Lao People's Democratic Republic

Peace Independence Democracy Unity Prosperity

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Ministry of Natural Resources and Environment

and

Ministry of Public Works and Transport

Lao PDR Pollution and Waste Management Project (P510198)

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

Volume I - Main Report

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ABBREVIATIONS AND ACRONYMS

3R	Reduce, Reuse and Recycle
ARAP	Abbreviated Resettlement Action Plan
ASEAN	Association of Southeast Asian Nations
AWPB	Annual Work Plan and Budgets
C1	Component 1
C2	Component 2
CERC	Contingency Emergency Response Component
CHSP	Community Health and Safety Plan
COC on SEA/SH and VAC	Code of conduct on Sexual Exploitation Abuse/Sexual Harassment and Violence Against Children
COVID19	Corona Virus 19
CTA	Chief Technical Advisor
DCC	Department of Climate Change
DGs/DDGs	Director Generals/ Deputy Director Generals
DHUP	Department of Housing and Urban Planning
DNEI	Department of Natural Resources and Environmental Inspection
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 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 Fund
EPFO	Environment Protection Fund Office
E&S	Environmental and Social
ESCOP	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
EXRI	EX Research Institute Ltd
FGD	Focused Group Discussion
FM	Financial Management
FPIC	Free Prior and Informed Consent
GBV	Gender Based Violence
GCB	Green, Clean and Beautiful
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
Km	Kilometer
km^2	Square kilometre
LFND	Lao Front for National Development
LMP	Labour Management Procedures
LWU	Lao Women's Union
MAF	Ministry of Agriculture and Forestry
M&E	Monitoring and Evaluation
MOF	Ministry of Finance
MOIC	Ministry of Industry and Commerce
MONRE	Ministry of Natural Resource and Environment
MPWT	Ministry of Public Works and Transport
MEM	Ministry of Energy and Mines
MPI	Ministry of Planning and Investment
NGO	Non-Government Organization
NRERI	Natural Resources and Environmental Research Institute
NPAP	National Plastic Action Plan
NPSC	National Project Steering Committee
OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PAP	Project Affected People
PCU	Project Coordination Unit
PDO	Project Development Objective or Program Development Objective
PMU	Project Management Unit
PONRE	Provincial Offices of Natural Resource and Environment
PPE	Personal Protective Equipment
Pre-ESIA	Preliminary Environmental and Social Impact Assessment
PTI	Public Works and Transport Institute
PWMP	Laos Pollution and Waste Management Project
RAP	Resettlement Action Plan
RDF	Refuse-Derives Fuel
RPF	Resettlement Policy Framework
SCOC	Social Code of Conduct
SDAs	Subproject Delivery Agencies
SEA	Strategic Environmental Assessment
SEA-MaP	Southeast Asia Regional Program on Combating Marine Plastics
SEP	Stakeholder Engagement Plan
SIA-SMP	Social Impact Assessment and Social Management Plan
SMP	Social Management Plan
SWM	Solid Waste Management
US$ or $	United States dollar
UXO	Unexploded Ordnance
VCOMS	Vientiane City Office for Management and Service
VTC	Vientiane Capital
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 increased generation of solid wastes. To address these challenges, 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 Environmental Protection Fund Office (EPFO) has been preparing a project, namely Pollution and Waste Management Project (PWMP), for possible financing by the World Bank (WB). The project will be implemented between 2025 and 2031 with a total budget cost of US $37.85 M, of which US $34.5 M is from the National IDA19 country allocation, and US $3.35 M is from the PROBLUE grant for plastic activities. Project objectives and activities are provided in Section 1 and PAD.

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 the necessary ESF documents 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 2. This document is the ESMF of the PWMP which covers all project components.

E2. Project Objectives and Activities

The Development Objectives (PDO) of PWMP is to strengthen capacity for waste and pollution management, improve municipal solid waste services in targeted areas, and provide immediate and effective response in case of an Eligible Crisis or Emergency..

The PWMP will also contribute to the SEA-MaP program development objective (PDO), which is to reduce plastics consumption, increase recycling, and minimize leakages to prevent land- and sea-based marine plastic pollution in Southeast Asia (see Section 1 of the main text).

Achievement of the PWMP PDO will be measured by the following indicators:

(a) Strengthen Laos' monitoring and enforcement of pollution control:

i. Entities which are monitored for pollution compliance according to the new compliance monitoring system (Number).

(b) Improve waste management in targeted areas in Lao PDR:

ii. Municipal solid waste collected that is recycled, composted, and/or safely treated in Vientiane Capital (Percentage).

iii. People provided with access to improved municipal solid waste management services in Vientiane Capital (Number).

iv. 'Plastics policies, guidelines, or standards established and aligned with the Regional Action Plan' (Number). This is the common indicator of the SOP.

The Project activities will be implemented through the following 3 components while more details are provided in Section 1 of the main text and PAD:

- ***Component 1 (C1): Advancing System for Waste and Pollution Management (US$7.87M of which US$4.52 M National IDA, and US$3.35 M PROBLUE grant).*** The objective of this component is to strengthen the GoL's policies and capacities for pollution control and waste management. Activities under Component 1 are organized as two subcomponents: Subcomponent 1A is focused on capacity support to the GoL for implementing environmental risk management for air and water pollution control in selected sectors, and subcomponent 1B is focused on supporting the GoL with new policies and regulations and capacity support for waste and plastic management.
- ***Component 2 (C2): Improving Municipal Solid Waste Services in Vientiane Capital (US$29.98 M national IDA).*** This component aims to enhance the institutional, operational, financial, and technical capacity of MPWT and VCOMS for policy development and implementation of solid and plastic waste management. Activities under Component 2 are organized as two subcomponents.
- ***Component 3 (C3). Contingency 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. This Component will contribute to WBG GCRF Pillar 3.

E3. Project Location

The project will invest in waste management facilities in Vientiane Capital. Landfill rehabilitation works will be undertaken at the KM32 landfill in Xaythany district, and waste transfer stations with treatment facilities will be developed in Xaysettha and Naxaythong

districts. Activities for implementing village-scale waste recycling, will be done in Vientiane Capital, Vientiane Province and Oudomxay province. Strengthening of policy, legislation and regulation will primarily involve central government agencies in Vientiane Capital.

E4. Purpose and Scope of the SIA-SMP

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 (C1) to be implemented through EPFO and Component 2 (C2) to be implemented by MPWT. The SIA (i) describes the general national social background that is relevant to C1 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 C2;
- Annex 1B Labour Management Procedures (LMP) with Worker Grievance Procedure for C1 &3;
- Annex 2 Community Health and Safety Plan (CHSP) for all Components;
- Annex 3A Code of Conduct on SEA/SH and VAC for C2;
- Annex 3A Code of Conduct on SEA/SH and VAC for C & 3;
- Annex 4 Resettlement Policy Framework (RPF) (including livelihoods restoration); and
- Annex 5 Ethnic Group Engagement Framework (EGEF).

E5. 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, EPFO, 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 risk management (ERM) and capacity building of local authorities to be implemented under Component 1 will clearly support urban cleanliness, waste reduction, pollution control, and overall ERM capacity of GOL. 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 Component 3 will continue to strengthen EPFO capacity to engage key stakeholder and tap more funding supports from national and international sources and thus enhance sustainability of Project activities.

The PWMP investments proposed under Component 2 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 including capacity building of VCOMS and mitigation of potential negative impacts to waste pickers and other disadvantage or vulnerable groups.

The construction and operation of two new landfill cells proposed under the Km 32 landfill site will reduce some of the environmental impacts associated with disposal of the future incoming waste to the landfill. The proposed new landfill cells include leachate collection and treatment, which when managed and maintained properly will to some extent reduce the current pollution of surface water bodies draining from the landfill site and thereby also reduce adverse impacts caused by discharge of polluted water on agricultural fields. Human health risks due to contamination of water polluted by wastewater/leachate from the landfill site will also be reduced. Overall, compared with a “do nothing” scenario, the proposed improvements to waste disposal, leachate collection and treatment and waste disposal operations including a complete stop for open burning of waste, daily cover of incoming waste, and reduced littering - are expected to reduce odour nuisances, air and water pollution and improve health and safety for landfill workers and waste pickers.

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 addition of some inhabitants in the target areas to be selected for the 3R and NPAPs who will benefit from improved policies, regulations, monitoring and enforcement, legislation, strengthened institutions, and increased capacities the agencies responsible for implementation of Component 1.

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. The government will consider the effect on poorer households as it establishes new waste collection fees.

Overall Negative Impacts/Risk and Proposed Mitigations

Overall, the Project is classified as a high-risk project while the Project components have differing risk profiles. The social risks and impacts of the Component 1 and Component 3 are classified as low to moderate while those for Component 2 are classified as moderate to high. The high risks are mainly related to operation phase of activities at Km32 landfill taking into account (i) the existing waste at the Km32 Site and associated legacy risks and impacts; and (ii) limited institutional capacity and resources pertaining to waste facilities management.

There is historic and ongoing infiltration of polluted leachate from the legacy waste at the Km32 site which, if not mitigated, could potentially continue to pose significant long-term risks to the surface water and regional groundwater resources which are used for irrigation and/or domestic consumption and may continue to raise concerns on health impacts from nearby residents. During stakeholder consultations carried out during the project preparation, concerns have been raised by the nearby villages on impacts to rice productivity and impact on human skin (rash) and breathing due to air pollution and malodor from landfill burning, operation, and occasional landfill fire affect nearby villages. The project activities has included support for preparation of action plan and budget for managing legacy environmental and social issues so that the historical pollution at the site does not pose a significant risk to health and safety of workers and communities. With effective implementation of appropriate ESF Instruments and adequate design measures for solid waste management facilities as proposed in the Pre-ESIA, E&S risks and negative impacts from the Project's activities is expected to be at acceptable level. The project has

also included TA support for Detailed Design and for strengthening ES capacity of MPWT to manage waste facility including at Km32 landfill.

E&S Risks for Components 1

Social risk for Component 1 is considered low to moderate. Activities to be implemented under these components will be limited to technical assistance (TA); procurement of equipment and other goods/supplies; policy development; training, workshops, and other capacity building. However, the TA related to 3R, NPAPs, and Pilot investment projects/activities may also involve very small civil works such as installation of septic tanks, grease/oil traps, and/or simple solid/plastic waste storage room or refurbishing of old containers. The proposed activities under the C1 will create positive impacts on GOL efforts to improve overall capacity on ERM, pollution control, and waste management. However, there are possible risks and negative impact as summarized below:

- Social risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker[1].This will be addressed through the implementation of LMP (Attachment 1);
- 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);
- Temporary social 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 6A of the ESMF)
- The social risks and negative impacts of the implementation of the TA related to 3R, NPAPs, and Pilot investment projects/activities are expected to be low 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 by a simple ESCOP (Annex 6A of the ESMF) or Simple Do and Don't Measures (Annex 6B of the ESMF), LMP (Attachment 1B). The social assessment and analysis of possible in informal waste workers and the value chain of actors

[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.

associated with plastic collection, recycling, also businesses who use plastics, may place any restrictions or costs will be included in the TOR for TA activities.

Social Risks for Component 2:

Component 2B will finance waste management and recycling infrastructure investments at three sites 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) rehabilitation of the existing landfill at the km32 in Xaythany district. Component 2A will provide TA to VCOMS for development and implementation of regulations and capacity building on waste management planning, financing and cost recover, and development of operation manuals as well as providing supports for improving waste picker's working conditions and other supports for solid waste and plastic waste infrastructure and equipment, and management.

The overall risks and impacts of C2 are classified as moderate to high. The high E&S risks are associated with the operation phase and are mainly due to the risks of continued and long-term impacts of legacy pollution from the existing waste management at the Km32 landfill. These are compounded by limited institutional capacity and resources pertaining to the operation of waste management facilities. Key risks and impacts of legacy pollution at Km32 landfill include: leakage of leachate, contaminate runoff or toxic and infectious waste components into surface water, soil and groundwater resources; impacts on aquatic and agricultural resources from polluted water resources; air pollution and malodor from landfill operations and landfill fire; concerns on community health due to release of leachate and air pollution from the open dumps and occasional landfill fire; and poor occupational health and safety conditions and sanitation. The E&S risks and impacts associated with the pre-construction and construction are assessed to be moderate, temporary and localized.

To ensure that the social risks and impacts from the Project will be assessed and managed to an acceptable level, a Pre-ESIA has been prepared for the proposed activities at the Km32 landfill based on the preliminary design and pre-feasibility study. The Pre-ESIA has confirmed that the Km32 landfill currently has significant social issues such as impacts on agricultural resources due to leakage of leachate/toxic waste components into soil, water resource; air pollution and odor; poor health and safety and sanitation and concerns on community health as discussed earlier. 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 mentioned sensitive environment receptors (surface and groundwater, soil, air, etc.) in and nearby Km32 landfill has been affected by pollution from existing waste.

Based on the proposed Project activities at the Km 32 landfill described in the preliminary design and pre-feasibility study, the Pre-ESIA has identified several opportunities for

reducing social impacts through strengthening the originally proposed conceptual technical design as the preferred project alternative. This strengthened technical design proposed in the Pre-ESIA is considered a preferred alternative that will be further evaluated and developed during the Detailed Design.

The project design will be subject to a full-scale social impacts assessment (ESIA) as required WB ESF and by GOL regulation and will 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 C2 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, Focus Group Discussions (FGD) were carried out on 11 August 2022 by the EPFO 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. There were representatives from village authorities, local residents, informal waste pickers[2], and registered waste pickers at the Km32. The team were divided into two teams and carried out the FGD at the three locations on the same date and during FGD the participants were divided into small groups of 8-10 participants. Key Informant Interviews were 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 results of KII and FGD are provided in Section 7 of this document while list of participants is provided in the SEP including details on the survey including the questionnaires used. The draft ESF documents (ESCP, SEP, ESMF, SIA-SMP, and Pre-ESIA) were disclosed on 29 November 2022 (https://laoepf.org.la/en/esf-documents-for-ewmp/) and revised draft on 23 December

[2] General villagers who are seasonal waste pickers

2022 (https://laoepf.org.la/en/esf-documents-for-ewmp-2/. A full-day public consultation at the national level was held on 20 December 2022). The details were provided in the project's SEP.

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 PWMP 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 due to low literacy levels, lack of Lao language.
- Grievances related to) 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).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 Laos Pollution and Waste Management Project (PWMP or the Project) for possible financing by the World Bank (WB) to be implemented from 2025 to 2021 with a budget of about US$ 37.85 M 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 2, 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. The main development objective of PWMP is to strengthen Laos' monitoring and enforcement of pollution control, improve municipal solid waste management in targeted areas in Laos, and provide immediate and effective response in case of an Eligible Crisis or Emergency.

5. The PWMP will also contribute to the SEA-MaP[3] program development objective (PDO), which is to reduce plastics consumption, increase recycling, and minimize leakages to prevent land- and sea-based marine plastic pollution in Southeast Asia. The Project 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.

6. 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

[3] The EWMP will be one of the national-level projects contributing to the Southeast Asia Regional Program on Combating Marine Plastics (SEA-MaP) (P175659) which was approved in June 2022 and follows a Series of Projects (SOP) approach to support marine plastics solutions at the regional and national levels.

infrastructure and equipment focusing in priority areas in Vientiane capital. The Project will facilitate the creation of models for solid waste management in target areas that can demonstrate improved and cost-effective performance and serve as inspirations for other areas.

7. The Project will seek to comprehensively support stakeholder collaboration across all aspects of the sector, most notably MONRE, MPWT, key sector agencies, and local governments responsible for solid waste management.

8. The Project will measure its success by the following indicators:

a. Strengthen Laos' monitoring and enforcement of pollution control:

i. Entities which are monitored for pollution compliance according to the new compliance monitoring system (Number).

b. Improve waste management in targeted areas in Lao PDR:

i. Municipal solid waste collected that is recycled, composted, and/or safely treated in Vientiane Capital (Percentage).

ii. People provided with access to improved municipal solid waste management services in Vientiane Capital (Number).

iii. 'Plastics policies, guidelines, or standards established and aligned with the Regional Action Plan' (Number). This is the common indicator of the SOP.

1.3 PROJECT COMPONENTS

9. The project activities will be implemented through the following 3 components (Please see PAD for Details Project Description). The project activities in Component 1 will be implemented by: MONRE's Department of Environment (DOE), Department of Natural Resources and Inspection (DNEI), Natural Resources and Environment Research Institute (NRERI), and Department of Water Resources (DWR). The MPWT (DHUP and PTI) and the VCOMS will implement Component 2.

- ***Component 1. Advancing System for Waste and Pollution Management.*** The objective of this component is to strengthen the GoL's policies and capacities for pollution control and waste management. Activities under Component 1 are organized as two subcomponents. (see Table 1-1).

TABLE 1-1: C1 SUBCOMPONENTS (REFERENCE: REVISED PAD/JAN 2025)

Component	Lead Implementing Agency
Component 1: Advancing System for Waste and Pollution Management	MONRE

Subcomponent 1.1: Upgrading Pollution Monitoring and Enforcement a. Develop (i) standard procedures for monitoring and evaluation of investment projects' compliance with Laos' environmental regulations; (ii) a compliance monitoring system for tracking environmental performance of investment projects; (iii) regulations for penalties for non-compliance with environmental regulations. b. Undertake compliance monitoring with focus on air and water pollution in the hydropower, mining, agriculture and industry sectors, and providing technical assistance to investment projects for improving environmental compliance. c. Provide technical assistance for strengthening air and water quality monitoring systems and for integrating the air and water quality data and information with the GoL's environmental compliance monitoring system. d. Provide technical assistance for enhancing capacity in other priority areas of ERM including on (i) ESIAs for the agriculture, mining, hydropower and industry sectors; and (ii) integrating climate risk and mitigation management as part of ERM interventions in the four priority sectors for environmental regulation.	MONRE
Subcomponent 1.2: Strengthen Waste and Plastic Management System a. Develop a National Waste Management Decree on non-hazardous and hazardous waste and relevant sub-regulations on waste management measures such as waste minimization, separation at source, service delivery, waste tariff collection, and budgeting for waste management and establish a cross-ministerial National Solid Waste Management Coordination Committee to support implementation of the Decree and regulations. b. Develop a national waste and pollution data and information system, and SOPs for data collection, data sharing and usage methodology for use by both national and local government. Collected data in this information system would be used to measure the progress of this project. c. Provide technical assistance and finance for	MONRE

implementation, monitoring and enforcement of the National Plastics Action Plan (NPAP).[4] d. Provide finance for scaling-up small-scale plastic waste reduction, collection and processing initiatives including waste banks for plastics collection at villages and schools, composting at schools, waste separation at the household level in target districts, training support for the informal sector with a focus on women and piloting refill and reuse stations with a focus on tourism hotspots.	
Subcomponent 1.3: Component 1 Coordination and Reporting. a. This subcomponent will finance fiduciary management, environmental and social risk management for Component 1. The Environment Protection Fund (EPF), which is a government fund created to mobilize funds for environmental and natural resources management, and one of the implementing agencies will lead this subcomponent.	EPF

- ***Component 2: Improving Municipal Solid Waste Services in Vientiane Capital.*** This component aims to enhance the capacity of MPWT and the Vientiane City Office for Management and Services (VCOMS) to improve their capacities in the policy development and implementation of solid and plastic waste management**.** Activities will be implemented through the following two subcomponents i.e. Subcomponent 2.1 focusing on capacity building for waste management planning, operation, monitoring, waste service delivery, and cost recovery at the local level and Subcomponent 2.2 focusing on waste and plastics management 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 (see Table 1-2).

TABLE 1-2: C2 SUBCOMPONENTS (REFERENCE: REVISED PAD/DEC 2022)

Component	Lead Implementing Agency
Component 2: Improving Municipal Solid Waste Services in Vientiane Capital	**MPWT**

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

Component	Lead Implementing Agency
Subcomponent 2.1. Municipal Solid Waste Service Planning, Operation, Monitoring, and Cost Recovery in Vientiane Capital: a. Developing local regulations and strengthening capacity for waste management planning; financial and revenue management including tariff and tipping fee setting, contract management and supervision of private waste operators; and waste recycling at KM32 landfill, transfer stations and landfill operations and management. b. Developing a waste management plan for Vientiane Capital that includes waste collection zones; waste collection schedules; resources management; fee structures (tariff, tipping fee); contract management; approaches for enhancing collection of tariffs and tipping fees; awareness raising and engagement with waste service users; waste facilities management; and waste data collection and regular environmental monitoring. c. Developing operational manuals for equipment maintenance, transfer stations, composting facilities, and landfill management including site selection, standard landfill design, standard operational procedures for construction, day-to-day operation, risk management, pollution monitoring, environmental and social safeguards, and landfill closure process. The operational manual for landfill will include the long-term plan for KM32 landfill upgrading and operation. d. Establish a registration system of informal waste pickers at KM32 landfill and provide support for improving waste pickers working conditions through: i. Vocational skills building and training, provision of protective equipment and health and safety training. ii. Interventions for improving female workers' access to jobs in the SWM sector described in the Gender assessment section (Section C) of PAD. iii. Support measures for children engaged in waste picking described in Annex 2 of PAD. iv. Allowing informal waste workers to safely access incoming waste at the KM32 landfill. e. Investment preparation for solid and plastic waste	MPWT (DHUP, DPWT and PTI) and VCOMS

Component	Lead Implementing Agency
infrastructure and equipment. This will include preparation of a feasibility study and detailed design, site-specific Environmental and Social Framework (ESF) instruments, an action plan for environmental and social legacy issues, and bidding documents	
Component 2.2: Municipal Solid Waste Service Infrastructure Investments in Vientiane Capital, with following activities a. Rehabilitate the KM32 landfill to extend its lifetime by at least 10 years with financing for: i. Civil works – capping and closing waste cells, relocation (and compacting) of existing waste, construction of new sanitary landfill cells to accept incoming waste, rehabilitating the existing leachate pond, constructing an internal access road in the landfill and regulation pond and leachate treatment facility, installing methane gas capturing pipes and leachate collection piping system, developing a waste reception area[5], clean-up of legacy waste in concession area[6], and building bathroom facilities for waste workers and upgrading of the administration office. ii. Equipment – a weighbridge and washing, crushing, and pelletizing equipment at the waste management community centre for informal waste workers, a solar plant for on-site electricity generation, trucks and other equipment for landfill operation. b. Establish the Naxaythong transfer station and composting facility (north-west of VC) with financing for: i. Civil works – build a waste transfer facility that will segregate organic waste, aggregate and compact regular waste for transfer to bigger waste transportation vehicles. The transfer station will also have a composting plant, administration office building,	MPWT (DHUP, DPWT and PTI), and VCOMS

[5] During the Detailed Design at KM32, the project will determine the precise location of the new sanitary landfill cells within the KM32 landfill area.

[6] A private company holds a 30-hectare concession adjacent to the VCOMS landfill site, which contains legacy waste previously disposed of by VCOMS.

Component	Lead Implementing Agency
vehicle maintenance workshop and bathroom facilities for waste workers. ii. Equipment - weighbridge; transportation truck, wheel loader, forklift and other equipment for transfer station operation. c. Upgrade the KM16 transfer station in Xaysettha District[7] with financing for: i. Civil works - waste transfer facility for segregating organic fraction of waste, aggregate and compact regular waste for transfer to bigger waste transportation vehicles; upgrading the existing composting plant; and vehicle maintenance workshop, and bathroom facilities for waste workers. ii. Equipment - a weighbridge; transportation truck, wheel loader, forklift, and other equipment for transfer station operation. d. Increase the waste collection equipment in sub-urban districts with financing for: i. Equipment including various size of waste collection vehicles from tricycles, waste-carts, collection bins, community collection point set-up, and waste containers.	
Subcomponent 2.3: Project Coordination and Reporting. a. This subcomponent will finance the costs of project management, monitoring, learning, and coordination across the implementing agencies. It will finance fiduciary management, environmental and social risk management for Component 2, and gender and civil engagement, communication, results and impact monitoring, and reporting for the entire project.	MPWT (DHUP and DPF)

- ***Component 3. Contingency Emergency Response Component (CERC)***. This component will provide an immediate response to an Eligible Crisis or Emergency, as

[7] Currently, the transfer station does not have any sorting and recycling functions.

needed. In an Eligible Crisis or Emergency, the GoL can seek reallocation of project funds to support emergency response and recovery.

10. **Project Financing**. The total project financing will be US $37.85 M, of which US $34.5 M is from the National IDA19 country allocation, and US $3.35 M is from the PROBLUE grant for plastic related activities. The project's costs breakdown and indicative financing by component and subcomponent are shown below.

Component/Subcomponent	IDA (US$M)	PROBLUE (US$M)	Total (US$M)
Component 1: Advancing Systems for Waste and Pollution Management	**4.52**	**3.35**	**7.87**
Subcomponent 1.1: Upgrading Pollution Monitoring and Enforcement	3.64	0	3.64
Subcomponent 1.2: Strengthen Waste and Plastic Management System	0.15	3.35	3.50
Subcomponent 1.3: Component 1 Coordination and Reporting	0.73	0	0.73
Component 2: Improving Municipal Solid Waste Services in Vientiane Capital	**29.98**	**0**	**29.98**
Subcomponent 2.1: Municipal Solid Waste Service Planning, Operation, Monitoring, and Cost Recovery in Vientiane Capital	1.65	0	1.65
Subcomponent 2.2: Municipal Solid Waste Service Infrastructure Investments in Vientiane Capital	26.64	0	26.64
Subcomponent 2.3: Project Management and Coordination	1.69	0	4.49
Component 3: Contingent Emergency Response Component	**0**	**0**	**0**
Total	**34.50**	**3.35**	**37.85**

1.4 PROJECT LOCATIONS

11. Under Component 1, the Project activities will be implemented nationwide on the part related to policy, regulations, and technical assistance (TA) related to Reduce, Reuse, and Recycle (3R), the National Plastic Actions Plan (NPAP), and pilot for improving environmental compliance of investment projects and activities will be conducted in Vientiane Capital and nearby provinces and the target areas to be identified during Project implementation according to the objective and scope of the proposed activities to be discussed and agreed with WB.

12. Component 2 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 (the existing landfill) 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 Naxaythong site selection is presented in Annex 2. The Project Areas of Influence for Component 2 will cover transportation routes between collection points to transfer stations, and transfer stations to KM32 landfill site, existing landfill at KM32 which the project will rehabilitate, existing transfer station at KM16, new transfer station in Naxaythong district, and auxiliary facilities including worker camps, and borrow pits. More details description on project locations for investments under Component 2 are provided in *Section 3.4* and details of project activities and sensitive environmental and social receptors at Km32 landfill are provided in in a Preliminary Environmental and Social Impact Assessment (Pre-ESIA) prepared for KM32 landfill rehabilitation.

1.5 SIA-SMP Scope and Objective

13. The Social Impact Assessment (SIA) provides information and analysis to be used in the preparation of other ESF instruments. The SIA covers Component 1 (C1) to be implemented through EPFO and Component 2 (C2) to be implemented by MPWT. The SIA (i) describes the general national social background that is relevant to C1 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 C2;
- Annex 1B Labour Management Procedures (LMP) with Worker Grievance Procedure for C1 &3;
- Annex 2A Community Health and Safety Plan (CHSP) for all Components
- Annex 3A Code of Conduct on SEA/SH and VAC for C2;
- Annex 3A Code of Conduct on SEA/SH and VAC for C1;
- 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

14. 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 PWMP 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	• 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	• 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

Subjects	Related national policies, strategies, laws, regulations
	Affected by Development Projects, No. 84/GoL, dated 05/04/2016 • The Decree on Environmental Impact Assessment, No. 389/GoL, dated 20/10/2022 • The Public Involvement Guidelines in ESIA Process, No. 707/MONRE, dated 05/02/2013 • Other applicable laws and regulations
Ethnic Groups including engagement	• 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, no 16/MoI, 09/11/2016; • 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)	• 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	• Law on Health Care, No. 58/NA, dated 24 December 2014;

Subjects	Related national policies, strategies, laws, regulations
procedure to combat COVID-19.	• 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)

15. 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)

16. 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 SOCIAL BASELINE

17. Section 3.1 provides a brief overview on the social context in Lao PDR while Section 3.2 to 3.4 provides brief social baseline conditions of Vientiane Capital. Section 3.5 provides information specific to the locations under Component 2 (a more detailed description of social baseline conditions of the Km32 Site is provided in the standalone Pre-ESIA report).

3.1 OVERVIEW OF SOCIO-ECONOMIC PROFILE IN LAO PDR

Demographics

18. 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%8. 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

19. 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.

20. 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.

21. 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.

[8] Lao Statistic Bureau, 2020a

22. 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.

23. 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.

24. 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.

25. 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

26. 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%). Laos 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.

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.[9] 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. Lao PDR is small in population, with only the capital city Vientiane having a population of more than 100,000 people and few high-rise buildings. City centers 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.

29. 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 GDP10. 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.

30. 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 PM2.5 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

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

[10] Ibid.

Development Plan (NSEDP),[11] 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.

31. 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 NSEDP. 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.[12] Two major sources of water pollution in Laos are faecal contamination or microbial pollution of drinking water, and arsenic in groundwater tube wells in central and southern parts Laos that are used for drinking.[13] 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.[14] 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 NSEDP-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.

32. 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. Waste collection and transfer systems to the dumpsites are not properly organized (waste collection trucks are not covered, overloaded and waste leakage before it even gets to dumpsite). 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

[11] 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.

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

[13] Ibid.

[14] 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

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.

33. 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.

34. 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 micro plastics 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.

35. 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.

36. 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

37. 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.

38. 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, etc[15]. There are customs and various festivals such as the Lao New Year, the rocket festival, Hokhaopadapdin festival, floating lantern festival, boat festival.

39. 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 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.

40. 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

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

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.

41. 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)

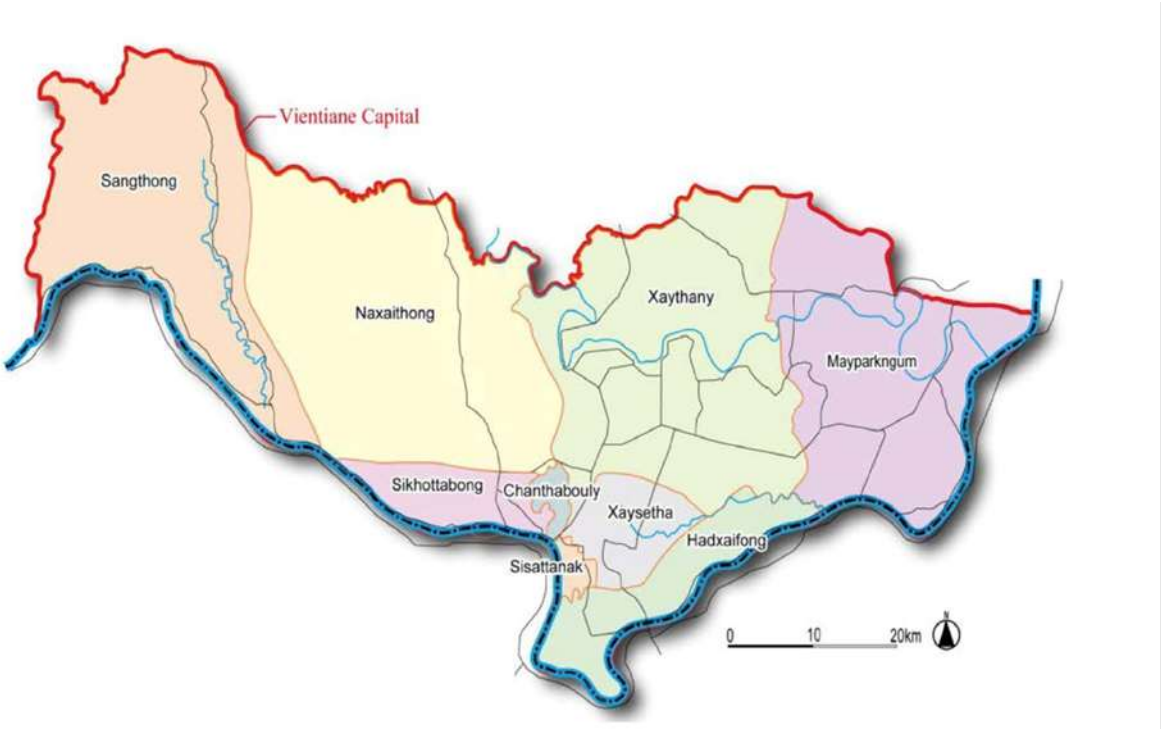

Figure 3-1 Map of Vientiane Capital (JICA, 2011a)

3.3 BRIEF DESCRIPTION OF PROPOSED SITES TO BE INVESTED UNDER C2

42. The investments will be divided into three locations strategically selected (at the existing landfill Km32, existing waste transfer station Km16, and in Naxaythong district) 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.

43. The brief site description of the three sites to be invested under C2 is provided below while the detailed social baseline conditions of the Km32 Site are provided in the Pre-ESIA.

3.3.1 Brief Description of the KM32 Investments

44. The preliminary design of the proposed Km 32 Landfill Project includes the following main activities and facilities:

- Civil works: capping waste cells, installing landfill liner, constructing an internal access road in the landfill and regulation pond and treatment facility, installing methane gas capturing pipes and leachate collection piping system, developing new sanitary landfill cells with waste reception area, developing hazardous waste storage, developing bathroom facilities including changing rooms (separate for male and female waste pickers and workers) and upgrading of the administration office including rest rooms, canteen, training rooms. All legacy waste to be provided with a low permeability cap.
- Equipment: a weighbridge and washing crushing and pelletizing equipment at the waste management community centre, a solar plant for on-site electricity generation, and trucks and other equipment for landfill operation.

Figure 3-2 The Conceptual Landfill Design (Pre-FS Report, June 2022)

45. 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).

46. The total area of the landfill site is 100 hectares is divided into two main sites:

- A 70 ha large area covering the 50 ha southern half of the entire site and 20 ha on the north-western part of the site. This site is managed by Vientiane City Office for

Management and Service (VCOMS) and includes the active landfill disposal area, waste sorting operations and previous landfill cells. This site constitutes the Km 32 Landfill Project under PWMP.

- A 30 ha large are on the north-eastern part of the 100 ha site. This site is leased to Vientiane Waste Management Company (VWMC) under a concession agreement. The concession agreement dates back to 2011 and originally covered the 50 ha northern part of the 100 ha landfill site. The agreement was amended in 2019 and further amendments negotiated in 2023 are expected to be signed in early 2024. With these amendments, the land lease will be reduced to the said 30 ha. VWMC plans to establish waste management facilities including plastic recycling, composting for production of fertilizer, and production of Refuse Derived Fuel for generation of electric power in a waste-to-energy plant.

47. The VWMC facilities do 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.

48. 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. This private company, as a VCOMS's contractor, will also have ES related responsibilities as a contractor of VCOMS under the project I.e., on labor procedures, OHS, grievance mechanism, and livelihood options offered to informal waste workers.

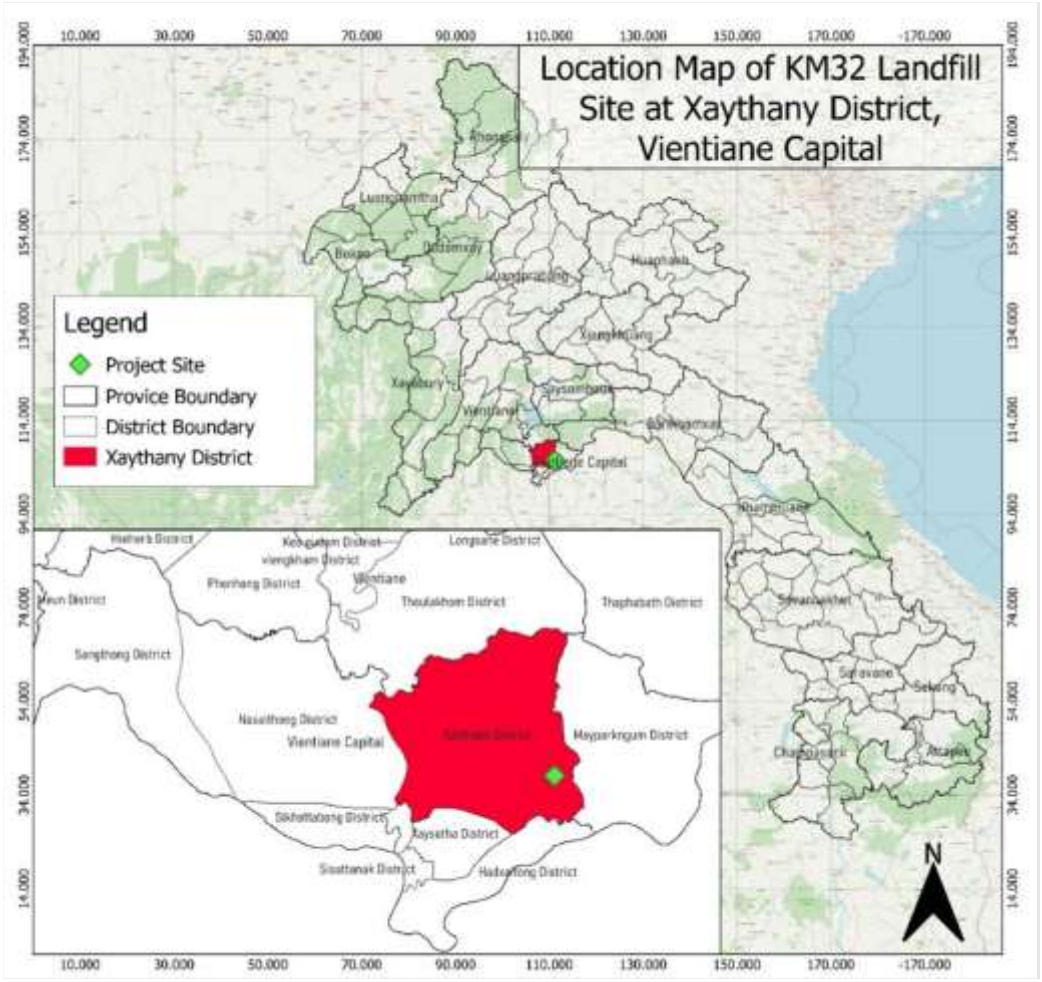

Figure 3-3 Location of Xaythany District, Vientiane Capital

49. 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 3-4 Surrounding of the KM32 Landfill (Sub-project Site)

50. More details on the social baseline conditions of the Km32 Site are provided in the standalone Pre-ESIA report.

3.3.2 Brief Description of the Km16 Facility

51. Under C2, upgrade the KM16 transfer station in Xaysettha District to be an Integrated Waste Management Facility with financing for:

- Civil works - waste collection, sorting, and material recovery facilities; upgrading the existing composting plant;
- Separate bathroom facilities including changing room for males and female workers and waste pickers.
- Equipment - a weighbridge; transportation truck, wheel loader, forklift and other equipment for transfer station operation.

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

53. 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.

54. 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.

55. 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.

56. 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.

57. 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 site16 (See Figure 3-7). The detailed social baseline conditions of the KM16 will be collected and analyzed during the full ESIA stage.

58. 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.

[16] According to the WB IFC standard, it should be at least 250m radius buffer zone.

Figure 3-5 Site location Map

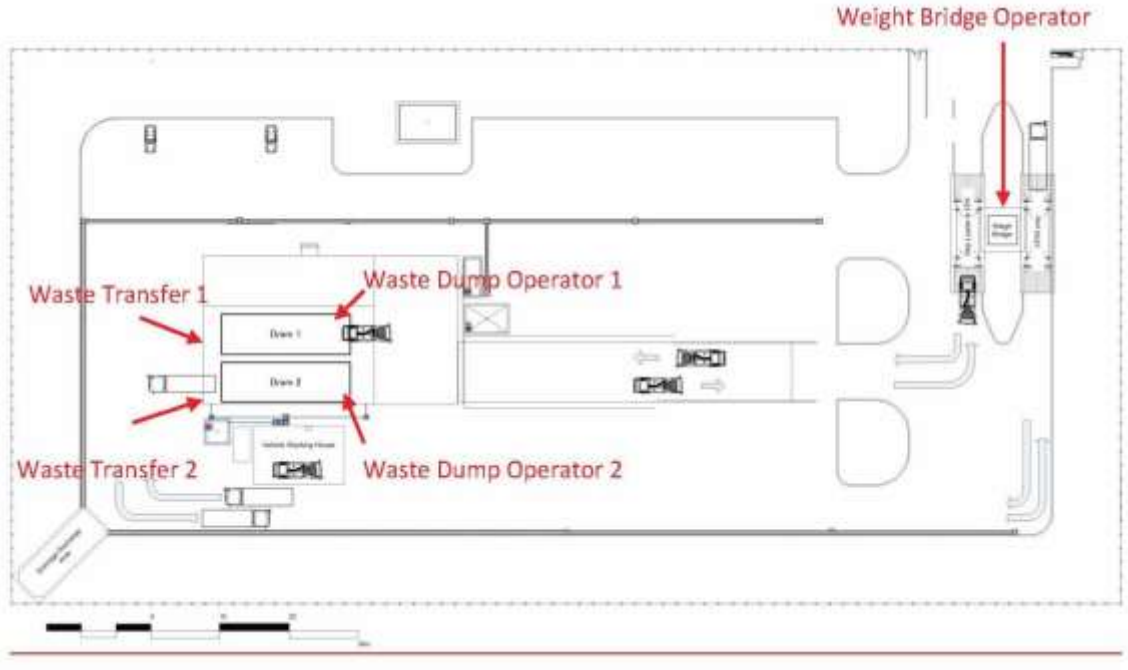

Figure 3-6 Operational Diagram of the waste transfer station at KM16

3.3.3 Brief Description of the Naxaythong Site

59. Under C2, eestablishment of the Naxaythong transfer station and Integrated Waste

Management Facility (in the north-west of Vientiane Capital) with financing for:

- Civil works - a material recovery facility, composting plant, administration office building including rest rooms, canteen, training rooms.
- Bathroom facilities including changing room for male workers and waste pickers.
- Bathroom facilities including changing room for female workers and waste pickers.
- Equipment - sorting, washing, shredding plastics waste equipment; weighbridge; transportation truck, wheel loader, forklift and other equipment for transfer station operation.

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

61. 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.

62. 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.

63. 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.

64. 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.

65. The detailed social baseline conditions of the Naxaythong site will be collected and analysed during the full ESIA stage under the Component 2.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.

4 POTENTIAL SOCIAL RISKS, IMPACTS AND PROPOSED MITIGATION MEASURES

66. Overall, the project is classified a high-risk project. Project components have differing risk profiles. Social risks and impacts of the Component 1 are classified as low to moderate while the Component 2 risks and impacts are classified as moderate 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 as well as lack of clear policies, regulations, and limited institution capacity including the risk of inadequate Detailed Design at Km32.

67. 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

68. Improved policy and regulations related to environmental risk management (ERM) under Component 1 will support urban cleanliness, waste reduction, pollution control, and overall ERM capacity of GOL. This will lead to positive health outcomes for residents, reduce expenditure on healthcare and support urban poverty alleviation. Implementation of the SEA regulations as well as other ERM tools and pollution control measures will also contribute to reduction of waste generation and of negative impacts and promote positive impacts and participation of the sector agencies and local authorities on ways to incorporate E&S consideration into the upstream planning and monitoring especially those related to potential cumulative impacts and uncertainty related to climate change. Implementation of Component 3 will continue to strengthen EPFO capacity to engage key stakeholders and tap more funding support from national and international sources and thus enhance sustainability of Project activities.

69. The PWMP investments proposed under Component 2 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 including capacity building of VCOMS and mitigation of potential negative impacts to waste pickers and other disadvantage or vulnerable groups.

70. The construction and operation of two new landfill cells proposed under the Km 32 landfill site will reduce some of the environmental impacts associated with disposal of future incoming waste to the landfill. The proposed new landfill cells include leachate collection and treatment, which when managed and maintained properly will to some extent reduce the current pollution of surface water bodies draining from the landfill site and thereby also

reduce adverse impacts caused by discharge of polluted water on agricultural fields. Human health risks due to contamination of water polluted by wastewater/leachate from the landfill site will also be reduced. Overall, compared with a "do nothing" scenario, the proposed improvements to waste disposal, leachate collection and treatment and waste disposal operations including a complete stop for open burning of waste, daily cover of incoming waste, and reduced littering - are expected to reduce odour nuisances, air and water pollution and improve health and safety for landfill workers and waste pickers.

71. 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 addition of some inhabitants in the target areas to be selected for the 3R and NPAPs who will benefit from improved policies, regulations, monitoring and enforcement, legislation, strengthened institutions, and increased capacities the agencies responsible for implementation of Component 1.

72. 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.

73. 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. The government will consider the effect on poorer households as it establishes new waste collection fees.

4.2 Social Risks and Impacts and Proposed Mitigation Measures of C1

74. Social risk for Component 1 is considered low to moderate. Activities to be implemented under these components will be limited to technical assistance (TA); procurement of equipment and other goods/supplies; policy development; training, workshops, and other capacity building. However, the TA related to 3R, NPAPs, and Pilot investment projects/activities may also involve very small civil works such as installation of septic tanks, grease/oil traps, and/or simple solid/plastic waste storage room or refurbishing of old containers. The proposed activities under the C1 will create positive impacts on GOL efforts to improve overall capacity on ERM, pollution control, and waste management. However, there are possible risks and negative impact as summarized below:

- Social risks related to the working conditions, labour disputes transmission of infectious diseases (such as Covid-19) of Project Worker[17].This will be addressed through the implementation of LMP (Annex 1);
- 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 (Annex 3B);
- Temporary social 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 6A of the ESMF)
- The social risks and negative impacts of the implementation of the TA related to 3R, NPAPs, and Pilot investment projects/activities are expected to be low 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 by a simple ESCOP (Annex 6A of the ESMF) or Simple Do and Don't Measures (Annex 6B of the ESMF), LMP (Attachment 1B). The social risks assessment and analysis of possible in informal waste workers and the value chain of actors associated with plastic collection, recycling, also businesses who use plastics, may place any restrictions or costs will be included in the TOR for TA activities.

75. The proposed project activities to be implemented under Component 1, the expected social impacts and potential risks with ESS relevance, and the proposed mitigation measures to be applied during project implementation are presented in Table 4-1.

[17] 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.

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

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
Component 1. Advancing System for Waste and Pollution Management				
Subcomponent 1.1 Upgrading Pollution Monitoring and Enforcement	• 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. • Exclusion and/or inadequate or deficient meaningful consultation among key agencies and key stakeholders, preparation and implementation of SEA could lead to unexpected impacts to key sector agencies, local authorities, and local communities, and the private sector.	• Update, implement, monitor and report LMP (Attachment 1), COC on SEA/SH and VAC (Attachment 3B); • Implement, monitor and report ESCOP (Annex 6A of the ESMF) or Simple Do and Don't Measures (Annex 6B of the ESMF); • Implement, monitor and report of GRM and SEP; • 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.	ESS1-5, 7 and 10	DOE-MONRE and PCU of EPFO throughout the project implementation

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	• CHS Temporary risks and disturbances related to dust and noise generation including transmission of infectious diseases during installation of environmental quality monitoring stations. • Risks/Impacts due to land acquisition for ambient environmental quality monitoring stations are low as they are in government- managed land.			
Subcomponent 1.2 Strengthen Waste and Plastic Management System	• Decree development or capacity development or TA activities may result in downstream E&S risks if not properly assessed and consulted with all stakeholders. • Plans may generate unmitigated social or environmental impacts including impacts to businesses, waste collection/distribution/recycling value chains, including informal waste workers as a result of NPAP	• The risks related to development of decrees and TAs activities will be mitigated through implementation of regulatory impact assessment, which is also required under Lao Law (Annex 4 of the ESMF for the guidance note on regulatory impact assessment. • Social risks and impact assessment to be included in the TOR of the TA activities. This will	ESS1-4, 7 and 10	DOE-MONRE throughout the project implementation

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	regulations and activities. • 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 private sector. • 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;	also include the assessment on how much of the current waste collection is reliant on informal waste workers and how the value chains related to them may be affected with any new changes in regulation or organization of the solid waste management. • To address the issues related to consultation, under PWMP, these activities will be continued with more extensive consultation following SEP procedures that are being prepared and to be applied to all project activities; • 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,		

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
		coordinate, monitor and report the E&S implementation.		
Component 1.3: Component 1 Coordination and Reporting and Component 2.3: Project Management and Coordination				
These subcomponents will support project management, monitoring, learning and coordination across the implementing agencies focus on inter-ministerial coordination, progress reporting, and monitoring and evaluation.	• 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.	• 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 C1.3 for supervision, capacity/training, monitoring and reporting of implementation of ESF instruments.	ESS1-4, 7 and 10	EPFO/PCU and MPWT/PMU during project implementation

4.3 SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES OF C2

76. Component 2.1 will provide TA to VCOMS for development and implementation of regulations and capacity building on waste management planning, financing and cost recover, and development of operation manuals as well as providing supports for improving waste picker's working conditions and action plan and budget for managing legacy environmental and social issues and other supports for solid waste and plastic waste infrastructure and equipment, and management.

77. Component 2.2 will finance waste management and recycling infrastructure investments at three sites in Vientiane Capital including (i) a new waste transfer station in Naxaythong district; (ii) upgrading material recovery facility at the Km16 in Xaythany district; and (iii) rehabilitation of the existing landfill at the Km32 in Xaythany district.

78. The social risks associated with proposed activities to be implemented at three sites under Component 2.2 are rated to be moderate to high. The social risks and impacts associated with the pre-construction and construction are assessed to be moderate, temporary and localized.

79. The main potential social risks during the construction phase, the operational phase, the closure phase and associated with the legacy waste to be addressed and mitigated at the VCOMS Site at the Km32 include the following:

Pre-Construction and Construction phase:

80. Overall, the social risks and impacts associated with the pre-construction and construction are assessed to be moderate, temporary and localized as summarized below:

- Potential land acquisition, impact on ethnic minorities or impact on cultural heritage sites during construction of the new Transfer Station in Naxaythong (including at borrow pits, sand and quarry sites). In case a sanitary zone needs to be established around waste facilities - to be assessed during full ESIA – there could be a possible need for relocation or restrictions on livelihood activities affecting people living or farming on the surrounding land. These risks will be assessed in detail during the full ESIA stage.
- For the Km32 and Km16, both sites are fully owned by VCOMS and there are no marginalized ethnic minorities claiming collective ownership or cultural connection to the landfill site and surrounding areas.
- Risks related to labour management, employment and occupational health and safety.
- Health and safety risks for construction workers, landfill workers, waste pickers and collectors and nearby residents and farmers related to construction site hazards such as the movement of heavy equipment, construction dust and noise and malodour from excavating and relocating waste and traffic along the access road.

- The temporary influx of construction workers could affect nearby villages, potentially increasing incidence of substance abuse and gender-based violence and spread of communicable diseases.
- Civil works at the Km32 land fill site could potentially disrupt waste picker recycling activtiies if not suitably managed. This applies in particular plans to reconstruct the 'community waste centre' used by waste pickers for sorting, as well as construction of new waste cells and relocation of existing waste dumps.

Operational phase:

81. Social risks during the operations phase applicable to all three sites include:

- Risks related to labour management, employment and occupational health and safety.
- Community health and safety risks due to exposure of the waste pickers including children among the waste pickers to flies and other vermin attracted by the future incoming waste and to sharps and other hazardous items in the waste.
- Health and safety risks for communities along the hauling route due to accidents involving daily waste truck traffic.

82. At the km32 site, the social risks associated with the operation phases are assessed to be high when taking into account (i) the existing waste at the Km32 Site and associated legacy risks and impacts; and (ii) limited institutional capacity and resources pertaining to waste facilities management.

83. Km32 landfill has been in operation since 2009 and is operated as an unsanitary open dump. Based on an analysis of Google Earth historical images, an estimated 533,000m3 of waste has been dumped on the VCOMS site over an estimated 47.8 ha. On the adjacent VWMC site, an estimated 95,000m3 of waste has been dumped over 8.8 ha. The VWMC site shares the same airshed and watershed as the VCOMS site.

84. Social risks associated with legacy waste at the Km32 site include:

- Historic and on-going infiltration of polluted leachate from the legacy waste posing a significant long-term risk to the important groundwater resources of importance fro domestic, agricultural and industrial uses.
- Significant long-term risk of contamination of surface water in streams and ditches draining the landfill site by polluted leachate or seepage from the legacy waste affecting the productivity and quality of crops and may also pose a risk to the health of farmers, domestic animals and wildlife in the area nearby Km32 landfill.
- Pollution of the ambient air due to open burning of legacy waste, malodour from decomposing legacy waste affecting landfill workers, waste pickers and nearby residents.
- Health and safety risks of waste pickers and landfill workers from exposure to polluted leachate, and flies and other vermin attracted by the legacy waste.

Closure phase at the existing VCOMS's Km32 site:

- Exposure to waste by people or animals.
- Spread of diseases by vectors and vermin.
- Odour nuisances, windblow litter and risk of fire.
- Breach of capping and ponding in depressions leading to increased infiltration and increased generation of leachate, erosion and crop death.
- Risk of pollution of surface water by leachate or seepage from waste impacting on agricultural production, aquatic flora and fauna, and human health.
- Risk of groundwater contamination due to failure of the liner and the leachate collection and treatment system.

Mitigation Measures

85. Key social mitigation measures proposed are summarized below:

- For pre-construction phase, the key mitigation measure is to ensure a comprehensive ESIA study and preparation of Site Specific ESMP with meaningful and inclusive consultations. The proposed preferred design of the new landfill cells including composite liner systems combined with proper implementation of the operational mitigation measures including daily cover of the waste, leachate collection and treatment will minimise the risk to groundwater and effectively stop the current pollution of surface water bodies draining from the VCOMS landfill site and prevent future adverse impacts on surface water and agricultural fields.
- For the construction phase, the social impacts and risks are assessed to be moderate, temporary, and localized. These risks will be effectively mitigated by conventional construction methods and standard mitigation measures.
- Occupational and community health and safety will be improved through proper landfill operations including a complete stop for open burning of waste, daily cover of incoming waste, and reduced littering; and a waste reception area will be established where the waste pickers can segregate recyclables under improved health and safety conditions.
- The project will include support for preparing action plans and budget for managing legacy environmental and social issues so that the historical pollution at the site does not pose a significant risk to health and safety of workers, communities or the environment.
- The legacy waste on the VCOMS site will be regrouped and compacted and provided with a cap designed to minimise infiltration, and to collect landfill gas; and the cap will ensure a range of recreational or productive land uses.
- Upon closure, the design of the final capping of the engineered landfill cells will allow a range of recreational or productive land uses.
- Impacts on the livelihoods of the waste pickers due to capping of the legacy waste is likely insignificant as recyclable items in the legacy waste currently on the landfill site most likely already have been removed by the waste pickers, and during the construction phase, the waste pickers will be provided with access to the incoming waste at the waste reception area.

- Risks of impacts on the waste pickers' livelihoods during the operational phase will likely are insignificant as the waste pickers will have access to segregating the recyclables from the incoming waste at the waste reception area.
- PWMP will establish under Component 1 a coordination mechanism among VCOMS, VWMC, MPWT, MONRE and PONRE to address environmental, social and health and safety issues. This will strengthen the regulatory oversight and improve compliance with regulatory environmental requirements. More details are provided in the standalone Pre-ESIA.

86. A full ESIA to be prepared for Component 2 will further assess these potential social risks and impacts of project activities at Km32 landfill, Km16 and Naxaythong sites. The proposed mitigation measures for improvement of design and operations of Km32 rehabilitation proposed in the Pre-ESIA will be considered in the Detailed Design. Revision/update of the preliminary design should ensure that adequate considerations on social risks and impacts are incorporated and that potential E&S risks and impacts from the project activities are acceptable.

87. All identified social impacts/risks for the Km32 site are assessed to be acceptable with the adoption of preferred alternative conceptual design proposed in the Pre-ESIA and implementation of the mitigation measures outlined in the Pre-ESIA (Table 8-1 to Table 8-5).

88. The proposed project activities to be implemented under Component 2 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 summarized in Table 4-2.

TABLE 4-2 SUMMARY OF THE SOCIAL RISKS AND IMPACTS AND PROPOSED MITIGATION MEASURES FOR C2

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
Component 2: Improving Municipal Solid Waste Services in Vientiane Capital				
Subcomponent 2.1: Municipal Solid Waste Service Planning, Operation, Monitoring, and Cost Recovery in Vientiane Capital	***Most of the proposed activities will create positive impacts and mitigate social risks . However, there are some E&S risks and impact as summarized below:*** • Lack of inclusive and meaningful consultation during the full ESIA study and development of landfill and transfer operational manuals for with all concerned stakeholders (esp. vulnerable/poor households, women, waste pickers and collectors as well as nearby communities) could result in the risk is regulatory non-compliance, project delays, reputational harm to project stakeholders; • Social risks related TA activities if not properly assessed and consulted with all stakeholders. • Risk of increase in illegal dumping,	• Update, implement, monitor and report LMP (Attachment 1), COC on SEA/SH and VAC (Attachment 3B) • Implement, monitor and report of SEP including GRM; • Ensuring that the full ESIA is carried out in compliance with compliance with the ESMF, SIA-SMP, Pre-ESIA and SEP. • Careful assessment of impacts due to changes in fees or policies through stakeholder consultations. • Include social assessment in the TOR of TA activities. This will also include the assessment on how much of	**ESS1-8, 10**	MPWT PMU, PTI and VCOMS, Consultant firms (DD and Full ESIA study) throughout the project implementation

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	littering, and open burning, as results increase in waste fee collection, can exacerbate impacts on public health and the environment; • 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 and consultation workshops	the current waste collection is reliant on informal waste workers and how the value chains related to them may be affected with any new changes in regulation or organization of the solid waste management.		
Subcomponent 2.2 Municipal Solid Waste Service Infrastructure Investments in Vientiane Capital	***Overall, the social risks and impacts associated with the pre-construction and construction are assessed to be moderate, temporary and localized as summarized below:*** • Lack of inclusive and meaningful consultation during the full ESIA study with all concerned stakeholders (esp. vulnerable/poor households, women, waste pickers and collectors as well as nearby communities) could result in the	• Full ESIA and Site Specific ESMPs (SS-ESMPs), as part of project activities under C2A, will be prepared by MWTP PMU with technical assistant from a qualified ESIA firm in compliance with the ESMF, SIA-SMP, Pre-ESIA and SEP; • Temporary impacts and disturbances will be managed through the implementation,	**ESS1-8, 10**	MPWT PMU, PTI and VCOMS, Construction Supervision Consultant firm, Construction Contractors including VCOMS's

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	risk is regulatory non-compliance, project delays, reputational harm to project stakeholders; • Inadequate Stakeholder Engagement or inadequate management of the grievances redresses mechanism during the construction stage • Potential land acquisition, impact on ethnic minorities or impact on cultural heritage sites during construction of the new Transfer Station in Naxaythong (including at borrow pits, sand and quarry sites). In case a sanitary zone needs to be established around waste facilities - to be assessed during full ESIA – there could be a possible need for relocation or restrictions on livelihood activities affecting people living or farming on the surrounding land. These risks will be assessed in detail during the full ESIA stage. • OHS risks of existing waste pickers due to construction activities and increased	monitoring and reporting of Contractor Environmental and Social Management Plan (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. • Background checks and security training will be conducted for contractor workers to ensure no history of abuse and no incidents on undue use of force regarding local communities. • More details of mitigation measures are provided in the Pre-ESIA for the Km32 Site (Table 8-5).		contractors Throughout the project construction phase

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	traffic congestion (transportation of construction materials and solid wastes to the landfill); • Damages to the access road and other local roads due to increased traffic causing excessive dust, increasing risks of accidents and increasing costs of maintenance; • Risks related to labour management and working conditions, including (i) employment discrimination, (ii) denial of basic labour rights; (iii) unresolved labour disputes, (iv) child labour; (v) accidents and injuries involving heavy equipment; and (vi) injuries and illnesses due to exposure to waste which may contain toxic agents, sharp objects, and pathogens as well as exposure to contaminated soils and dusts at construction site; (vii) Risks related 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			

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	amphetamine. Such substance abuse is often a contributing factor to accidents and incidents. It also is a contributing factor for gender-based violence; • Community health and safety risks related to construction site hazards such as the movement of heavy equipment, construction dust and noise. Nearby residents and farmers working downwind could potentially be exposed to dusts while those along the construction routes may be impacted by the construction traffic. The temporary influx of construction workers could affect nearby villages, potentially increasing incidence of substance abuse and gender-based violence and spread of communicable diseases. Although the landfill areas are outside the UXO danger zone, there may be risk of encountering UXOs at borrow pits. • See the Pre-ESIA for more details on E&S risks and impacts relating to Km32 site.			

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	Overall, the social risks and impacts associated with the operation phases are assessed to be high due to the existing waste at the Km32 Site and associated legacy risks and impacts as provide above; and (ii) weak legal and institutional capacity on waste management. The key E&S risks and impacts are summarized below while more details of social risks and impacts of the Km32 are provided in the Pre-ESIA. • 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 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 operational social risks and impacts will be mitigated to be an acceptable level through the implementation of project activities under C2A; • Implement the operational phase mitigation measures outlined in the Pre-ESIA for the Km3 (Table 8-5); • Provide opportunities to waste pickers to work at the new waste management facilities at km 32, and at km 16 and Naxaythong sites; • Waste pickers will have access to in-coming waste in Km 32. An on-going role for waste pickers during operations is assured through project design. • The risks of loss/reduction of	ESS1-8, 10	Implemented by VCOMS and monitored by MPWT PMU/DHUP

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	• 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	the existing livelihoods of waste collectors, waste-pickers and other groups like informal recyclers will be assessed as part of the preparation of NPAP and other related activities on the sector, including policy and legal / regulatory support. The assessment of poverty and social impacts as well as related consultation activities will be integrated in the TORs for such TA assignments. • 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 before the commencement of project activities.		

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	injury of people or loss of cattle; • Air pollution from open burning of waste or landfill fires can pose 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.	• Background checks and security training will be conducted for VCOMS workers to ensure no history of abuse and no incidents on undue use of force regarding local communities. • 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. • Updating, implementing, monitoring and reporting of SEP. • Monitoring and strict enforcement of regulation for waste collection companies • Awareness raising on		

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
		environmental impacts of waste dumping and burning • Issue village-level regulations with penalties for illegal dumping.		
	Livelihood impacts Risks of impacts on the waste pickers' livelihoods will likely be insignificant as the waste pickers will have access to segregating the recyclables from the incoming waste at the waste reception area. The previously proposed investments in recycling facilities at the Km 16 and Naxaythong transfer stations have subsequently been dropped and the earlier concern that these investments would cause a reduction in recyclables arriving at the Km 32 landfill site and thus potentially cause a reduction in the income of waste collectors and waste pickers, is therefore no longer expected to materialise. However, the waste pickers have noted a reduction in recyclables due to unsorted waste directed to the VWMC RDF plant, whereas pre-sorted waste	To mitigate any impacts of the operation of the new engineered landfill cells to the livelihood of waste-pickers and seasonal recyclers whose access to the recyclable waste may be reduced, the project will: (a) provide opportunities to waste pickers to work at the new waste management facilities at km 32, and at km 16 and Naxaythong sites; (b) offer waste pickers skills and vocational training on literacy, numeracy, entrepreneurship among others to improve their livelihoods and prevent job loss; (c) improve their working conditions by	ESS5	VCOMS

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
	containing less recyclables is delivered to the VCOMS site by private companies. During the consultations, VCOMS responded that they will address this concern so that at least 50% of VCOMS' and Small B's waste trucks are directed to the VCOMS site.	upgrading of the existing recycling facility and the waste reception area, providing training in waste handling, hazardous waste and providing PPE. In addition, to address the concern raised by waste pickers that unsorted waste collected by VCOMS/Small B is being directed to the VWMC RDF plant next to the VCOMS site, whereas pre-sorted waste containing less recyclables is delivered to the VCOMS site by private companies, VCOMS will arrange that at least 50% of VCOMS' and Small B's waste trucks are directed to the VCOMS site. The risk of impacts on the livelihoods of waste pickers and waste collectors is therefore considered minor but it is something that needs to be		

Component/Key Activities	Social Risks	Social Instruments and Measures	WB ESS	Responsibility / Implementation Stage
		closely monitored during project implementation.		
	The social risks and negative impacts during closure phase[18] are as follows: • Direct exposure to waste by people or animals • Disease spread by vectors and vermin • Odour nuisances, windblow litter and risk of fire • Breach of capping and ponding in depressions leading to increased infiltration and increased generation of leachate, erosion and crop death • Uncontrolled use of the land incompatible with the design of the caps or the integrity and stability of the cells.	• These E&S risks will be mitigated through the implementation of the mitigation measures provided in the Table 8-4 in the Pre-ESIA.	ESS1-4, 6,7,8, 10	Implemented by VCOMS and monitored by MPWT PMU/DHUP

[18] This refers to risks and impacts that are solely associated with the Km 32 Landfill Project not including the risks and impacts from the existing conditions at the project site (the VCOMS site).

5 SOCIAL MANAGEMENT PLAN (SMP)

89. 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 PWMP. 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.

90. 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) to (5-5) below.

5.1 LABOR MANAGEMENT PROCEDURES (LMP)

91. The Labor Management Procedure (LMP), provided in Attachment 1A for C2 and Attachment 1B for C1 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 EPFO-PCU and MPWT-PMU, SDAs) 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)

92. 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)

93. The CoC on SEA/SH and VAC, provided in Attachment 3A and Attachment 3B for C1 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)

94. The Resettlement Policy Framework (RPF) provided in Attachment 4 is prepared in line with ESS5. 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.

95. 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.

96. 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).

97. 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)

98. 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

99. 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

100. 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.

101. 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.

102. For C1 EPFO PCU 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;

103. For C2, 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).

104. 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 and disadvantage or vulnerable groups (Please see description of vulnerable groups on Section 4.2, No. 35 of the SEP and Attachment 4, Section A4.3.8 of the RPF of the SIA-SMP.

7.2 CONSULTATIONS DURING PROJECT PREPARATION

105. 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 PWMP 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 PWMP as well as their suggestions and recommendations.

106. 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.

107. Focused Group Discussion (FGD) was carried out on 11 August 2022 by the EPFO 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. There were representatives from village authorities, local residents, informal waste pickers[19], and registered waste pickers at the Km32. The team were divided into two teams and carried out the FGD at the three locations and during FGD the participants were divided into small group of 8-10 participants. The summary of FGD is summarized as follows:

- 90% of 195 households have at least 1-2 members work as informal or seasonal waste pickers to collect and sell waste for their livelihoods.
- There are 264 registered waste pickers[20] (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. Nineteen are under 18 years old. Five live in non-permanent settlement area nearby. Most of the waste pickers are local residents living in the nearby villages or in other villages in Xaythany District and other districts in Vientiane Capital and the

[19] General villagers who are seasonal waste pickers

[20] The registered waste pickers are those individuals whose names are registered with VCOMs. However, individuals from nearby villages are considered unregistered waste pickers if they come only to collect recyclable waste materials on a seasonal basis and they also have other sources of income.

remainders are from other provinces including Champasak, Khamuane, Luang Prabang, Oudomxay.

- 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.
- Their Income from selling waste is 500,000-1,500,000 kip per household per week (300 kip/kg); some of them work both at daytime and night-time at the landfill. They often find valuable materials (gold, jewellery, clothes) and money with values ranging from 100,000 kip to 10 million kip. If they don't have waste to pick and sell, it will significantly affect their income and livelihoods.
- 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 short 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.

108. 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).

109. The draft ESF documents (ESCP, SEP, ESMF, SIA-SMP, and Pre-ESIA) were disclosed at the EPFPO website on 29 November 2022 (https://laoepf.org.la/en/esf-documents-for-ewmp/) and revised draft on 23 December 2022 (https://laoepf.org.la/en/esf-documents-for-ewmp-2/). A full-day public consultation workshop at the national level was held on 20 December 2022) with a total of 103 participants (39 females) attended and participated. The consultation was organized in two modes (face-to-face and virtual formats). The morning session was in Lao language for relevant government organizations from all levels (district and provincial offices, and ministries), community representatives, and village chiefs in the project areas), private sectors (waste management operator, waste collection companies) and academia (national university, and private schools). The afternoon session was conducted in English and attended by representatives from international organizations and social organizations (NGOs, CSOs, donors). Summary of the results of the consultation workshop are as follows:

- All comments were related to Component 2 on the investment of the waste management facility and Km32 landfill project. Discussion were on the current solid waste management operation practices including waste collection and transfer, infectious waste disposal and maintenance work by VCOMS, contracted operator, and waste collection companies. The wastewater discharge, emission, odor, and vectors were also raised by Napahasouk village chief.
- Raised the issue of the waste drop off and leachate leaking from the waste transferring truck along the road (a 100m road connecting between the '450 Year' ring road and the access road to a waste transfer station);
- Irregular waste collection from Nahai village resulted in waste being scavenged by domestic animals;
- The GGGI mentioned their organizations' activity related waste to energy project that would engage and involve the waste operator (Small B) and Khounmoung group to use the waste at the Km32 landfill for the waste to energy project.
- The Save the Children also raised concern related to SEA/SH and VAC in the landfill site and suggested a social monitoring be in place during the operation.

110. On 8 January 2024, the ESF consultants has conducted additional consultation on the latest PWMP with VCOMs, VWMC and waste pickers with a total of 46 participants of which 27 of them are female. The consultation results are summarized as follows:

- VCOMs and VWMC reported on the status of the updated VWMC concession

agreement.

- VCOMs and VWMC confirmed that the updated CA excludes the right to use the existing waste and VWMC agreed to return 20ha back to VCOMs and location of 20ha identified and agreed with VWMC. After CA signed, land title of VWMC will be modified.
- VCOMs proposed to the Project: (i) to move the planned leachate treatment facility and leachate regulating pond to the 20ha area so they can more space to develop cells in the future; (ii) life of new cells at least 10 years; (iii) new cell for healthcare waste autoclaved by the hospitals (at the 20ha area). This will need further discussion and investigation during the detailed design and full FS and ESIA study.
- Waste pickers strongly support the Project as they believe the Project will provide them with safe working conditions through the improved sanitation facilities, vocational skills building and training, and provision of protective equipment and health and safety training.
- The volume of recyclable waste delivered to Km32 has recently reduced because all VCOMS/Small B trucks are delivering waste to the new VWMC RDF plant. Only private trucks are continuing to dump at the KM32 landfill. The private trucks have less recyclable waste as their workers sort and extract the recyclables before reaching the landfill. Waste pickers requested to allocate the VCOMS/Small B trucks to be dumped at the VCOMS area at least 50:50. VCOMs responded to the waste picker that this issue will be addressed as per request by VCOMs.
- Waste picker requested at least two buyers to buy used glass bottles as now only one buyer is allowed. They requested to allow the old buyer to buy from waste picker as the new buyer gives lower price than the old buyer and she did not buy all. VCOMs responded that they will consider and get back to the waste pickers later.
- Apart from what were presented or planned activities, they requested the project improve community waste sorting facility and provide equipment such as compactor washing machine and a building with roof, fence and gate with a security guard for their motorbike. They are happy to pay for the fee to a security guard. This will be addressed under Component 2B.

111. Details of the consultation workshop are included in the project's Stakeholder Engagement Plan (SEP).

112. 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

113. 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 site specific ES instruments will also be disclosed and consulted on site with local communities. The PWMP 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

114. The Stakeholder Engagement Plan will be periodically revised and updated as necessary in the course of the PWMP 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

115. 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.

116. 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.

117. The EPFO PCU will be responsible for receiving and resolving in a fair, objective, and constructive manner, all concerns or complaints raised in related to the C1 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 C2. 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.

118. 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.

119. In the PWMP 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 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). Some of these may be specific to ethnic groups.
- Grievance related to livelihood or access restrictions affecting waste pickers. Job-related disputes (see Chapter 5.1 LMP and Annex 1a, 1b).
- Grievances could potentially be received in relation to activities of third parties, including for example the adjacent VWMC waste facility. These will be referred to the party concerned, and if related to VWMC will be addressed through the coordination mechanism established between VCOMS and VWMC.

120. More details on GRM provided in SEP.

9 MONITORING AND REPORTING

121. 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

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

11 LIST OF ESMF ANNEXES AND ATTACHMENTS

123. 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 C2
- Attachment 1B: Labour Management Procedures (LMP) with Worker Grievance Procedure for C1
- Attachment 2: Community Health and Safety Plan (CHSP) for all Components
- Attachment 3A: Simple Code of Conduct on SEA/SH and VAC for C2
- Attachment 3B: Code of Conduct on SEA/SH and VAC for C1
- Attachment 4: Resettlement Policy Framework (RPF) (including livelihoods restoration for waste pickers)
- Attachment 5: Ethnic Group Engagement Framework (EGEF)