SUBCOMPONENTS (REFERENCE: REPORT NO: PAD4795)

Component	Lead Implementing Agency	Total Budget (US\$ millions)
Component 4. Project Coordination and Reporting	EPF	3.81
Subcomponent 4A. Project management and administration	EPF	2.90
Subcomponent 4B. Communication, Engagement, and EPF Capacity building	EPF	0.91

- **Component 5. Contingent Emergency Response (CERC).** This component is designed to provide swift response in the event of an eligible crisis or emergency, by enabling the GOL to request the World Bank to reallocate project funds to support emergency response and reconstruction.

More details about project description are provided in Annex 1 of the ESMF.

1.4 PROJECT LOCATIONS

9. Under Component 1, the project activities will be implemented nationwide on the part related to policy, regulations, and technical assistance (TA) while some activities such as those related to the matching grant (C1A) and the National Plastic Actions Plan (NPAP) (C1E) may focus on specific areas to be identified during project implementation. However, it is expected that these activities will be conducted in Vientiane Capital and nearby provinces.

10. Under Component 2, the project activities will be conducted in specific areas to be identified during project implementation according to the objective and scope of the Subcomponent activities (C2A, C2B, and C2C). The activities will be implemented in Vientiane Capital, Vientiane Province and Oudomxay Province. The brief Environmental and Social (E&S) baseline condition of these three provinces are provided in Section 3.

11. Component 3 will finance priority low-cost infrastructure to improve effectiveness and efficiency of waste and plastics management in Vientiane Capital in Xaythany District and Naxaythong district. In Xaythany district, there are two specific sites: one at the existing solid waste landfill at Km32 and another at the existing waste facilities at Km16. In Naxaythong, the specific site is being considered for the proposed project activities to



establish a transfer station and Integrated Waste Management Facilities (IWMF). Site selection criteria, including environmental and social criteria considered for Naxayrthong site selection is presented in Annex 3A of the ESMF.

1.5 SIA-SMP SCOPE AND OBJECTIVE

12. The Social Impact Assessment (SIA) provides information and analysis to be used in the preparation of other ESF instruments. The SIA covers Component 1,2 &4 (C1,2 & 4) to be implemented through EPF and Component 3 (C3) to be implemented by MPWT. The SIA (i) describes the general national social background that is relevant to C1,2 & 4 as well as the brief social baseline for KM32 (while the details are provided in the Pre-ESIA study); (ii) identify and assess project-related social risks and impacts; and (iii) proposed mitigation measures. Based on the findings of the Project SIA, the Social Management Plan (SMP) was prepared to manage the identified risks and impacts and pay special attention to impacts on disadvantage groups including women, children, and vulnerable ethnic groups. The Social Management Plan (SMP) sets out management and mitigation measures for risks identified in the SIA as well as recommendations for maximizing social inclusion and social benefits. The SMP is considered part of the Environment and Social Management Framework (ESMF) and the SMP and its monitoring and capacity building plan will be implemented as part of the ESMF implementation. The SMP includes the following ESF instruments:

- Annex 1A Labour Management Procedures (LMP) with Worker Grievance Procedure for C3;
- Annex 1B Labour Management Procedures (LMP) with Worker Grievance Procedure for C1,2 &4;
- Annex 2A Community Health and Safety Plan (CHSP) for all Components
- Annex 3A Code of Conduct on SEA/SH and VAC for C3;
- Annex 3A Code of Conduct on SEA/SH and VAC for C1,2 &4;
- Annex 4 Resettlement Policy Framework (RPF) (including livelihoods restoration); and
- Annex 5 Ethnic Group Engagement Framework (EGEF).

2 LEGAL AND INSTITUTIONAL FRAMEWORK

2.1 NATIONAL LEGAL FRAMEWORK

13. The Lao PDR has many laws and regulations that govern social impacts and risks assessment and management applicable for all development projects financed by both public and private sectors. The key Lao laws and regulations relevant to social impacts and risks assessment and management applicable for the EWMP Project are listed in Table 2-1 below while details are provided in Annex 2 of the ESMF.



TABLE 2-1 KEY LAO PDR SOCIAL LEGISLATIONS APPLICABLE TO THE PROJECT

Subjects	Related national policies, strategies, laws, regulations
Labour: child labour non-discrimination, freedom of association, worker grievance; labour code of conduct	<ul style="list-style-type: none"> • The Law on Labour Protection, No. 43/NA, dated 24/12/2013; • The Law on Grievance Redress, No. 023/NA, dated 09/11/2016; • The Law on Hygiene, Prevention and Health Promotion, No. 73/NA, dated 22/11/2019; • The Law on Prevention of HIV Disease, dated 01/NA, dated 29/6/2010; • The Law on Entry-Exit and Management of Foreigners, No. 59/NA, dated 26 December 2014; • The Law on Lao Union, No. 3-/NA, dated 15/11/2017; • The Law on Anti-Human Trafficking, No. 73/NA, dated 17 December 2015; • The Law on the Protection of Children Rights and Benefits, No. 05/NA, dated 27/12/2006; • The Law on Road Traffic, No. 021/NA, dated 08/11/2016; • The Decision on Occupational Health and Safety at Construction Sites, No. 3006/MLSW, dated 21/08/2013; • The Decree on Occupational Health and Safety, No. 22/GoL, dated 05/02/2019; • Other applicable laws and regulations.
Land acquisition including involuntary resettlement	<ul style="list-style-type: none"> • The Law on Environment Protection, No. 29/NA, dated 18/12/2012 • The Law on Land, No. 70/NA, dated 21/06/2019 • The Law on Resettlement and Occupation, No. 086/NA, dated 15/06/2018 • The Decree on Compensation and Resettlement of People Affected by Development Projects, No. 84/GoL, dated 05/04/2016 • The Decree on Environmental Impact Assessment, No. 21/GoL, dated 31/01/2019 • The Public Involvement Guidelines in ESIA Process, No. 707/MONRE, dated 05/02/2013 • Other applicable laws and regulations
Ethnic Groups including engagement	<ul style="list-style-type: none"> • The Constitution of the Lao PDR People’s Democratic Republic (1991, amended, No. 63/NA, 08/12/2015); • The Ethnic Minority Policy (1992); • The Law on Lao Front for National Development, No. 49, dated 20/8/2018; • The National Assembly of the Lao PDR –2009 and National Assembly Meeting No. VIII, 28/12/2018 for Ethnic Groups in Lao PDR. • The Guidelines for the Implementation of the State Decree on the Management and Protection of Religious Activities in the Lao PDR,



Subjects	Related national policies, strategies, laws, regulations
	<p>no 16/Mol, 09/11/2016;</p> <ul style="list-style-type: none"> • The Public Involvement Guidelines in ESIA Process, No. 707/MONRE, dated 05/02/2013; • Laws and Decrees on land acquisition including involuntary resettlement as provided above
Sexual Exploitation and Abuse/ Harassment (SEA/SH)	<ul style="list-style-type: none"> • The Law on Preventing and Combating Violence against Women and Children, Law No. 56/NA, 23/12/2014; • The Law on the Development and Protection of Women, No.08/NA, dated 22/10/2004; • The Family Law, No. 05/NA, dated 26/9/2008; • The National Plan of Action for the Prevention and Elimination of Violence against Women and Violence against Children 2014-2020; • Other applicable laws and regulations. • Laws and regulations on labour including child labour non-discrimination, freedom of association, worker grievance as provided above
Laws, policy and procedure to combat COVID-19.	<ul style="list-style-type: none"> • Law on Health Care, No. 58/NA, dated 24 December 2014; • Law on Preventive Vaccination (immunization), 09 August 2018; • Law on Prevention and Control of Communicable Disease, 19 December 2017; • Decision on Healthcare Waste Management, No. 1373, dated 23 November, 2017; • Decision on hygiene condition of healthcare facilities, No. 1667, dated 15 August 2018; • Guideline on prevention of the transmission and infection of COVID-19 at international airport, land border, and transportation stations; • Guideline on prevention of the transmission and infection of COVID-19 at suspected to be infected area or temporary quarantine center; • Guideline on prevention of the transmission and infection of COVID-19 at public place (hotel, guesthouse, offices, schools, and others). • Prime Minister’s Orders on Prevention and Response Measures

2.2 APPLICABLE WORLD BANK SOCIAL STANDARDS (SS)

14. At this stage of project preparation, the key WB Social Standards (SSs) that are deemed likely relevant to the project (and that may require specific instruments to be prepared) are:

- ESS1 – Assessment and Management of Environmental and Social Risks and Impacts;
- ESS2 – Labour and Working Conditions;
- ESS4 – Community Health and Safety;
- ESS5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;



- ESS7 – Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities;
- ESS8 – Cultural Heritage; and
- ESS10 – Stakeholder Engagement and Information Disclosure.

The following ESS is not relevant to the project:

- ESS9 – Financial Intermediaries. (to be further discussed with the WB)

15. The description of the relevance is provided in the **Section 2.2 of the ESMF** while gap analysis between WB ESS and National Policies provided in **Section 2.3 of the ESMF**.



3 BRIEF SOCIAL BASELINE PROFILE

16. The project detailed activities to be implemented under Components 1, 2, 3 and 4 are provided in chapter 1.3 while the project locations are provided in Section 1.4. Section 3.1 provides brief overview on the general E&S background in Lao PDR while Section 3.2 to 3.4 provides brief environment baseline conditions of Vientiane Capital, Vientiane Province and Oudomxay Province while brief social baseline conditions of these three provinces are provided in the SIA-SMP. Section 3.5 provide information of the selected sites to be implemented under Component 3 while more details description on the E&S baseline conditions of Km32 are provided in the standalone Pre-ESIA report.

3.1 OVERVIEW OF SOCIO-ECONOMIC PROFILE IN LAO PDR

Demographics

17. Lao PDR is a land-locked country located in Southeast Asia region, it shares border with Thailand, Vietnam, Cambodia, Myanmar and China with a total area of 236,800 km². About 80% of the country landscape is mountainous. In 2020, the country had 7.2 million people live in 18 provinces, with an estimated annual growth rate of 1.5%². Vientiane is the capital and the largest city of Lao PDR; it has the land area of 3,920 km² with population of 787,529. The country has a total of approximately 1.3 million households with average household size of 5.3 people per family and population density of 31 people per km².

Socioeconomic development

18. Despite being among the fastest-growing economies in the world before COVID-19, Laos's growth model is showing its limitations. Economic growth averaged about 7 percent over the two decades to 2019, but the economy's growth pattern was capital-intensive, resource-driven, and debt-fueled. Economic growth had been steadily decelerating from 8.0 percent in 2013 to 5.5 percent in 2019. Growth was predominantly driven by large foreign investments in hydropower, mining, and construction (of transport infrastructure), which provided few formal job opportunities.

19. Economic growth has been severely affected by the COVID-19 pandemic but is starting to recover gradually. Lockdowns, restrictions on economic activity, quarantine requirements, and social distancing measures have led to a reduction in employment and working hours. Real Gross Domestic Product (GDP) growth declined sharply from 5.5 percent in 2019 to 0.5 percent in 2020, owing to the wide-ranging economic impacts of COVID-19 – including the collapse of international tourism. Growth is estimated to have recovered to 2.5 percent in 2021.

² Lao Statistic Bureau, 2020a



20. Laos has made remarkable progress in reducing poverty over the past few decades, from 46.0 percent to 18.6 percent over 1992-2018 periods. Recent estimates show that the national poverty rate fell from 24.6 percent in 2012 to 18.3 percent in 2018, due to an annual average GDP growth of about 7 percent during the same period.

21. Despite this progress, poverty in Laos remains high compared to its regional peers. A lack of non-farm job creation has limited gains in household income, especially at the lower end of the income distribution, weakening the impact of growth on poverty reduction and driving inequality. Despite improvement in farm incomes, poverty remains highly concentrated in agriculture. COVID-19 has set back progress on reducing poverty. Employment disruptions and remittance losses due to return migration resulted in a decline in household income, while rising prices put pressure on households' purchasing power.

22. Laos's rich natural resources and biodiversity continue to play a key role in the country's economic development prospects and resilience. The Lao population is directly dependent on forests, land, and related resources including non-timber forest products for livelihoods. Natural resources are furthermore critical for the national socio-economic development. Natural resource-based sectors contributed one-third of GDP in 2018, and the Lao natural capital value of assets were quantified at USD149 billion, with 78 percent coming from water and forests and a further 22 percent from agriculture. The natural resources are especially valuable in times of COVID-19 when thousands of migrant young laborers return home unemployed and without income.

23. While Laos is rich in natural resources, environmental degradation poses a threat to sustainable development and household livelihoods. As a result of agricultural expansion, mismanaged forest plantation development, shifting cultivation and unsustainable timber harvesting, forest cover decreased from 61 percent in 2000 to 58 percent in 2015 and the target of 70 percent in 2020 was not achieved but postponed to 2030. The annual cost of environmental degradation is estimated at 19.3 percent of GDP in 2017.

24. The most important environmental problems are associated with environmental health, representing an annual cost equivalent to 14.6 percent of GDP. Most costly are those related to air pollution, as well as inadequate disposal and widespread burning of solid waste, water pollution and inadequate wastewater treatment and lead exposure. As elsewhere in the world, the distribution of pollution impacts falls primarily on the vulnerable.

Ethnicity

25. The country is ethnically diverse country in Southeast Asia. The Lao government currently recognizes 160 ethnic subgroups within 50 ethnic groups. Out of the total population, the Lao ethnic group accounted for 53 percent, followed by Khmu (11%), Hmong (9%) and other ethnic groups (27%). Lao is official language and over 80 languages used by different ethnicities in Lao PDR and the most common are Khmu and Hmong languages. Other minority languages include Akha, Arem, Bana, Katu, Ksingmul, Maleng, Lamet, Phai, Tai



Daeng, Phu Thai, and Tai Dam. The most vulnerable ethnic minorities have very few assets, are geographically isolated (mostly highlands), and face language and cultural barriers. Buddhism is the pre-dominant faith practiced by the population in Lao PDR. Sixty-five percent of the populations are Buddhist, while Christians constituted nearly 2%, and 32% reported themselves as having no religion or being animist.

26. Cities in Lao PDR are small in population, with only the capital city Vientiane having a population of more than 100,000 people and few high-rise buildings. City centres are not very densely built up and have wide peri-urban areas around them, requiring trash collection and recycling transportation. Waste collection schemes currently exist only in (parts of) the larger cities in the country. Collection of recyclable materials is informal and focuses only on materials for which there is an attractively priced market. When prices drop, specific materials may no longer be collected. In rural areas a market for some recyclable materials is lacking (e.g. plastic bottles) due to lower resale value and higher transportation costs. Collection of recyclable materials is mainly implemented by 3 actors: informal door-to-door collectors of recyclables; formal waste collectors separating valuable materials during their regular collecting rounds; and waste pickers (formal/informal) collecting at waste disposal sites. Waste separation at source is rare, except for some higher value materials such as scrap metal, used engine oil and re-use of glass beer bottles by the beer factories. Cleaning of recyclable materials, such as plastic bags can add value, but is rare.

Pollution level, social and health aspect

27. Despite improvements cities and districts suffer from lack of infrastructure and municipal services. Urban population growth in Laos was the highest in Southeast Asia in 2021 at 3.2 percent which was twice the average of the East Asia Pacific region for the same year. City limits have expanded but often in the absence of spatial planning and urban development planning.³ The continued growth of the cities will require higher levels of infrastructure and municipal services, which are currently facing underinvestment together with weak institutional capacity in policy, planning implementation and enforcement.

28. Pollution levels in Lao PDR have severe public health and economic impacts and need improved monitoring and regulatory oversight, and improved environmental, pollution and solid waste management is emerging as a priority for the GOL. The most important environmental problems are associated with environmental health, representing an annual cost equivalent to 14.6 percent of GDP⁴. Most costly are those related to air pollution, as well as inadequate disposal and widespread burning of solid waste, water pollution and inadequate wastewater treatment and lead exposure. As elsewhere in the world, the

³ Government of Lao PDR (2021). National Progress Report on the Implementation of the New Urban Agenda. Ministry of Public Works and Transport.

⁴ Ibid.



distribution of pollution impacts falls primarily on the vulnerable.

29. Seasonal burning of waste and agricultural fields, and area-wide dust, may cause high concentrations during certain periods during the dry season both in urban and rural areas. Household use of solid fuels for cooking is also contributing to elevated levels of PM_{2.5} in rural villages as well as in urban areas. In Lao PDR, environmental pollution contributed to 10,000 deaths in 2017 (22 percent of all deaths in Lao PDR) and 27 percent of these deaths were from ambient air pollution. The cost of health effects from ambient air pollution in 2017 amounted to a 3.5 percent equivalent cost of GDP. Air quality is identified as a priority environmental issue in the 9th National Socio-Economic Development Plan (NSED),⁵ and the MONRE has been taking steps to improve its capacity for air quality monitoring with focus on training of staff at central level and provinces and increasing the number of air quality monitoring stations.

30. Water pollution is also a significant environment challenge for Laos, and the GoL has prioritized water quality management (WQM) as a national priority in the 9th NSED. Using 2017 data, Larsen (2019) estimated that about 1,549-3,002 deaths occur annually in Laos due to water pollution, and the annual cost of water pollution was estimated at 2,745-5,384 billion Lao kip (LAK) which is about 1.95-3.82 percent of 2017 GDP.⁶ Two major sources of water pollution in Laos are fecal contamination or microbial pollution of drinking water, and arsenic in groundwater tube wells in central and southern parts Laos that are used for drinking.⁷ Of the two, microbial pollution accounts for the greater share (92 percent) of health impacts and mortality. The use of unprotected drinking water sources declined from 24 percent in 2011/2012 to 16 percent in 2017.⁸ As about 15 percent the population to date still rely on natural sources (surface water and groundwater) for drinking water, water quality monitoring of these sources is of high priority. Priority activities under the NSED-9, include the development of management plans to allocate and use and manage water resources efficiently, effectively and sustainably, and to establish strategies and policies at the national and local levels to encourage effective investment in appropriate sanitation services for water resource management and use.

⁵ Priority air quality measures include (i) conducting environmental quality inspections, in particular, on air quality (PM 2.5), establishing a database system and collecting information on sources of pollution; (ii) implementing measures to reduce and prevent bush fire, haze and slash and burn agricultural practices at all hotspots; and (iii) solve air pollution problems.

⁶ Larsen, B. 2019. Economic Assessment of Major Environmental Health Risks in Lao PDR. Report prepared for the World Bank. Washington D.C.: World Bank.

⁷ Ibid.

⁸ Larsen, B. 2019. Benefit-Cost Analysis of Interventions to Address Priority Environmental Health Risks, in Sánchez-Triana, Ernesto. 2021. Environmental Challenges for Green Growth and Poverty Reduction: A Country Environmental Analysis for the Lao People's Democratic Republic. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/36266> License: CC BY 3.0 IGO



31. While the amount of solid waste generation has substantially increased, the infrastructure for collection and sanitary disposal has not kept up with the demand, causing significant environmental problems. Landfills in Lao PDR are usually operated as open dumpsites without proper waste and leachate treatment, with the landfills of Vientiane or secondary cities such as Luang Prabang or Savannakhet being no exception. Currently, approximately 30 controlled landfills and 60 open dumps are in operations in Lao PDR. Waste dumping is done without compaction and disposal planning. There is a high risk that toxic waste components are or will in the future contaminate soil at adjacent farmland, surface water bodies and groundwater. Uncollected methane from anaerobic decomposition of organic waste significantly contributes to greenhouse gas emissions and poses a high risk of landfill fires.

32. Medical waste treatment facilities are still limited with two medical waste incinerators in Vientiane while medical wastes are placed in landfills in other places. Inadequate solid and plastic waste management system leads to widespread practices of open burning, household burying, littering along roadsides and rivers, and dumping in vacant lands which has contributed to pollution generation. Household burning of waste is one of the major sources of ambient air pollution in VTE capital. Open burning and occasional accidents, such as inferno, at landfill sites could also aggravating the already pressing air pollution issues. Toxic waste components are contaminating surface and groundwater, including of adjacent farmland. Uncollected methane significantly contributes to national greenhouse gas emissions and results in a high risk of landfill fires.

33. Plastics pollution is an increasing concern in the country. The amount of plastic waste is continuously increasing particularly in urban areas and often remains uncollected. In Vientiane, plastics constitute around 12 percent of the total waste stream. In a series of studies, the priority plastic items ending up in the environment and waterways were identified as: drinking bottles; caps and lids; bags; cups; food containers; and straws. In major cities such as Vientiane, Savannakhet, and Pakse, plastic waste is a key factor in blockage of drainage systems causing sudden flooding during rains. In key tourism hotspots such as Luang Prabang or Vang Vieng, widespread plastics littering poses a substantial threat to the touristic value. Fishers throughout the country report catching plastics almost every single time they are out fishing, and a study at the largest marshland of Vientiane found high amounts of microplastics in fish, surface water, and sediments. In addition, burning of plastics is widespread, contributing to air pollution and causing respiratory health issues. Lao PDR has seen an almost 10-fold increase in plastic waste imports from 2018 to 2019 due to the recent import regulations by China and other countries in the region. The quality and recyclability of the waste imports are unknown, and the capacity to cope with the large amounts of plastic waste in Lao PDR is not present.

34. Women and children in the informal waste sector tend to be socially disadvantaged and are exposed to health and safety threats posed by inadequate solid waste management.



Their contributions to recovery and recycling in the context of underdeveloped formal waste management systems are largely overlooked and unsupported. Improving the management of waste collection systems must consider the informal sector, where substantial amount of waste pickers are women, and work in hazardous and unsanitary environments without adequate protection and safety.

35. Due to the lack of appropriate collection systems, open burning, household burying, littering along roadsides and rivers, and dumping in vacant lands are widely spread practices in both urban and rural areas. Illegal dumpsites are also common in urban areas. Open waste burning contributes to respiratory infections for urban residents resulting in significant health damages and lost working days, and further aggravates the severe air pollution in the country. Poor and vulnerable populations are the most likely to suffer from inadequate sanitation due to uncollected waste, which can be a heavy financial burden through health-related expenditures and lost productivity.

3.2 BRIEF SOCIO-ECONOMIC PROFILE OF VIENTIANE CAPITAL

36. Vientiane is the capital and the largest city of Lao PDR located on the curve of Mekong River bordering Thailand. It has the land area of 3,920 km². It is divided administratively into 9 districts namely Chanthabouly, Sikhottabong, Xaisethha, Sisatthanak, Xaithany, Naxaythong, Hatxayfong, Pakngum, and Sengthong. Vientiane is the economic center of Laos (Figure 3-1). The city had a population of 948,477 as of the 2020. Vientiane topography is lowland valleys along the Mekong floodplain between 300 and 1284 meters above sea level.

37. Vientiane, the capital of Laos, has a rich culture heritage with religious art and architecture. Different styles of architecture are evident in the numerous Buddhism Temples. Folk music with principal instrument (the Khean) is another excellent example of the richness of Lao culture. The national folk dance is the lamvong, a circle dance in which people dance in which people dance circles around each other. The Baci festival is a common culture, it was started even before Buddhism as an animist ritual used to celebrate important events and occasions, like births and marriages and also entering the monkhood, departing, returning, beginning a New Year, and welcoming or bidding etc⁹. There are customs and various festivals such as the Lao New Year, the rocket festival, Hokhaopadapdin festival, floating lantern festival, boat festival.

38. In 2016, Vientiane Capital's economy grew by 10.92 percent, a reduction of 0.8 percent, while GDP reached 37.4 trillion kip, with an average of almost US\$4,784 per capita. In 2017, Authorities of Vientiane Capital predicted to see economic growth of 11 percent this year, with an expected GDP increase of 41.6 trillion kip. The annual average per capita income for

⁹ (*Laos. Volume 15 of Cultures of the World Series, 2021*).



residents of Vientiane Capital is also expected to reach US\$5,000. Industry is expected to grow by 47 percent of GDP, while agriculture and forestry is said to grow by 7 percent.

39. Vientiane Capital anticipates producing rice for domestic consumption and export on over 76,000 hectares of land, with a yield of 355,800 tons. Vegetables and other crops are also being promoted and are to be grown on over 11,200 hectares of land. This will yield 115,500 tons of produce. To grow the beef industry, Vientiane will also focus on commercial cattle farming and will expand the number of farms. The services sector is also targeted for growth representing 36 percent of GDP, according to figures provided by the Vientiane Department of Planning and Investment. In order to achieve the economic growth target, Vientiane Capital must invest 14.9 trillion kip into socio-economic development, with 103 billion kip coming from the state budget.

40. GDP Annual Growth Rate in Laos decreased to 0.20 percent in 2020 from 5.20 percent in 2019. In recent years Laos opened its economy to private initiative and foreign direct investments. As a result, Laos started to exploit its hydropower, precious metals and wood resources. The country is heavily dependent on agriculture (33 percent of GDP) as it employs around 80 percent of the population. Tourism (11 percent of GDP) is the second largest earner of foreign currency and is growing rapidly. In spite of the recent developments, the government relies extensively on foreign aid to fund its budget and infrastructure development. (Source: Bank of the Lao PDR, 2020)

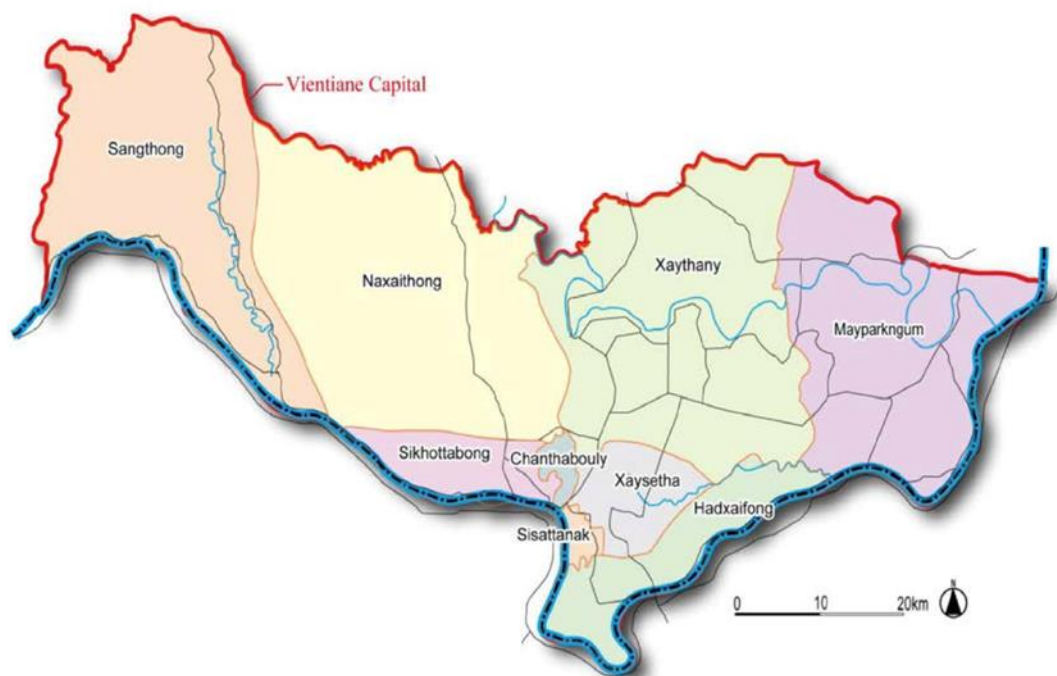


FIGURE 3-1 MAP OF VIENTIANE CAPITAL (JICA, 2011A)

3.3 BRIEF SOCIO-ECONOMIC PROFILE OF VIENTIANE PROVINCE

41. Vientiane Province should not be confused with Vientiane Municipality, which is the



capital of Laos. These two jurisdictions used to be part of one another until 1989 when they were split. Located in the northwest of Laos, Vientiane Province borders Sayabouly Province to the west, Luang Prabang Province to the north, Xiangkhoang Province to the northeast, Bolikhamxay Province to the east, and Vientiane Municipality and Thailand to the south (Figure 3-2). It has the land area of 15,927 km², divided into eleven districts, including Thoulakhom, Keo-oudom, Kasy, Vangvieng, Feuang, Xanakham, Med, Viengkham, Hinheup, and Muen and Phonhong. Phone Hong district, about 70 kilometers north of Vientiane Capital, is the province's capital. As of 2021 the province has a population of 471,974 people, 424 villages, and 86,993 households¹⁰. The majority of population is dominated by Lao Tai followed by Hmong and Khmu.

42. Vientiane Province is blessed with many attractive sites. The heaven-on-earth beauty of Vang Vieng, the big, open sky and vast freshwater of Nam Ngum Dam Reservoir, the magnificent sight of Phu Khau Khouay Mountain, to name a few. Tourism in Vientiane Province, especially in Vang Vieng, has skyrocketed in the past decade.

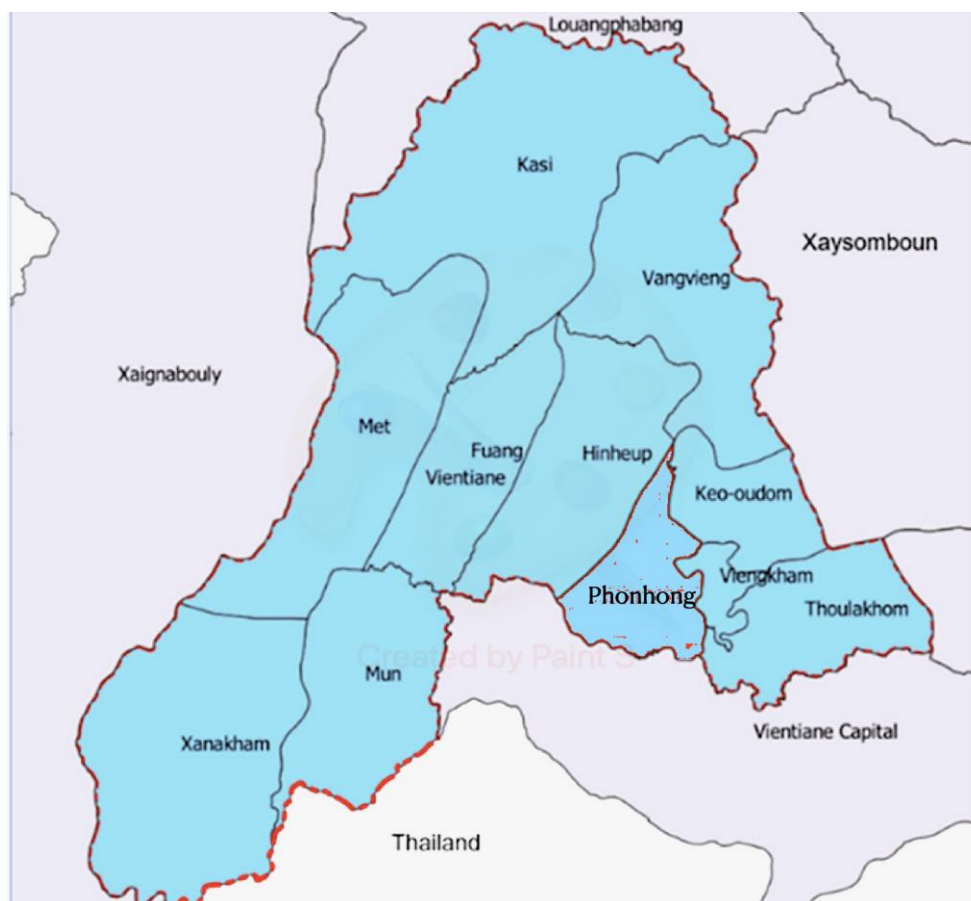


FIGURE 3-2 MAP OF VIENTIANE PROVINCE (PRE-FS REPORT, JUNE 2022)

43. Vientiane is among the chosen provinces for agro-processing industry. Production

¹⁰ [Vientiane Province | Investment Promotion Department \(investlaos.gov.la\)](http://investlaos.gov.la)



centers have been founded for crop seeds and animal breeders. The goals are to scientifically promote good seeds that yield short-lived crops as well as to boost economic plants and animals. A number of fishery demonstration centers and fresh water fish breed production centers have been constructed to meet the market demand within the province and surrounding areas. The government also plans to construct handicraft centers for bamboos and rattan weaving in the province to produce commercial goods.

44. The Vientiane Provincial Gross Domestic Product (GDP) was US\$ 858,905,278 in 2019 with the GDP Growth Rate of US\$ 1,882. GDP Annual Growth Rate in Laos decreased to 0.20 percent in 2020 from 5.20 percent in 2019. In recent years Laos opened its economy to private initiative and foreign direct investments. As a result, Laos started to exploit its hydropower, precious metals and wood resources. The country is heavily dependent on agriculture (33 percent of GDP) as it employs around 80 percent of the population. Tourism (11 percent of GDP) is the second largest earner of foreign currency and is growing rapidly. In spite of the recent developments, the government relies extensively on foreign aid to fund its budget and infrastructure development. (Source: Bank of the Lao PDR, 2020).

3.4 BRIEF SOCIO-ECONOMIC PROFILE OF OUDOMXAY PROVINCE

45. Oudomxay Province is in the heart of northern Laos. It borders China to the north, Phongsaly Province to the northeast, Luang Prabang Province to the east and southeast, Xayabouly Province to the south and southwest, Bokeo Province to the west, and Luang Namtha Province to the northwest (Figure 3-3). Covering an area of 15,370 km² (5,930 sq. ml), the province's topography is mountainous, between 300 and 1,800 metres (980-5,910 ft.) above sea level. Annual rain fall ranges from 1,900 to 2,600 millimetres (75-102 in.). The average winter temperature is 18 C, while during summer months the temperature can climb above 30 C¹¹.

46. There are 14 different ethnic groups living in Oudomxay. According to the Oudomxay province administration, the following estimations can be assumed; Khumu (among them Khmu Lue, Khmu Khong, Khmu Ou, Khmu Bit) 60–80%, Lao Loum 25%, Hmong (among them Hmong Khao, Hmong Dam und Hmong Lai) 15%. Other ethnic groups living in the province include Akha, Phouthai (Thai Dam & Thai Khao), Phou Noy (Phou Xang, Phou Kongsat, Phou Nhot), Lao Houy (also Lenten), Phouan, Ly, Yang, Ikho and Ho.

47. Due to its mountainous terrains, the majority of Oudomxay residents practice slash-and-burn agriculture, growing mountain rice. Other main crops include cassava, corn, cotton, fruits, peanut, soybean, sugarcane, vegetables, tea, and tobacco. Major exports include corn, onions, watermelons, and tobacco. Animal husbandry is widely practiced in rural Oudomxay. The province's meadows and valleys are ideal for livestock breeding.

¹¹ [Udomxay | Investment Promotion Department \(investlaos.gov.la\)](http://investlaos.gov.la)



48. The local government is honored to extend an open invitation to domestic and foreign business people to explore potential environmentally and socially sustainable investments in this beautiful province. Oudomxay is considered as one province that has lots of potential on trade. It creates lots of interests for both domestic and foreign business investors. The majority of business activities are agriculture, livestock, and entrepreneurship, investment in different industries like dam, hydro power, mining, rubber tree plantation, crops and others. Most of the business investors are from China, Vietnam, Thailand and Myanmar as well as some domestic investors from different provinces. Moreover, the province is also focusing on tourism development, marketing and services. The whole income of each year is approximately 10 million US Dollars.

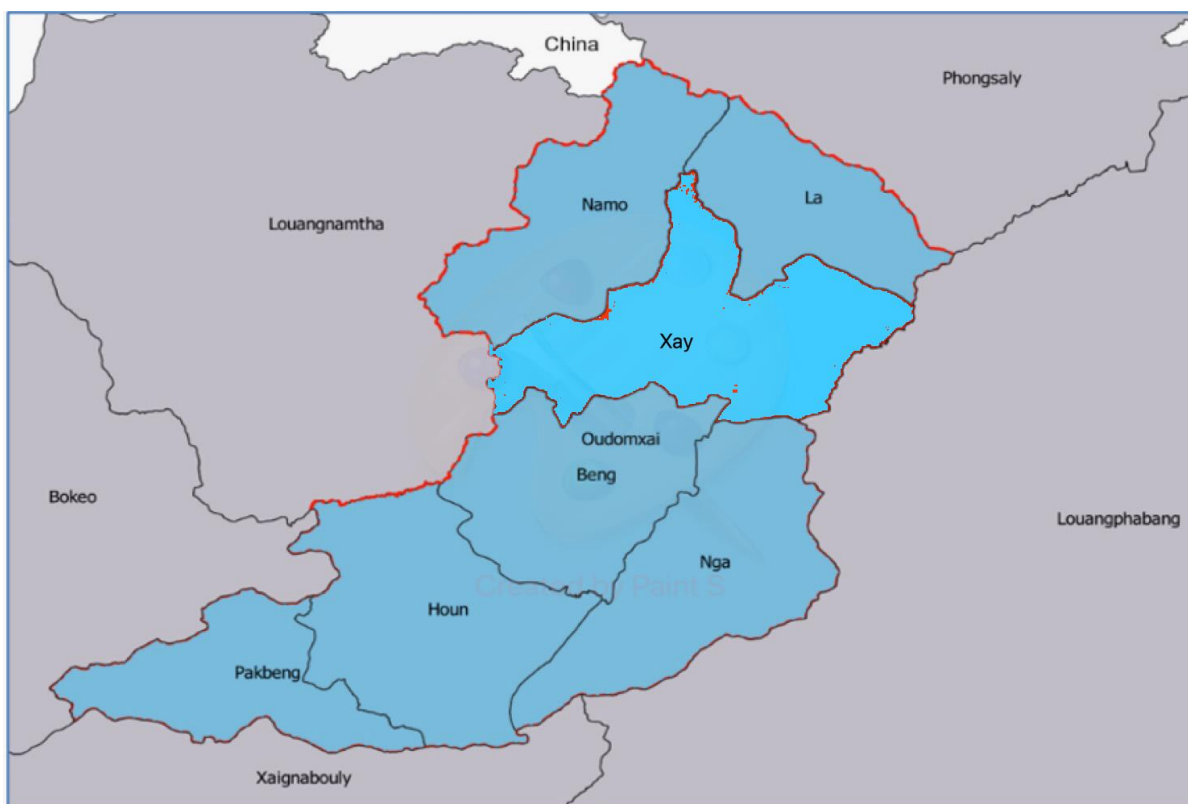


FIGURE 3-3 MAP OF OUDOMXAY PROVINCE (PRE-FS REPORT, JUNE 2022)

3.5 BRIEF DESCRIPTION OF PROPOSED SITES TO BE INVESTED UNDER C3

49. The investments will be divided into three locations strategically selected to improve the integrated waste management in Vientiane Capital to maximize the waste-to-resource opportunity, to minimize the waste volume that will be landfilled at the Km 32 landfill, and to mitigate the negative environmental and social impacts from waste management.

50. The brief site description of the three sites to be invested under C3 is provided below while the detailed social baseline conditions of KM32 are provided in the Pre-ESIA.

3.5.1 Brief Description of the KM32

51. The preliminary design of the proposed Km 32 Landfill Project includes the following



main activities and facilities:

- Construction of two new fenced engineered landfill cells with a total capacity of 1.15 million m³ of waste over a design life of 10 years. The cells are designed with a 1.5 mm HDPE liner, protected by a geotextile, and leachate collection systems and landfill gas ventilation.
- Excavation of the existing waste (156,000 m³) in the area for the new cells and redepositing the waste in Cell 5 within the landfill site.
- When the two new landfill cells are filled-up they will be capped with 2 m soil and equipped with a gas ventilation system.
- Construction of a hazardous waste storage facility (900 m²) for temporary storage of small amounts of hazardous solid waste in the incoming municipal waste which will be segregated and put in drums to be stored in the facility.
- Construction of a leachate treatment facility comprising a combination of an Up-flow Anaerobic Sludge Blanket Reactor (UASB) and an aerobic rotary disc system and including a HDPE lined regulating pond. Only leachate from the new landfill cells will be treated in the leachate treatment facility.
- Construction of an administration building (3,200 m²), a weighbridge, a solar power system (5,000 m²), and concrete paved internal roads (width 7 m, length 950 m).
- Upgrading of the existing recycling facility and the waste management centre to improve the working conditions and increase the value of recyclables.
- Construction of 4 groundwater monitoring wells.



FIGURE 3-4 THE CONCEPTUAL LANDFILL DESIGN (PRE-FS REPORT, JUNE 2022)

52. The Km 32 Landfill Project is proposed to be developed at Vientiane Capital's existing Km 32 landfill located in Ban Naphasouk, Xaythany District, and Vientiane Capital. The landfill is connected to Road No. 13 South by a 2.8 km two-lane unpaved access road (see Figure 3-5). The total area of the landfill site is 100 hectares of which 50 hectares on the north side are granted as a 50-year concession to Khouanmouang Group Company, where the concessionaire plans to make a waste complex management system that includes recyclable waste plants and a Refuse Derived Fuel (RDF) plant. This part is currently inactive. This facility does not fall into the definition of Associated Facilities defined in the ESF which requires that Associated Facilities is necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. The southern part of the site (50 ha) is managed by Vientiane City Office for Management and Service (VCOMS). VCOMS has a contractual arrangement with a private company under which the company implements waste management-related administrations, fee collection, data collection, waste collection, and landfill operation and management.

53. The 50 ha large southern part managed by VCOMS constitutes the Km 32 Landfill Project site.

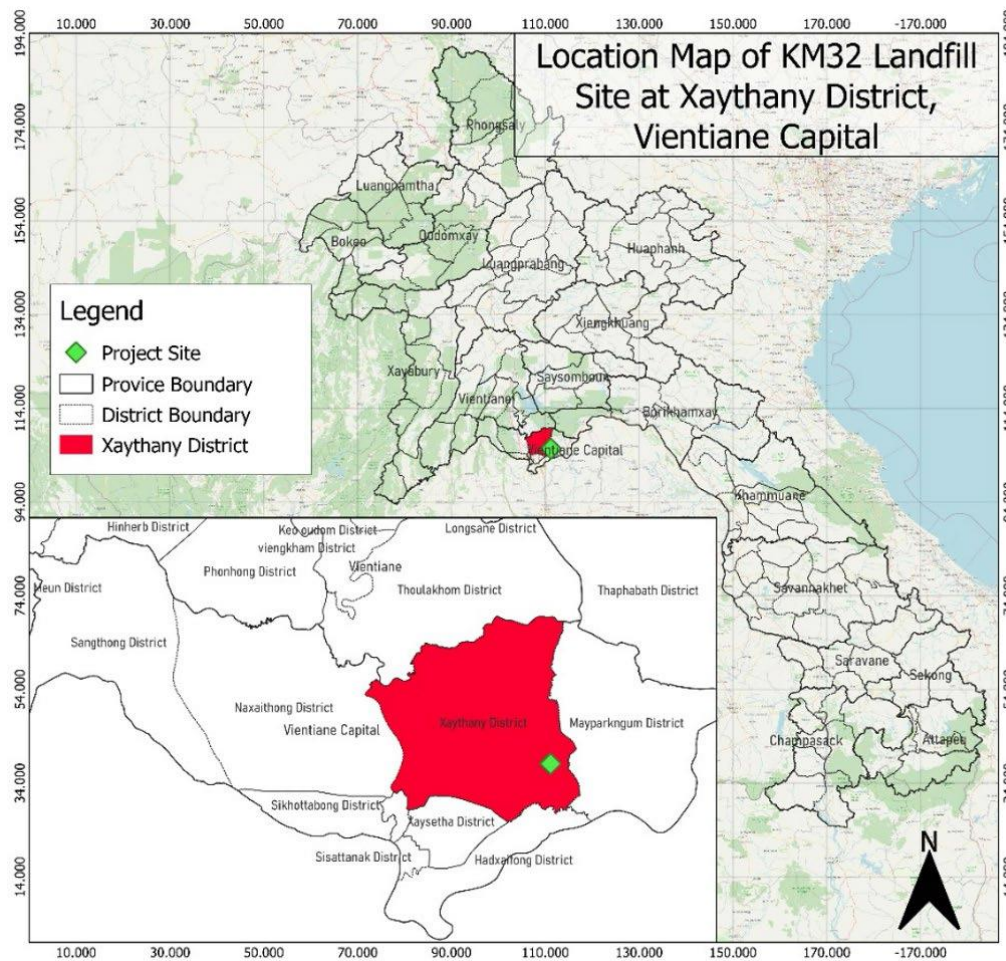


Figure 3-5 Location of Xaythany District, Vientiane Capital

54. The landfill compound in the existing landfill boundary facility includes (1) a control entrance and fence, (2) administration office, (3) weighbridge, (4) waste incineration plant only for medical waste, (5) two sludge ponds (6) wheel-washing, (7) storm-water ponds (8) recyclable plant (one active, and one disabled), and (9) a garage, truck parking, and recyclable waste storage. See Figure 3-6 for surrounding of the Km32 Landfill Project Site.



FIGURE 3-6 SURROUNDING OF THE KM32 LANDFILL (SUB-PROJECT SITE)

3.5.2 Brief Description of the KM16 Facility

55. Under Component 3, the investments in the existing Km 16 Transfer Station are proposed to include:

- A Material Recovery Facility
- A Refuse Derived Fuel production facility
- Upgrade of the existing composting facility
- Separate bathroom facilities for males and females

56. The integrated waste management facilities will provide job opportunities and priority will be given to Km 32 waste pickers with quotas for women.

57. The Project will improve workplace safety for women and men through providing personal protective equipment (PPE) and safety training as by improving the security standards and protocols at the waste facilities.

58. The Km 16 Transfer Station was built with technical and financial support from JICA and commissioned in January 2016. The 2-ha large waste transfer station is located in Ban Nahai, Xaysettha District, Vientiane Capital (Figure 3-7). The transfer station only reloads waste from smaller trucks to larger trucks without compaction or sorting. The waste is transported to the Km 32 Landfill. Currently, the Transfer Station only receives commercial and domestic solid waste.

59. In 2013, prior to establishing the transfer station, an Initial Environmental Examination (IEE) was undertaken and the Vientiane Capital Department of Natural Resources and



Environment issued an Environmental Compliance Certificate.

60. The existing facilities include (Figure 3-8):

- A main building 20 m x 40 m
- An office building
- A parking lot
- A weighbridge
- A workshop
- A wastewater retention pond, and
- A composting plant.

61. The site is accessible from the 450-highway through the access road that is divided into two sections, a 1 km unpaved and 0.8 km concrete access road. According to the IEE of 2013, the waste transfer station was developed on vacant land that was cleared by the villagers. The study did not identify any big trees or wildlife. The Consultant visited the site on 10 August 2022 and noted that the site is surrounded by some households and shops, agricultural land including rubber and cassava plantations. The nearest single residences are located about 300 m from the site and the nearest village, Ban Nahai is located about 600 m south of the site (See Figure 3-7). **The detailed social baseline conditions of the KM16 will be collected and analyzed during the full ESIA stage.** According to the Ministerial Agreement No 8056, MONRE of 17 December 2013, recycling factories (Item 3.40 in the Ministerial Agreement) fall under the category that are required to develop an ESIA for review and approval by MONRE. The proposed investments belong in this category and these investments are planned to be covered under the full-scale ESIA to be prepared during detailed design. The full ESIA will build on KM32 Pre-ESIA and will cover all the three sites including the Km 32, the Km16 and Naxaythong site.



FIGURE 3-7 SITE LOCATION MAP

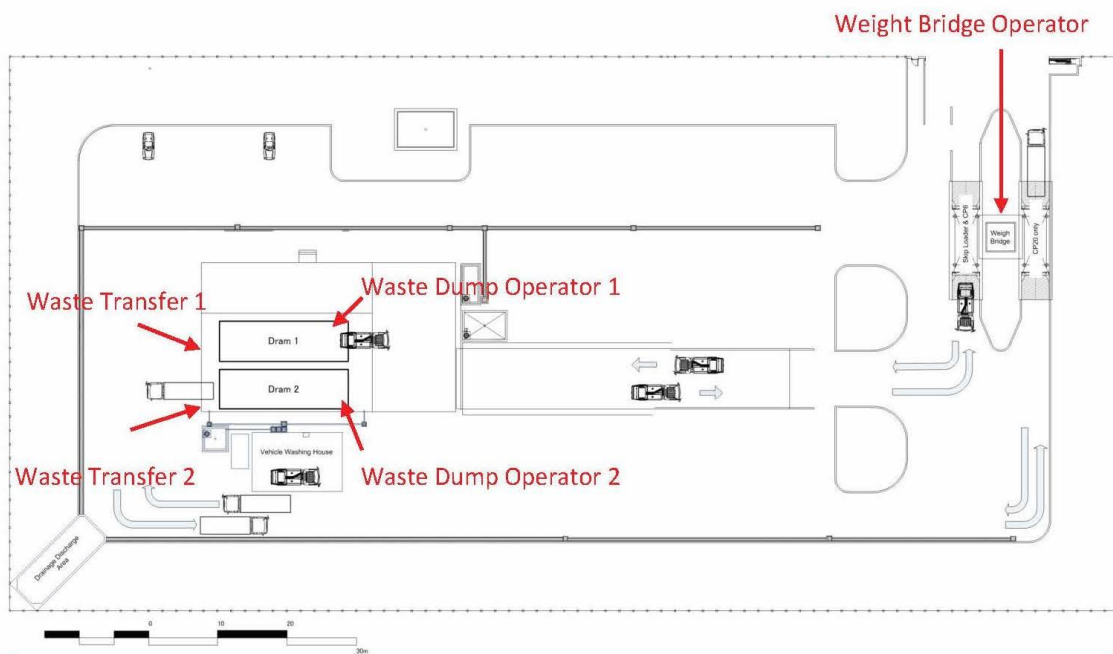


Figure 3-8 Operational Diagram of the waste transfer station at KM16

3.5.3 Brief Description of the Naxaythong Site

62. The investments of Component 3 in Naxaythong Integrated Waste Management



Facilities are proposed to include:

- Waste transfer facilities
- Simple sorting facility for plastic, paper and metal waste
- Separate bathroom facilities for males and females.

63. The integrated waste management facilities will provide job opportunities and priority will be given to Km 32 waste pickers with quotas for women.

64. The Project will improve workplace safety for women and men through providing personal protective equipment (PPE) and safety training as by improving the security standards and protocols at the waste facilities.

65. The location of the site for the Integrated Waste Management Facilities in Naxaythong District has not yet been determined. The location and design for a transfer station and RDF plant in Naxaythong District will be identified using criteria in Annex 3A. The E&S baseline conditions and the potential risk, impacts, and mitigation measures will be collected and analysed during the full ESIA stage under the Component 3.

66. According to the Ministerial Agreement No 8056, MONRE of 17 December 2013, recycling factories (Item 3.40 in the Ministerial Agreement) fall under the category that are required to develop an ESIA for review and approval by MONRE. The proposed investments belong in this category and the investments are planned to be covered under the full-scale ESIA.

67. Naxaythong District is located in the middle of the north part of Vientiane Capital, next to Xaythany District. It has a total area of 1,131 km². To the north, there is Phonhong District in Vientiane Province. To the south, there are the adjacent Sikhodthabong and Chanthabouly Districts. To the east, there is the adjacent Xaythany District. To the west, there is the adjacent Sangthong District. Currently, Naxaythong has no waste management facilities so all waste is transported around 50 km to the Km32 landfill in Xaythany District.

68. Naxaythong District has a total of 88,298 people, including 44,412 women, across 18,557 households in 54 villages (Vientiane capital Statistics Center; as of June 2021). The population density is 76 persons per km².

69. **The detailed social baseline conditions of the Naxaythong site will be collected and analysed during the full ESIA stage.**

4 POTENTIAL SOCIAL RISKS, IMPACTS AND PROPOSED MITIGATION MEASURES

70. Overall, the project is classified a high-risk project. Project components have differing risk profiles. Social risks and impacts of the Component 1, 2 and 4 are classified as low to moderate while the Component 3 social risks and impacts are classified as substantial to high mainly due to the on-going significant pollution at Km32 landfill site and risk if social



considerations and implementation during each phase of activities including Detailed Design is inadequate.

71. With effective implementation of appropriate ESF Instruments and adequate design measures for solid waste management facilities as proposed in the Pre-ESIA, social risks and negative impacts from the project's activities is expected to be at acceptable level. Risks and impacts are broken down into positive impacts and social risks and negative impacts as presented in Section 4.1, 4.2 and 4.3 accordingly.

4.1 POSITIVE SOCIAL BENEFITS

72. The project will support GOL ongoing efforts to strengthen environmental protection systems, improve municipal solid waste management in selected cities in Lao PDR, and provide immediate and effective response in case of an Eligible Crisis or Emergency building on key outcomes of existing and/or recent projects financed by WB as well as initiate policy, regulations, and capacity building to address priority issues related to solid waste and plastics in Lao PDR. The project will seek to comprehensively support capacity building and stakeholder collaboration across priority aspects of key sector agencies of MONRE, MPWT, EPF, and selected local governments responsible for solid waste management.

73. Key benefits from project intervention through the efforts to improve policy and regulations related to environmental prevention measures (EIA, IEE, SEA, 3R, GCB, and the Laos Environmental Matching Grant Program (LEMGP) to be implemented under Component 1 and capacity building of local authorities to be implemented under Component 2 will clearly support urban cleanliness and overall environmental management and pollution control. This will indirectly impact the quality of health of residents, which will lead to healthy long lives, money savings on health medication and support for urban poverty alleviation. Implementation of SEA regulations as well as other tools related ISP-LUP and pollution control measures will contribute to minimize risk and impacts and promote positive impacts and participation of the sector agencies and local authorities on ways to implement them. Implementation of Component 4 will continue to strengthen EPFO capacity to engage key stakeholder and tap more funding support form national and international sources.

74. The EWMP Project investments proposed under Component 3 aim at significantly improving waste management in Vientiane Capital through an integrated waste management approach comprising upgrading the existing waste management and disposal facilities at the existing Km 32 landfill, establishment of Integrated Waste Management Facilities at the existing Km16 transfer station, and at a new transfer station to be established in Naxaythong District.

75. Direct and indirect beneficiaries of the project are expected to be the approximately 1 million inhabitants of Vientiane Capital who will benefit from improvement to the waste management system, and an additional 820,000 inhabitants in Oudomxay and Vientiane provinces who will benefit from improved policies, regulations, monitoring and enforcement,



legislation, strengthened institutions, and increased capacities of SWM departments as included under Components 1 and 2.

76. The 264 waste-pickers at the KM-32 landfill will benefit directly from improved working conditions at the landfill, training and skills development provided through the project, and opportunities for work at the waste management facilities planned for Naxaythong and KM16. Women and vulnerable groups currently involved in informal (and formal) waste collection, sorting, and disposal networks will be specifically targeted to ensure they benefit from re-skilling and training opportunities, with the objective of incorporating informal workers into formal waste management systems and identifying alternative and/or substitute livelihood operations.

77. The poor and near poor, on average 10 percent of the population, are likely to experience significant positive impacts of collected waste, decreased waste burning, decreased pollution, and sanitary disposal of waste.

4.2 SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES OF C1, 2 AND 4

78. The overall risk rating of Component 1, 2 and 4 is classified as low to moderate. Activities to be implemented under Component 1, 2 and 4 will include technical assistance (TA); procurement of equipment and other goods/supplies; policy development; training, workshops, and other capacity building; small and/or very small civil works; SME matching grants. The key social risks and impact are summarized below:

- Risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker¹². This will be addressed through the implementation of LMP (Attachment 1B of the SIA-SMPs).
- Inappropriate behaviour by Project Worker during training, consultation workshops and working in communities or field data collection. This can be managed through the implementation of a simple Code of Conduct on SEA/SH and VAC (Attachment 3A of the SIA-SMPs).
- Temporary risks and disturbances related to OHS, CHS and dust and noise generation due to (construction and/or rehabilitation of small and/or very small civil works as well as installation of environmental quality monitoring stations. This will be mitigated by a simple ESCOP (Annex 6 of the ESMF).

¹² The World Bank ESS2 defines four categories of project workers are grouped into direct workers, contracted workers, primary supply workers, community workers and civil services. The definition of project workers is provided in the Attachment 1 LMP of the SIA-SMP.



- Given the size, location and activities for LEMGP under C1B and 2B will be identified during implementation, the social risks and negative impacts of the implementation of the Laos Environmental Matching Grant Program (LEMGP) are categorized as low up to moderate and associated to working conditions, labour disputes transmission of infectious disease and temporary disturbances related to OHS, CHS and dust and noise generation due to construction and/or rehabilitation of small and/or very small civil works. This will be mitigated through a list of ineligible items (Annex 3B provided in the ESMF) to be applied to the program as well as specific requirements (as part of the site-specific mitigation measures and/or preparation of an environmental management plan (ESMP) of the proposed activities (Annex 5B provided in the ESMF). Similar approach will be made for those related to 3R, GCB, and NPAP related activities to be implemented in selected areas and the activities will be planned and conducted in close consultation with local authorities and local community.

79. The proposed project activities to be implemented under Component 1,2 and 4 and the expected social impacts and potential risks while ESS relevance and the proposed mitigation measures and/or ESF instruments to be applied during project implementation are presented in Table 4-1.



TABLE 4-1 SUMMARY OF THE SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES FOR C1,2&4

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
Component 1. Policy Implementation and Capacity Enhancement (PICE)				
<p>1A Policy and capacity support on EIA/IEE/SEA, solid waste management, and Toxic and Hazardous Waste, with the following key activities: <i>Key detailed activities on EIA/IEE/SEA development and capacity support on:</i></p> <ul style="list-style-type: none"> • Upgrading of the Strategic Environment Assessment (SEA) Ministerial Decision to a SEA Prime Minister Decree, and development of SEA sub-legislation; • Development of a SEA for the mining sector, and support to the implementation of the power sector and green growth SEAs developed under the LENS2 project; • Development of Environmental Impact Assessment (EIA)-related guidelines; • Revision of the Integrated Spatial Planning and Land Use Planning (ISP-LUP) guideline to include climate change and disaster risk considerations, and integration of ISP-LUPs into 11 Provincial Socio-Economic Development Plans; • Preparation and dissemination of the national State of Environment Report (2021-2025); • Dissemination of the Environment Protection Law, several other environmental protection regulations 	<ul style="list-style-type: none"> • OHS risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker; • Inappropriate behaviour by Project Worker during training, consultation workshops and working in communities or field data collection. 	<ul style="list-style-type: none"> • Update, implement, monitor and report LMP (Attachment 1), COC on SEA/SH and VAC (Attachment 3B of the SIA-SMP); • Implement, monitor and report of SEP including GRM; • Each SDA to assign one E&S coordinator to oversee, coordinate, monitor and report the E&S implementation. 	<p>ESS1-4, ESS7 and ESS10</p>	<p>DOE-MONRE throughout the project implementation</p>



Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
<p>and guidelines developed under the LENS2 project. <i>Key activities on Solid Waste Management:</i></p> <ul style="list-style-type: none"> • Development of a National Waste Management Decree, its relevant sub-national regulations; • Development of standard operational procedures (SOPs) on waste management measures covering all types of waste to support the enforcement of SWM regulations. 				
<p>1B Capacity and Financial Support to SMEs on environmental and waste management, with the following key activities: Key activities would include:</p> <ul style="list-style-type: none"> • Capacity and financial support (matching grant) to SMEs (hotel, restaurant, and tourism companies) in Vang Vieng, Vientiane Province to enable them to improve their environmental and waste management, and compliance with MONRE environmental regulations(SMEs eligible to receive the matching grant support would be those that have investment projects that are classified by the MONRE as Category 1 and that have an environmental clearance certificate (ECC) or will be issued an ECC) 	<ul style="list-style-type: none"> • Risks that selected firms/LA/LC that have poor environmental or social performance, including non-compliance with National environmental legislation; • Support to activities that may harm people, the environment or the society; • Temporary risks and disturbances related to OHS, CHS and dust and noise generation including transmission of infectious diseases from civil works may occur. • Risk of insufficient public information and awareness among the project’s beneficiaries; • OHS Risks related to the 	<ul style="list-style-type: none"> • Include ESMF requirements applicable to Components 1 during the development of the subproject proposal and the activities to be implemented by the beneficiaries; • Apply Annex 3B: Ineligible/Negative Criteria List for Components 1,2,4 and Annex 4 Guideline for ES Impacts Screening and Scoping for proposal selection; • Prepare ESMP including EGEP (if needed) in compliance with this ESMF (esp. Annex 2, 3B, 4B, 5B, 7B, Attachment 1B, 2B, 3B and 5 and SEP (ensuring inclusive and meaningful 	<p>ESS1-4, 7 and 10</p>	<p>EPF throughout the project implementation</p>



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
	<p>working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker;</p> <ul style="list-style-type: none"> • CHS and inappropriate behaviour by Project Worker during training, consultation workshops and working in communities or field data collection; • Weak system of grievance redresses mechanism. 	<p>consultations with stakeholders and local communities);</p> <ul style="list-style-type: none"> • Implement, monitor and report the approved ESMP; • To address the issues related to consultation, under EWMP, these activities will be continued with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities and components; • Assign one EPF E&S coordinator to oversee, coordinate, monitor and report the E&S implementation of the SMEs and Matching Grants; • Each SMEs and Matching Grants should assign an E&S coordinator. 		
<p>1C ECC compliance and pollution monitoring framework with the following key activities: Key detailed activities would include policy and capacity support on ECC compliance and pollution monitoring</p>	<ul style="list-style-type: none"> • Risks/Impacts due to land acquisition for ambient environmental quality monitoring stations is low as they are in 	<ul style="list-style-type: none"> • Apply Annex 3B: Ineligible/Negative Criteria List for C,1,2,4 and Annex 4 Guideline for ES Impacts 	ESS1-5, 7 and 10	DNEI/NRERI-MONRE throughout the project



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
<p>framework for environmental pollution management:</p> <ul style="list-style-type: none"> Enhancing of the existing 9-site Air Quality Monitoring Stations (AQMS) to improve the completeness and reliability of the network and work to understand exposure to air pollution. Strengthening of water quality and pollution monitoring through the procurement of equipment for water quality monitoring and water quality analysis. Establishing SOPs and QA/QC protocols for AQMS, and implement via capacity building trainings including PONRE staff; Conducting a limited deployment of low-cost sensors in provinces that currently have no AQMS and to establish a training data set to enable use of global remote sensing products to estimate human exposure to PM2.5 with reduced uncertainty until network expansion can be financed. 	<p>government- managed land;</p> <ul style="list-style-type: none"> Occupational health and safety risks/impacts during installation on monitoring stations; Temporary risks and disturbances related to OHS, CHS and dust and noise generation including transmission of infectious diseases during installation of environmental quality monitoring stations. 	<p>Screening and Scoping for proposal selection;</p> <ul style="list-style-type: none"> Implement, monitor and report ESCOP (Annex 6) and LMP (Attachment 1B); Implement, monitor and report of GRM and SEP; Each SIA to assign one E&S coordinator to oversee, coordinate, monitor and report the E&S implementation. 		implementation
<p>1D Climate change and low carbon resilient development with the following key activities: Development and implementation of a long-term low emission development strategy (LT-LEDS) 2030. Including:</p> <ul style="list-style-type: none"> Climate adaptation and resilience activities including integration of the updated Nationally Determined Contribution (NDC) include a 	<ul style="list-style-type: none"> OHS risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker; Inappropriate behaviour by Project Worker during training, consultation workshops and 	<ul style="list-style-type: none"> To address the issues related to consultation, under EWMP, these activities will be continued with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities and 	ESS1-4, 7 and 10	DCC-MONRE/ DOP-MPI



Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
<p>commitment to achieve net zero emissions by 2050 (conditional to international support).</p> <ul style="list-style-type: none"> The LT-LEDS can also further strengthen the country’s aspiration towards a cleaner and greener economy and improve the lives of citizens, particularly the most vulnerable groups. Climate and disaster risk screening (CDRS) tool into the national Green Growth Investment Guidelines; Expansion of the Green Growth Investment Guidelines to cover private investment projects; and Capacity building for sectors and provincial offices for green growth strategy implementation. 	<p>working in communities or field data collection;</p> <ul style="list-style-type: none"> Strategies unintentionally apply to activities outside the targeted “community”. 	<p>components;</p> <ul style="list-style-type: none"> Update, implement, monitor and report LMP (Attachment 1 of the SIA-SMP), CHSP (Attachment 2 of the SIA-SMP), COC on SEA/SH and VAC (Attachment 3A of the SIA-SMP), SEP and GRM for project staffs; Each SIA to assign one E&S coordinator to oversee, coordinate, monitor and report the E&S implementation. 		
<p>1E Policy and capacity support on plastics policies and legislation with the following key activities: Development of the National Plastic Actions Plan (NPAP) including:</p> <ul style="list-style-type: none"> Development and implementation of national policies, legislation and regulations; implementation of the National Plastics Action Plan (NPAP)¹³; Development of guidelines and supporting instruments for NPAP implementation; capacity 	<ul style="list-style-type: none"> Inadequate consultation among key agencies and key stakeholders, implementation of these activities could lead to unexpected impacts to key sector agencies, local authorities, and local communities, and the 	<ul style="list-style-type: none"> To address the issues related to consultation, under EWMP, these activities will be continued with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities and components. Activities under 	ESS1-4, 7 and 10	DOE-MONRE throughout the project implementation

¹³ At this time, the NPAP is under development led by MONRE and supported by the World Bank and other development partners.



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
<p>building at the national and sub-national level to enable monitoring and enforcement; awareness raising, education campaigns, and citizen engagement; plastics information and reporting system;</p> <ul style="list-style-type: none"> Development of SOP for plastic/HTW waste management, 3Rs, GCB and Circular Economy campaign, inventories and database on plastic and solid waste in selected provinces; Micro plastic in aqua life analysis in selected river basins, guideline and; Support implementation of Single-use plastics. 	<p>private sector.</p> <ul style="list-style-type: none"> OHS risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker; CHS and inappropriate behaviour by Project Worker during training, consultation workshops and working in communities or field data collection; Plans may generate unmitigated social or environmental impacts and fail to adequately address the main current and likely future problems. 	<p>1E include citizen engagement;</p> <ul style="list-style-type: none"> Implement GRM for project workers; Implement, monitor and report LMP (Attachment 1B) CHSP (Attachment 2) COC on SEA/SH and VAC (Attachment 3B); Each SIA to assign one E&S coordinator to oversee, coordinate, monitor and report the E&S implementation. 		
Component 2. Integrated Support and Capacity Building for Local Government and Municipalities				
<p>2A Support and Capacity Building for Local Governments on waste and pollution data and information systems and waste services with the following key activities:</p> <ul style="list-style-type: none"> Development and implementation of sub-decrees, regulations and ordinances on waste and pollution data and information systems ; Capacity Building for Local Governments (PONRE) of Vientiane Capital and Oudomxay and Vientiane 	<ul style="list-style-type: none"> Inadequate consultation among key agencies and key stakeholders, implementation of these activities could lead to unexpected impacts to key sector agencies, local authorities, and local 	<ul style="list-style-type: none"> To address the issues related to consultation, under EWMP, these activities will be continued with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities and 	ESS1-4, 7 and 10	DNEI/NRERI-MONRE throughout the project implementation



Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
<p>Provinces on sub-decree development,, waste and pollution data and information systems and waste services;</p> <ul style="list-style-type: none"> Feasibility study on establishment of waste and pollution data and information system in collecting regional/international good practices in managing and utilizing the waste statistics system 	<p>communities, and the private sector;</p> <ul style="list-style-type: none"> OHS risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker; Inappropriate behaviour by Project Worker during training, consultation workshops and working in communities or field data collection. 	<p>components;</p> <ul style="list-style-type: none"> Implement GRM for project workers; Implement, monitor and report LMP (Attachment 1B) CHSP (Attachment 2) COC on SEA/SH and VAC (Attachment 3B); Each SIA to assign one E&S coordinator to oversee, coordinate, monitor and report the E&S implementation. 		
<p>2B GCB and 3R projects plus capacity building for NPAP/plastic policies implementation in target districts with the following key activities:</p> <p>To continue the ongoing efforts for waste management and plastics reduction at the village-scale:</p> <ul style="list-style-type: none"> GCB and 3R projects + capacity building for NPAP/plastic policies implementation in target districts; Promote the MONRE’s Green, Clean and Beautiful (GCB) and 3R programs that aims for waste management and plastics reduction at the village-scale ; 	<ul style="list-style-type: none"> Lack of inclusive stakeholder consultation and incorporation of public comments in the policy development; Risks that selected firms and LC that have poor environmental or social performance, including non-compliance with National environmental legislation; Support to activities that may harm people, the environment or the society; 	<ul style="list-style-type: none"> Include ESMF requirements applicable to Components 1, 2, and 4 during the development of the subproject proposal and the activities to be implemented by the beneficiaries; Apply Annex 3B: Ineligible/Negative Criteria List for Components 1,2,4 and Annex 4 Guideline for ES Impacts Screening and Scoping for proposal selection; 	ESS1-4, 7 and 10	DOE-MONRE throughout the project implementation



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
<ul style="list-style-type: none"> • Development of waste bank recycling operational guidelines and awareness-raising campaigns. which could contribute to the GoL’s GCB program; • Scaling-up the waste bank initiatives at villages and schools, composting at schools, waste separation at household level. 	<ul style="list-style-type: none"> • OHS Risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker; • CHS and inappropriate behaviour by Project Worker during training, consultation workshops and working in communities or field data collection; • Lack of inclusive stakeholder consultation and incorporation of public comments in the policy development; • Risk of insufficient public information and awareness among the project’s beneficiaries; • Weak system of grievance redresses mechanism. 	<ul style="list-style-type: none"> • Prepare ESMP including EGEP (if needed) in compliance with this ESMF (esp. Annex 2, 3B, 4B, 5B, 7B, Attachment 1B, 2B, 3B and 5 and SEP (ensuring inclusive and meaningful consultations with stakeholders and local communities); • Implement, monitor and report the approved ESMP; • To address the issues related to consultation, under EWMP, these activities will be continued with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities and components; • Assign one EPF E&S coordinator to oversee, coordinate, monitor and report the E&S implementation of GCB and 3Rs (Matching Grants or Sub-projects) and each subproject should assign an E&S 		



Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
<p>2C Support to private-public partnerships and enhancing output-based waste service delivery and cost recovery capacity with the following key activities: Support private-public partnerships and enhancing output-based waste service delivery and cost recovery capacity. Activity proposed by the MPWT including:</p> <ul style="list-style-type: none"> • Development of Standard Operation Procedures (SOPs), Sub-regulation preparation and its guidelines, and Solid waste management planning and capacity development for DPWT, UDAA/VCOMS; • Introducing improved contract management system to improve performance and output-based contract management between VCOMSS and private waste operators • Development and training of mobile application for fee collection and user feedback for waste fee payment, services route tracking and communication with clients to address cost recovery; • Technical and equipment supports to the waste pickers currently working at the Km32 to provide necessary protection equipment and facility to improve their 	<ul style="list-style-type: none"> • Lack of inclusive stakeholder consultation and incorporation of comments from private waste operators in development of mobile application for fee collection and user feedback for waste fee payment, services route tracking and communication with clients. • OHS Risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker; • Inappropriate behaviour by Project Worker during training, consultation workshops. 	<p>coordinator.</p> <ul style="list-style-type: none"> • To address the issues related to consultation, under EWMP, these activities will be continued with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities and components; • Implement, monitor and report LMP (Attachment 1B) CHSP (Attachment 2) COC on SEA/SH and VAC (Attachment 3B); • Implement SEP including GRM; • Each SDA to assign one E&S coordinator to oversee, coordinate, monitor and report the E&S implementation. 	<p>ESS1-4, 7 and 10</p>	<p>MPWT, MONRE, VCOMS, district offices and private waste operators</p> <p>throughout the project implementation</p>



Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Mitigation Implementation Stage
working environment.				
Component 4. Project Coordination and Reporting				
<p>C4: Project Coordination and Reporting with the following key activities: <i>Project management and administration related activities including:</i></p> <ul style="list-style-type: none"> • Procurement, project staffing, consultant, meeting, workshop, training, capacity building, project annual audit and etc. <p><i>Communication, Engagement, and EPF Capacity building:</i></p> <ul style="list-style-type: none"> • Inter-ministerial coordination; • Progress reporting, and monitoring and evaluation, strengthening implementation and management capacity • Enhancing stakeholder’s collaboration at all levels. 	<ul style="list-style-type: none"> • OHS risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker. • Inappropriate behaviour by Project Worker during training, consultation workshops and working in communities. 	<ul style="list-style-type: none"> • Implement, monitor and report LMP (Attachment 1B) CHSP (Attachment 2) COC on SEA/SH and VAC (Attachment 3B); • Implement SEP including GRM; • Recruit CTA and E&S consultants to assist C4 for supervision, capacity/training, monitoring and reporting of implementation of ESF instruments. 	ESS1-4, 7 and 10	EPF during project implementation



4.3 SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES OF C3

80. The proposed activities to be implemented in three sites under Component 3 as presented in the Section 1.4 above are likely to create social risks at substantial level; however, the risks are increased to high level when taking into account (i) weak legal and institutional capacity on waste management; and (ii) the existing waste at the Km32 Site and associated legacy risks and impacts.

81. The key social risks and negative impacts with proposed mitigation measures during pre-construction and construction phases of the three sites are as follows:

- Overall, the environmental risks and impacts associated with the construction activities of the three sites are assessed to be moderate, temporary and localized. These impacts are well-known and can be effectively mitigated by conventional methods. More details are provided in a standalone SIA-SMPs.
- Lack of inclusive and meaningful consultation during the full ESIA study with all concerned stakeholders (esp. vulnerable/poor households, women, waste pickers and collectors) could result in the risk is regulatory non-compliance, project delays, reputational harm to project stakeholders.
- Risk of land acquisition and impact on the heritage assets or values including discovery of artifacts or relics during construction of the new Transfer Station in Naxaythong district and operation of new borrow pits, sand and quarry sites.
- The risks of UXO explosion during the construction activities is considered minor but cannot be excluded.
- OHS risks of existing waste pickers due to construction activities and increased traffic congestion (transportation of construction materials and solid wastes to the landfill).
- Poor condition of the access road causing excessive dust, increasing risks of accidents and increasing costs of maintenance.
- OHS Risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19), SEA/SH and VAC including the temporary labour influx of construction workers is likely to increase the risk of substance abuse such as alcohol and amphetamine. Such substance abuse is often a contributing factor to accidents and incidents. It also is a contributing factor for gender-based violence.
- Nearby CHS risks due to temporary disturbance from construction activities including dust/noise/ wastewater/ solid wastes generation, traffic and road safety impacts, transmission of infectious diseases and other social issues from temporary labour influx of construction workers etc.
- Damages to the local roads due to increased traffic.



- Disruption or restrictions on recycling activities with risk of causing loss/reduction in income of the waste collectors, waste-pickers and other groups (informal recyclers or small-scale waste buyers) who rely on income from the waste stream.
- Inadequate Stakeholder Engagement or inadequate management of the grievances redress mechanism during the con.
- Full ESIA and Site Specific ESMPs (SS-ESMPs) will be prepared by MWTP PMU with technical assistant from a qualified ESIA firm in compliance with the ESMF, SIA-SMP, Pre-ESIA of the Km32 and SEP. Revision/update of the preliminary design during the detailed design stage should ensure that adequate considerations on environmental and social risks and impacts are incorporated and that potential social risks and impacts from the project activities are acceptable.
- Temporary social risks and impacts and disturbances will be managed through the implementation, monitoring and reporting of CESMP to be prepared by contractor(s) in compliance with the SS-ESMPs. PMU with technical assistant from PTI and CSC will conduct capacity building and training to contractor (s) and regularly monitor the contractor's E&S compliance.

82. The key social risks and negative impacts with proposed mitigation measures during operation phases of the three sites are as follows:

- Based on the current preliminary conceptual liner design of the new cells in the Km32 landfill, there is a high risk of contamination of surface, groundwater and soil which could be or may in the future be used for domestic water supply, and which is therefore important for long-term water supply and public health, the productivity and quality of rice production and other agricultural production in the surrounding fields; and may also pose a risk to the health of farmers, domestic animals and wildlife; and may in general render the water resources in the affected streams unusable.
- The implementation of the integrated waste management facilities in Naxaythong District and Km16 may result in a reduction in recyclables arriving at the Km 32 and therefore affecting the current income (livelihood) of the seasonal and registered waste-pickers at the Km32 including vulnerable groups (currently one family working as waste pickers at the KM32 landfill) who rely on income from the waste stream at the landfill.
- Risk that waste-pickers do not receive a fair payment for the recyclables.
- OHS risks include the risk of: (i) employment discrimination, (ii) labour related disputes, (iv) SEA/SH and VAC from alcohol, drug and amphetamine (as per FGD); (v) child labour (waste pickers); (vi) accidents and injuries, exposure to toxic waste component/ air pollution (dust and hazardous wastes/materials, odours nuisances, and vehicle emissions/noise and vibration/ pathogens and vectors in waste collection, transport and management processes.



- CHS risks/impacts involving increased number of garbage trucks going back-and-forth to the landfill could lead to increased dust, noise, smells, water pollution, road safety (esp. children and vendors along the access road) and spread of infectious diseases (COVID-19, HIV-AIDS) and) SEA/SH and VAC..
- Risk of uncontrolled site access leading to injury of people or loss of cattle.
- Open burning of waste or landfill fires caused by lack of controlled collection and release/flaring of landfill gas will generate air pollution posing a health hazards to landfill workers, waste-pickers and nearby residents.
- Risk of increase in illegal dumping, littering, and open burning exacerbating impacts on public health and the environment.
- Inadequate Stakeholder Engagement or inadequate management of the grievances redress mechanism.
- ESMP for Operation Phase (ESMP-OP) including operational manual for the new landfill facilities at the Km32 and transfer stations at the Km16 and Naxaythong sites will be prepared by MPWT PMU in compliance with the ESMF, and implemented by VCOMS for the Km32, Small B for the KM16 and UDAA for the Naxaythong site.

83. The social risks and impacts associated with the Component 3 and the relevant ESF instruments to be applied during project implementation are presented in Table 4-2.



TABLE 4-2 SUMMARY OF THE SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES FOR C3

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
C3: Waste and plastics management Infrastructure Investments (US\$24.62 million of which US\$21 million IDA and US \$3.62 million ProBLUE)				
<p><u>At the existing landfill Km32:</u></p> <p>The preliminary design of the proposed Km 32 Landfill Project includes the following main activities and facilities:</p> <ul style="list-style-type: none"> • Construction of two new fenced engineered landfill cells with a total capacity of 1.15 million m3 of waste over a design life of 10 years. The cells are designed with a 1.5 mm HDPE liner, protected by a geotextile, and leachate collection systems and landfill gas ventilation. 	<p><i>Key Social Risks and Impacts during the Pre-Construction and Construction Phase:</i></p> <ul style="list-style-type: none"> • Overall, the social risks and impacts associated with the construction activities are assessed to be moderate, temporary and localized; • Lack of inclusive and meaningful consultation during the full ESIA study with all concerned stakeholders (esp. vulnerable/poor households, women, waste pickers and collectors) could result in the risk is regulatory non-compliance, project delays, reputational harm to project stakeholders; 	<p><i>Proposed Mitigation Measures (MMs) during Pre-Construction and Construction Phase:</i></p> <ul style="list-style-type: none"> • Ensure that the ESF instruments (ESMF, SIA-SMPs, Pre-ESIA and SEP) are incorporated in the TOR for FS, DD and full ESIA; • Prepare full ESIA and SS-ESMPs¹⁴ including ARAP/RAP and EGEP in compliance with this ESMF (esp. Annex 2, 3A, 5A of the ESMF), Pre-ESIA and SMP and SEP (ensuring inclusive and meaningful consultations with stakeholders and local communities); Conduct site screening and scoping of new 	<p>ESS1-8, 10</p>	<p>Construction: Implemented by Contractors</p> <p>Monitored by: PIU, PONRE, CSC and MPWT PMU/DHUP</p>

¹⁴ One full ESIA will the three sites (Km32, Km16 and Naxathong site) while the ESMP will be site specific (SS-ESMP).



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
<ul style="list-style-type: none"> • Excavation of the existing waste (156,000 m3) in the area for the new cells and re-depositing the waste in Cell 5 within the landfill site. • When the two new landfill cells are filled-up they will be capped with 2 m soil and equipped with a gas ventilation system. • Construction of a hazardous waste storage facility (900 m2) for temporary storage of small amounts of hazardous solid waste in the incoming municipal waste which will be segregated and put in drums to be stored in the facility. • Construction of a leachate treatment facility 	<ul style="list-style-type: none"> • Risk of land acquisition and impact on the heritage assets or values including discovery of artefacts or relics during operation of new borrow pits, sand and quarry sites; • The risks of UXO explosion during the construction activities is considered minor but cannot be excluded; • OHS risks of existing waste pickers due to construction activities and increased traffic congestion (transportation of construction materials and solid wastes to the landfill); • Poor condition of the access road causing excessive dust, increasing risks of accidents and increasing costs of maintenance; • OHS Risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19), SEA/SH and VAC 	<p>construction materials sites will be part of the full ESIA study;</p> <ul style="list-style-type: none"> • Revision/update of the preliminary design during the detailed design stage should ensure that adequate considerations on environmental and social risks and impacts are incorporated and that potential social risks and impacts from the project activities are acceptable. • ESIA should examine social sensitivity in the project areas, identify and assess the potential social impacts and risks including UXO risks from project activities and the ESMPs will include appropriate measures to address social risks and impacts; • Obtain the approval from the WB and ECC from GOL (MONRE); • Including SS-ESMP, EGEP and SEP in the Bidding 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
<p>comprising a combination of an Up-flow Anaerobic Sludge Blanket Reactor (UASB) and an aerobic rotary disc system and including a HDPE lined regulating pond. Only leachate from the new landfill cells will be treated in the leachate treatment facility.</p> <ul style="list-style-type: none"> • Construction of an administration building (3,200 m²), a weighbridge, a solar power system (5,000 m²), and concrete paved internal roads (width 7 m, length 950 m). • Upgrading of the existing 	<p>including the temporary labour influx of construction workers is likely to increase the risk of substance abuse such as alcohol and amphetamine. Such substance abuse is often a contributing factor to accidents and incidents. It also is a contributing factor for gender-based violence;</p> <ul style="list-style-type: none"> • Nearby CHS risks due to temporary disturbance from construction activities including dust/noise/ wastewater/ solid wastes generation, traffic and road safety impacts, transmission of infectious diseases and other social issues from temporary labour influx of construction workers etc; • Disruption or restrictions on recycling activities with risk of 	<p>Documents/Contract Document (BD/CD);</p> <ul style="list-style-type: none"> • Provide temporary access and entrance for on-going waste collection trucks and temporary waste loading/dumping zone and strictly implement safe working practices for waste pickers and collectors (zoning, timing, incompatible activities, handling of various types of waste, use of PPE); • Pave the access road – at least as a proper gravel road and keep it well-maintained¹⁵ and enforce speed limits for project related traffic; • Safe drive trainings should be provided for contractor’s drivers 		

¹⁵ VCOMS’s Access Road Rehabilitation Plan is included in the ESCP.



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
<p>recycling facility and the waste management centre to improve the working conditions and increase the value of recyclables.</p> <ul style="list-style-type: none"> Construction of 4 groundwater monitoring wells. 	<p>causing loss/reduction in income of the waste collectors, waste-pickers and other groups (informal recyclers or small-scale waste buyers) who rely on income from the waste stream.</p> <p>Please refer to Pre-ESIA of the Km32 for more details on social risks and impacts</p>	<p>and waste collection drivers. All contractor’s trucks should be provided with readable ID number and hotline number so the public can easily report in case of unsafe driving, overflow solid waste, illegal dumping and burning of solid waste;</p> <ul style="list-style-type: none"> Developing, implementing, monitoring and reporting of CESMP including LMP, OHSP, CHSP, TMP, (CoCs) on SEA/SH and VAC, and chance finds procedure in compliance with the project SS-ESMPs, the SIA-SMPs and the WB Environmental Health and Safety Guidelines (EHSG) and Good International Industrial Practices (GIIP); Develop and implement no child labour regulation to ensure compliance with the Labour Law and other applicable national legislation including provisions for 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
		<p>hazardous working conditions and child labour;</p> <ul style="list-style-type: none">• The MPWT PMU will ensure that Social Security (health and life insurance) is provided to all workers according to the Labour Law before the commencement of project activity.• Provide alternative source of income and livelihood activities (encourage contractors to recruit them as labours during construction phase).• Promote local recruitment of workforce plus mitigation measures such as a worker code of conduct (including requirements for both worker-community and worker-worker interactions), mapping of third-party service providers plus specific actions (training, public awareness, etc.) to avoid sexual		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
		<p>harassment, sexual assault, and exploitation and human trafficking;</p> <ul style="list-style-type: none"> • Capacity building for MPWT PMU, PTI, CSC and contractors on the ESMP, EGEP and SEP including GRM; • Incident/accident reporting including the requirement to notify WB within 48 hrs. of become aware of severe accident; and • Developing, implementing, monitoring and reporting of a dedicated Worker Grievance Mechanism as part of LMP and SEP, for all groups of workers. <p>Please refer to Pre-ESIA of KM32 for more MMs.</p>		
	<p>Key Social Risks and Impacts during Operation Phase:</p> <ul style="list-style-type: none"> • Based on the current preliminary 	<p>Proposed Mitigation Measures (MMs) during Operation Phase:</p> <ul style="list-style-type: none"> • Ensure the new waste cells at Km32 	ESS1, 3, 4, 10	Implemented by VCOMS



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
	<p>conceptual liner design, there is a high risk of contamination of surface, groundwater and soil which could be or may in the future be used for domestic water supply, and which is therefore important for long-term water supply and public health, the productivity and quality of rice production and other agricultural production in the surrounding fields; and may also pose a risk to the health of farmers, domestic animals and wildlife; and may in general render the water resources in the affected streams unusable;</p> <ul style="list-style-type: none"> The implementation of the integrated waste management facilities in Naxaythong District and Km16 may result in a reduction in recyclables arriving at the Km 32 and therefore affecting the current income (livelihood) of the seasonal and registered waste-pickers at the 	<p>are constructed in compliance with the final DD (esp. liner design and placement of a daily and intermediate soil covers)</p> <ul style="list-style-type: none"> Measures to the reduction of income of waste pickers at the Km32 include (i) provide opportunities to waste pickers to work at the new waste management facilities at km 32, and at km 16 and Naxaythong sites; (ii) offer waste pickers skills and vocational training on literacy, numeracy, entrepreneurship among others to improve their livelihoods and prevent job loss; (iii) peg unit rates paid to waste pickers for recyclables to current market prices with deduction of a reasonable margin to ensure profitability for the appointed on-site buyer; and (iv) carefully develop regional landfill zoning for waste transfer station to minimize the impacts on the livelihoods or incomes of the KM32 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
	<p>Km32 including vulnerable groups (currently one family working as waste pickers at the KM32 landfill) who rely on income from the waste stream at the landfill;</p> <ul style="list-style-type: none"> • Risk that waste-pickers do not receive a fair payment for the recyclables; • OHS risks include the risk of: (i) employment discrimination, (ii) labour related disputes, (iv) SEA/SH and VAC from alcohol, drug and amphetamine (as per FGD); (v) child labour (waste pickers); (vi) accidents and injuries, exposure to toxic waste component/ air pollution (dust and hazardous wastes/materials, odours nuisances, and vehicle emissions/noise and vibration/ pathogens and vectors in waste collection, transport and management processes; • Nearby communities, landfill 	<p>surrounding landfill;</p> <ul style="list-style-type: none"> • The MPWT PMU will ensure that Social Security (health and life insurance) is provided to all workers according to the Labour Law and the Law on Social Security. • Provide continual supervision, inspection of equipment and structures and monitoring of treatment effectiveness by the landfill operator; • Develop and implement landfill operation manual including the operational measures outlined in the Pre-ESIA will effectively mitigate such risks and impacts on the burning of waste or landfill fires or flaring of landfill gas; • Develop, implement, monitoring and reporting of EMMP-OP including LMP, CHSP and OHSP and in compliance with SIA-SMPs (Attachment 1A,2A,3A) and SEP. The OHSP will include but 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
	<p>workers and waste-pickers' health risk exposure to nuisance odour, flies and other vermin attracted by the existing waste, relocated waste and future incoming waste;</p> <ul style="list-style-type: none"> • Risk of uncontrolled site access leading to injury of people or loss of cattle; • Open burning of waste or landfill fires caused by lack of controlled collection and release/flaring of landfill gas will generate air pollution posing a health hazards to landfill workers, waste-pickers and nearby residents; • Risk of increase in illegal dumping, littering, and open burning exacerbating impacts on public health and the environment. • Inadequate Stakeholder Engagement or inadequate management of the grievances 	<p>not limited to (i) procedures to eliminate or minimize the risk of exposure to biological agents and pests, (ii) personal hygiene practices, (iii) instructions in proper use of personal protective equipment, (iv) emergency procedures;</p> <ul style="list-style-type: none"> • Provision of personal protective equipment (PPE), first aid-kits, clean water and trainings on health and safety; • Provision of equipment for operation of the landfill including a bulldozer, an excavator, a backhoe, a dump truck and a water sprinkler truck to control dust; • Waste pickers should only be allowed to collect recyclable waste under strict safe working practices only completion of waste relocation and no movement of heavy trucks and equipment; • Safe drive trainings should be 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
	<p>redress mechanism.</p> <p>Please refer to Pre-ESIA of KM32 for more details on social risks and impacts</p>	<p>provided for waste collection drivers. All waste collection drivers should be certified in compliance with driving regulations. Hotline for waste complaints shall be provided and all waste collection truck should be provided with readable ID number and hotline number so the public can easily report in case of unsafe driving, overflow solid waste, illegal dumping and burning of solid waste;</p> <ul style="list-style-type: none"> • Rehabilitate/pave and regularly maintain the access road to the landfill and enforce speed limits and weight control of waste transportation trucks; • Strictly control the site access and well-maintained of fence to avoid the cattle and local animals entering the landfill area; • Measures to the risk on illegal dumping waste include (i) careful assessment of impacts due to changes 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
		<p>in fees or policies through stakeholder consultations; (ii) monitoring and strict enforcement of regulation for waste collection companies; (iii) awareness raising on environmental impacts of waste dumping and burning; and (iv) issue village-level regulations with penalties for illegal dumping.</p> <p>Please refer to Pre-ESIA of KM32 for more MMs.</p>		
<p><u>At the existing Transfer Station Km16:</u></p> <p>Under Component 3, the investments in the existing Km 16 Transfer Station are proposed to include:</p> <ul style="list-style-type: none"> • A Material Recovery Facility • A Refuse Derived Fuel production facility • Upgrade of the existing 	<p><i>Key Social Risks and Impacts during the Pre-Construction and Construction Phases:</i></p> <ul style="list-style-type: none"> • Overall, the social risks and impacts associated with the construction activities are assessed to be moderate, temporary and localized. • Lack of inclusive and meaningful consultation with all concerned stakeholders (esp. EG, vulnerable/poor households, women, waste pickers and collectors) could result in the risk is 	<p><i>Proposed Mitigation Measures (MMs) during the Pre-Construction and Construction Phases:</i></p> <ul style="list-style-type: none"> • Apply Annex 3A of the ESMF: Site Selection Criteria including E&S criteria for the Naxaythong site and new construction material sites • Ensure that the ESF instruments (ESMF, SIA-SMPs, Pre-ESIA and SEP) are incorporated in the TOR for FS, DD and full ESIA; 	<p>ESS1-8, 10</p>	<p>Pre-construction:</p> <p>DHUP/MPWT PMU with supports from PTI and ESIA firm</p> <p>Construction:</p> <p>Implemented by Contractors</p> <p>Monitored by:</p> <p>PIU, PONRE, CSC</p>



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
<p>composting facility</p> <ul style="list-style-type: none"> • Separate bathroom facilities for males and females <p><u>At the new Transfer Station in Naxaythong District:</u></p> <p>The investments of Component 3 in Naxaythong Integrated Waste Management Facilities are proposed to include:</p> <ul style="list-style-type: none"> • Waste transfer facilities • Simple sorting facility for plastic, paper and metal waste • Separate bathroom facilities for males and females. 	<p>regulatory non-compliance, project delays, reputational harm to project stakeholders.</p> <ul style="list-style-type: none"> • Risks of land acquisition and Ethic Groups at the new Transfer Station in Naxaythong district; • OHS Risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) including the temporary labour influx of construction workers is likely to increase the risk of substance abuse such as alcohol and amphetamine. Such substance abuse is often a contributing factor to accidents and incidents. It also is a contributing factor for gender-based violence; • Nearby CHS risks due to temporary disturbance from construction of new landfill facilities at Naxaythong and KM16 including dust/noise/ wastewater/ solid wastes 	<ul style="list-style-type: none"> • Prepare full ESIA and SS-ESMPs including ARAP/RAP and EGEP in compliance with this ESMF (esp. Annex 2, 3A, 5A of the ESMF), Pre-ESIA and SMP and SEP (ensuring inclusive and meaningful consultations with stakeholders and local communities); • ESIA should examine social sensitivity in the project areas, identify and assess the potential social impacts and risks from project activities and the ESMPs will include appropriate measures to address social risks and impacts; • Obtain the approval from the WB and ECC from GOL (MONRE) • Including SS-ESMP, EGEP and SEP in the Bidding Documents/Contract Document (BD/CD); • Prepare, implement, monitor and report CESMP in compliance with the 		<p>and MPWT PMU/DHUP</p>



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
	<p>generation, traffic and road safety impacts, transmission of infectious diseases and other social issues from temporary labour influx of construction workers etc;</p> <ul style="list-style-type: none"> • Damages to the local roads due to increased traffic; • The risks of UXO explosion during the construction activities is considered minor but cannot be excluded. • Impacts on heritage assets and values during the earth works (at the Naxaythong site) and operation of new borrow pits, sand and quarry sites • Inadequate Stakeholder Engagement or inadequate management of the grievances redress mechanism. 	<p>approved ESMP, EGEP and SEP;</p> <ul style="list-style-type: none"> • Implementing, monitoring and reporting GRM ; • Capacity building for MPWT PMU, PTI, CSC and contractors on the ESMP, EGEP and SEP; 		
	<p>Key Social Risks and Impacts during Operation Phase:</p>	<ul style="list-style-type: none"> • Measures to the reduction of income of waste pickers at the Km32 include 	<p>ESS1, 3, 4, 10</p>	<p>Implemented by: Small B for the</p>



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
	<ul style="list-style-type: none"> The implementation of the integrated waste management facilities in Naxaythong District and Km16 may result in a reduction in recyclables arriving at the Km 32 and therefore affecting the current income (livelihood) of the seasonal and registered waste-pickers at the Km32 who rely on income from the waste stream at the landfill OSH risks of waste pickers, collectors, and UDAA and Small B staffs: (i) employment discrimination, (ii) labour related disputes, (iv) SEA/SH and VAC from alcohol, drug and amphetamine (as per FGD); (v) child labour (waste pickers); (vi) accidents and injuries, exposure to toxic waste component/ air pollution (dust and hazardous wastes/materials, odours nuisances, and vehicle emissions/noise and vibration/ pathogens and vectors in waste collection, transport and 	<p>(i) provide opportunities to waste pickers to work at the new waste management facilities at km 32, and at km 16 and Naxaythong sites; (ii) offer waste pickers skills and vocational training on literacy, numeracy, entrepreneurship among others to improve their livelihoods and prevent job loss; (iii) peg unit rates paid to waste pickers for recyclables to current market prices with deduction of a reasonable margin to ensure profitability for the appointed on-site buyer; and (iv) carefully develop regional landfill zoning for waste transfer station to minimize the impacts on the livelihoods or incomes of the KM32 surrounding landfill;</p> <ul style="list-style-type: none"> The MPWT PMU will ensure that Social Security (health and life insurance) is provided to all workers according to the Labour Law and the Law on Social Security. 		<p>Km16 and UDAA for Naxaythong the site</p> <p>Monitored by: MPWT PMU/DHUP</p>



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
	<p>management processes;</p> <ul style="list-style-type: none"> • CHS risks/impacts involving increased number of garbage trucks going back-and-forth to the landfill could lead to increased dust, noise, smells, water pollution, road safety (esp. children and vendors along the access road) and spread of infectious diseases (COVID-19, HIV-AIDS) and) SEA/SH and VAC. • Risk of increase in illegal dumping, littering, and open burning exacerbating impacts on public health and the environment. • Inadequate Stakeholder Engagement or inadequate management of the grievances redress mechanism. 	<ul style="list-style-type: none"> • Provide continual supervision, inspection of equipment and structures and monitoring of treatment effectiveness by the landfill operator; • Develop, implement, monitoring and reporting of EMMP-OP including LMP, CHSP and OHSP and in compliance with SIA-SMPs (Attachment 1A,2A,3A) and SEP. The OHSP will include but not limited to (i) procedures to eliminate or minimize the risk of exposure to biological agents and pests, (ii) personal hygiene practices, (iii) instructions in proper use of personal protective equipment, (iv) emergency procedures; • Provision of personal protective equipment (PPE), first aid-kits, clean water and trainings on health and safety; • Provision of equipment for operation of the landfill including a bulldozer, an 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
		<p>excavator, a backhoe, a dump truck and a water sprinkler truck to control dust;</p> <ul style="list-style-type: none"> • Waste pickers should only be allowed to collect recyclable waste under strict safe working practices only completion of waste relocation and no movement of heavy trucks and equipment; • Safe drive trainings should be provided for waste collection drivers. All waste collection drivers should be certified in compliance with driving regulations. Hotline for waste complaints shall be provided and all waste collection truck should be provided with readable ID number and hotline number so the public can easily report in case of unsafe driving, overflow solid waste, illegal dumping and burning of solid waste; • Rehabilitate/pave and regularly maintain the access road to the 		



Lao PDR Environmental and Waste Management Project (P175996)

Component/Key Activities	Environmental and Social Risks	Environmental and Social Instruments and Measures	WB ESS	Responsibility / Estimated Project Stage
		<p>landfill and enforce speed limits and weight control of waste transportation trucks;</p> <ul style="list-style-type: none">• Measures to the risk on illegal dumping waste include (i) careful assessment of impacts due to changes in fees or policies through stakeholder consultations; (ii) monitoring and strict enforcement of regulation for waste collection companies; (iii) awareness raising on environmental impacts of waste dumping and burning; and (iv) issue village-level regulations with penalties for illegal dumping.		



5 SOCIAL MANAGEMENT PLAN (SMP)

84. Based on the SIA, Social Management Plan (SMP) in Volume 2 of this SIA has been prepared for all components to be implemented under the EWMP. The SMP sets out management and mitigation measures for risks identified in the SIA as well as recommendations for maximizing social inclusion and social benefits.

85. The SMP also include the following documents: Labor Management Procedures (LMP), with a Worker Grievance Procedure; Community Health and Safety Plan (CHSP); COC on SEA/SH and VAC; Resettlement Policy Framework (RPF) (including livelihoods restoration); and Ethnic Group Engagement Framework (EGEF). Details of these documents are described in section (5-1)-(5-5) below.

5.1 LABOR MANAGEMENT PROCEDURES (LMP)

86. The Labor Management Procedure (LMP), provided in Attachment 1A for C3 and Attachment 1B for C1,2,4 of this SIA-SMP, is to manage and mitigate adverse social risks affecting civil servants (government staff appointed from the implementing and concerned agencies at all levels), direct workers (workers hired directly by EPF-PMU and MPWT-PMU, SIAs) and contracted workers (employees of civil works contractors and subcontractors, service providers, employees of consulting firms) in line with the national Labor Law and ESS2. The LMP will include but not be limited to:

- Identification of national legislation and institutional arrangement as well as gaps if any between GOL and WB requirements and clear measures to be applied to the Project during planning, implementation, and monitoring
- Standard terms and conditions of employment regarding non-discrimination and equal opportunity, worker organization;
- Measures to address OHS risks such as provision of personal protective equipment (PPE), accommodation, transport, first aid kits, and access to emergency services;
- Codes of Conduct (CoCs) to be incorporated within letters of appointment for project staff, contractors and workers to address work-place risks including substance abuse, discrimination, child labor, forced labor, and SEA/SH;
- A Worker Grievance Mechanism accessible to all groups of workers, to receive and address grievances coming from these workers.
- Up-to-date COVID-safe guidelines mandated by the government and/or best practice in the country, in order to minimize the risk of COVID transmission through hygiene practices, use of PPE and ensuring affected workers can self-isolate and continue to receive pay.

5.2 COMMUNITY HEALTH AND SAFETY PLAN (CHSP)

21. The Community Health and Safety Plan (CHSP), provided in Attachment 2 for all Components (C1-4), are to manage and mitigate potential adverse potential health and



safety impacts to local communities. Issues and risks to be addressed in the CHSP will be identified in the SIA and ESMF, and will likely need to consider measures to address i) air, water, noise and dust pollution from waste facilities affecting local communities; ii) road safety along site access routes; iii) injury to community members (including waste pickers) who enter waste facilities; and iv) presence of contractor camps, labour influx and interactions with local communities including risks of SEA/SH, violence against children (VAC) and communicable disease, including COVID19.

5.3 CODE OF CONDUCT (COC) ON SEXUAL EXPLOITATION AND ABUSE (SEA), SEXUAL HARASSMENT (SH), AND VIOLENCE AGAINST CHILDREN (VAC)

87. The CoC on SEA/SH and VAC, provided in Attachment 3A for C3 and Attachment 3B for C1,2,4, is to provide guidance on the social Code of Conduct (COC) to be included in works contract to address the issues related to Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH), and Violence against Children (VAC) which is a new requirement to be applied to all projects with WB financing. These samples are used in several World Bank projects by the Lao MPWT such as LRSP2 and NR13N starting 2018.

5.4 RESETTLEMENT POLICY FRAMEWORK (RPF)

88. The Resettlement Policy Framework (RPF) provided in Attachment 4 is prepared in line with ESS5. The scope of the RPF is to apply for C3 (if relevant). The objective of the RPF is to describe procedures for land acquisition and livelihood restoration in accordance with national laws and ESS5 of the ESF.

89. The RPF will identify national legislation and institutional arrangement as well as gaps if any between GOL and WB requirements and clearly identify measures to be applied to the Project during planning, implementation, and monitoring. The RPF will also provide specific guidance on the compensation process and scope of a RAP in close consultation with WB specialist.

90. The RPF will provide guidance for screening land acquisition impacts, access restrictions and impacts on livelihoods even if there is no land acquisition during project implementation (when waste management investments are finalized and subproject locations are confirmed) and for the preparation of site-specific Resettlement Action Plans (RAP).

91. The RPF will define eligibility criteria for compensation and allowances together with a detailed entitlement matrix, potential livelihood restoration measures and support as well as describing processes for stakeholder consultation and grievance redress that is consistent with other ESF instruments being prepared such as the SMP, SEP and EGEF.

5.5 ETHNIC GROUP ENGAGEMENT FRAMEWORK (EGEF)

92. The Ethnic Group Engagement Framework (EGEF) is provided in Attachment 5 in line



with ESS7. The scope of EGEF application is to apply to all components (if relevant). The EGEF will identify national legislations and institutional arrangement as well as the difference between GOL and WB requirements and clearly identify measures to be applied during Project preparation, implementation, and monitoring. The EGEF will also provide specific guidance on the consultation and engagement process and scope of an Ethnic Group Engagement Plan (EGEP) in close consultation with WB specialist. The EGEF should include, inter alia:

- The types of works likely to be proposed for financing under the project;
- The potential positive and adverse effects of such works on ethnic groups;
- Brief description of legal and regulatory framework concerning ethnic groups in Lao PDR, and gap analysis with WB's ESF;
- Methodology for screening for the presence of ethnic groups in the area of influence of the potentially eligible investments;
- Methodology to assess the nature and degree of the expected direct and indirect economic, social, cultural (including cultural heritage), and environmental impacts on ethnic groups who are present in, or have collective attachment to, the project area;
- Procedures to carry out meaningful consultations and, in case it is required, obtain free, prior, and informed consent with ethnic groups, including ways to ensure that ethnic groups will participate in project design and implementation;
- Procedures for developing sub-project specific EGEP. The scope and scale of the plans will be proportionate to the potential risks and impacts of the project to ethnic groups;
- Institutional arrangements (including capacity building where necessary) for screening project-supported activities and preparing EGEP;
- Monitoring and reporting arrangements, including mechanisms and benchmarks appropriate to the project;
- Grievance Redress Mechanism, building on local grievance mechanisms and accessible to ethnic groups;
- Disclosure arrangements for EGEPs to be prepared under the EGEF.
- Gender will be considered a cross-cutting element of all the proposed activities.

6 SMP IMPLEMENTATION ARRANGEMENTS AND CAPACITY BUILDING

93. The SMP implementation arrangements and capacity assessment and building are provided in Section 6 of the ESMF.



7 CONSULTATION AND STAKEHOLDER ENGAGEMENT

7.1 OBJECTIVES

94. The objectives of the Stakeholder Engagement Plan are to:

- Offer opportunities for stakeholders to raise their concerns and submit their opinions, to incorporate this into the project when possible, and to provide this feedback to stakeholders.
- Create avenues for complaints handling and grievance management.
- Create opportunities for information sharing and disclosure.
- Foster strong project community relationships.
- Ensure meaningful consultation and the consideration of stakeholder's expectations and concerns into the implementation arrangements for the programme, including feedback on environmental and social mitigation measures and their implementation.

95. In order to achieve this, the project will:

- Provide meaningful information in a format and language that is readily understandable.
- Provide information in advance of consultation activities when possible.
- Disseminate information in a manner and location easy for stakeholders to access it.
- Establish a two-way dialogue that gives the Project and stakeholders the opportunity to exchange views and information, and have issues heard and addressed.
- Ensure inclusiveness in representation of views, including those of women, the elderly people living with a disability, ethnic peoples, and other vulnerable people, as necessary.
- Ensure any obstacles to participation that are identified are removed so that views of different stakeholders can be obtained.
- Ensure there are clear mechanisms for responding to people's concerns, suggestions, and/or grievances.
- Incorporate feedback of stakeholders into project design, and report back to stakeholders.
- Monitor stakeholder engagement activities and include project stakeholders in monitoring to the extent possible.
- Incorporate stakeholder engagement as part of the Project management responsibilities of the EPFO, MPWT and MONRE, and ensure staff, especially the Environment and Social focal persons are equipped with specific responsibilities and budget.

96. For C1,2 & 4, EPF PMU will ensure that MONRE SIAs and MPI SIA will implement activities with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities and components;

97. For C3, the project will engage stakeholders at various stages: during the initial design



of landfill, detailed design, prior to civil works commencing and during, and post-civil works. Engagement will vary in each stage of the project life. More details on stakeholder engagement please see the Stakeholder Engagement Plan as a stand-alone document. The SEP will be dynamic and flexible to changes throughout the project life. The SEP should be read together with other project documents (i.e., ESMF/ESMP, RPF/RAP, EGEF/EGEP and ESCP).

98. There will be several ways to engage with stakeholders and the Project shall choose the most appropriate method depending on the type of stakeholder and the goal of engagement. The project is expected to involve diverse groups of stakeholders from national to village levels, including local communities, government line agencies, mass organizations and the private sector.

7.2 CONSULTATIONS DURING PROJECT PREPARATION

99. Key Informant Interviews (KII) and Focused Group Discussion with key concerned departments and local communities have been carried during 9 to 16 August 2022 with key objectives. The key objectives of the consultation are to:

- Collect relevant information from the key project implementing entities to assess institutional arrangements and capacity;
- Present the main objective of the EWMP and its brief project description;
- Seek their opinions on the project development and implementation;
- Collect their opinions on the potential positive and negative impacts of the EWMP as well as their suggestions and recommendations.

100. Key Informant Interview (KII) was undertaken during 09 to 16 August 2022 with a total of 22 key representatives (9 women) from DOE, DINE, NRERI, PTI, DHUPD, VCOMS, Small B, and Xaythany district hospital. The summary of KII is summarized as follows:

- **Positive impacts:** Improve environmental and waste management, more employment opportunities and income, promote involvement of private sector in the waste management
- **Concerns on sustainability of the project,** labour influx leading to social/community conflicts with communities, unfair employment rate, labour discrimination, odour, fly, increased transportation to new landfill facilities, and road safety, resettlement, social conflicts, child, OHS of waste pickers and collectors
- **Recommendations and suggestions:** (i) set clear roles and responsibility among the relevant agencies (for example: design, construction, operation and monitoring and reporting etc); (ii) the operation agency needs to pay attention on O&M practices to ensure sustainable management of the waste management facilities; (iii) development of operation manual and capacity building; and (iv) regular monitoring and evaluation and ensure that the social management plan and the O&M are strictly followed.



101. Focused Group Discussion (FGD) was carried out on 11 August 2022 by the EPF consultants together with technical staffs from EPFO, NRERI and PTI in Ban Naphasouk village, the KM32 landfill and Nahai village (KM16 Transfer Station) with a total of 82 participants including 52 females. Most of them are Lao Tai with only 3 participants (waste pickers) are Khmu. The summary of FGD is summarized as follows:

- About 195HHs with 1800 people including 482 females (all are Lao Tai) and 90% of them depends on waste picking and selling;
- There are 264 registered waste pickers (124 females and 140 males) with ages ranging from 14 to 63 years old. Most of them are Lao Tai with only 3 are Khmu.
- There are OHS Risks including accidents and injuries from excavator excavated the waste without signalling or warning. Surprisingly, they said they did not have health issues (only normal cold and fever) and they did not smell any things from the landfill which was different from information given by the village authorities;
- Village authorities of Naphasouk village: support the project development as there is a need to improve the waste management in the VTE capital but request the project to help on the villagers (waste pickers) on their livelihood.
- Both villagers from Naphasouk village (who are considered themselves as seasonal waste pickers) and registered waste pickers do not support to move the waste to other place. If no waste to pick some of them said they will find work at available factories but it will be hard because only husband can go to work at factory and wife has to care kids and family. Salary at factory is low about LAK1.5m which is not enough to send their kids to schools, or they may not be able to send their kids to school;
- Villagers from Naphasouk village do not recommend building toilet and shelter at the landfill because no one taking care and the shelter can create social issues such as: place drug and alcohol consumption can lead to violence and sexual harassment and abused. The toilet had been built by Pheun Mit Charity (A charity helping homeless and poor people). However, registered waste pickers have requested for toilets and shelter at the landfill;
- Both Villagers from Naphasouk village and registered waste pickers have requested the followings (i) an increase in unit rate paid for their collected recycle wastes as now it is low (LAK300/Kg); (ii) more excavators to move/push the waste so they can easily sort the waste, big space for sorting the waste; (iii) request the excavator driver to provide signal or warning (horn); (iv) a safe space to park motorbike and motorbike with extended trailer and happy to pay fees (2000-5000LAK for security man to watch/protect their motorbike; (v) request for PPE; (vi) rehabilitation of access road: pave the road (or at least gravel) for both access road to KM32 and to KM16.

102. Feedback, recommendations, and concerns raised during the KII and FGD have used to refine the identification of potential risks, and impacts (both positive and adverse), validate key assumptions and improve risk mitigation measures proposed in this SIA-SMP. More details of the KII and FGD results with list of Participants are provided in the project's



Stakeholder Engagement Plan (SEP).

103. The SEP includes full details of the consultations carried out during project preparation, including concerns/comments and should be read together with this ESMF.

7.3 CONSULTATIONS DURING PROJECT IMPLEMENTATION

104. Stakeholders will be kept informed as the project develops, including reporting on project environmental and social performance and implementation of the stakeholder engagement plan and grievance mechanism. The EWMP shall report quarterly to the public before and during construction when the public may experience more impacts and annually during implementation. Consultations on specific activities shall be undertaken. In addition to written reports submitted to relevant departments/offices, reporting shall be undertaken in the form of meetings/workshops at provincial, district and village levels, involving presentation and discussion. More details are provided in SEP.

7.4 REPORTING BACK TO STAKEHOLDERS

105. The Stakeholder Engagement Plan will be periodically revised and updated as necessary in the course of the EWMP implementations in order to ensure that the information presented herein is consistent and is the most recent, and that the identified methods of engagement remain appropriate and effective in relation to the project context and specific phases of the development. Any major changes to the project related activities and to its schedule will be duly reflected in the SEP.

8 GRIEVANCE REDRESS MECHANISM

106. The GRM is described in full in the project's Stakeholder Engagement Plan (SEP). The key principles of the grievance mechanism are to ensure that:

- The basic rights and interests of affected people, including ethnic groups, are protected.
- The concerns of affected people, including ethnic groups, arising from the project implementation process are adequately addressed.
- Entitlements or livelihood support for affected people, including ethnic groups, if required, are provided on time and accordance with the above stated government policy and World Bank's ESF, and
- Affected people, including ethnic groups, are aware of their rights to access grievance procedures free of charge for the above purposes.

107. The GRM seeks to resolve concerns promptly, using an understandable process that is culturally appropriate and readily accessible at no cost. Grievances can be submitted if someone believes the Project is having a detrimental impact on the community, the environment, or on their quality of life. Stakeholders may also submit comments and



suggestions.

108. The EPF PMU will be responsible for receiving and resolving in a fair, objective, and constructive manner, all concerns or complaints raised in related to the C1,2 &4 while MPWT PMU will be responsible for receiving and resolving in a fair, objective, and constructive manner, all concerns or complaints raised in related to C3. Their broad responsibilities of the grievance management include:

- Developing and publicizing the grievance management procedures.
- Receiving, reviewing, investigating, and keeping track of grievances.
- Adjudicating grievances.
- Monitoring and evaluating fulfilment of agreements achieved through the grievance mechanism.

109. For the interest of all parties concerned, the grievance mechanism is designed with the objective of solving disputes as soon as possible. A recommended timeframe for the resolution of a complaint should be sought within two weeks.

110. In the EWMP it is envisaged there could be five types of grievances:

- Grievances relating to land acquisition, that follow the Resettlement Action Plan's GRM (detailed in the project's RPF/Draft RAPs).
- Grievances related to ethnic groups who may be excluded from project activities, attachment to land, different cultural practices, low literacy levels, lack of Lao language
- Grievances related to Gender-Based Violence (GBV), Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH); and Violence Against Children (VAC
- Grievances related to project implementation (including relating to environmental and social impacts, health, worker's camp, pollution and waste, etc.). Some of these may be specific to ethnic groups.
- Job-related disputes (detailed in the project's LMP).

111. More details on GRM provided in SEP.

9 MONITORING AND REPORTING

112. SMP monitoring and reporting are provided as part of ESMF (Section 9) while site specific social monitoring is provided in the Pre-ESIA for KM32.

10 BUDGET

113. The SMP implementation cost is included in the ESMF cost (Section 10).

11 LIST OF ESMF ANNEXES AND ATTACHMENTS

The list of SIA-SMP Attachments provided in a separated document (Volume II) includes:



- Attachment 1A: Labour Management Procedures (LMP) with Worker Grievance Procedure for C3
- Attachment 1B: Labour Management Procedures (LMP) with Worker Grievance Procedure for C1,2 & 4
- Attachment 2: Community Health and Safety Plan (CHSP) for all Components
- Attachment 3A: Sample Code of Conduct on SEA/SH and VAC for C3
- Attachment 3B: Sample Code of Conduct on SEA/SH and VAC for C1,2,4
- Attachment 4: Resettlement Policy Framework (RPF) (including livelihoods restoration for waste pickers)
- Attachment 5: Ethnic Group Engagement Framework (EGEF)