



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 Environmental and Waste Management Project (P175996)**

**Environmental and Social Management Framework (ESMF)**

**Volume II Annexes**

**(Draft)**

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## ABBREVIATIONS AND ACRONYMS

3R	Reduce, Reuse and Recycle
ARAP	Abbreviated Resettlement Action Plan
ASEAN	Association of Southeast Asian Nations
AQM	Air Quality Monitoring
CERC	Contingency Emergency Response Component
CHSP	Community Health and Safety Plan
CMU	Component Management Unit
COC	Code of conduct on .....
COVID19	Corona Virus 19
DCC	Department of Climate Change
DHUP	Department of Housing and Urban Planning
DINE	Department of Inspection on Natural Resources
DPF	Department of Planning and Finance
DOE	Department of Environment
DOP	Department of Planning
DONRE	District Offices of Natural Resource and Environment
DPWT	Department of Public Works and Transport
ECC	Environmental Compliance Certificate
ECOP	Environment Code of Practice
EDPD	Environmental Research and Disaster Prevention Division
EGEF	Ethnic Group Engagement Framework
EGEP	Ethnic Group Engagement Plan
EHSG	Environmental, Health and Safety Guidelines of WB Group
EIA	Environmental Impact Assessment
EPF	Environmental Protection 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
EWMP	Environmental Waste Management Project
EXRI	EX Research Institute Ltd



FGD	Focused Group Discussion
FPIC	Free Prior and Informed Consent
GBP	Green Business Plan
GBV	Gender Based Violence
GCB	Green Clean and Beautiful Lao PDR
GCBP	Green, Clean, and Beautiful Plan
GDP	Gross Domestic Product
GGGI	Global Green Growth Institute
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
IEE	Initial Environmental Examination
IFC	International Finance Corporation
IUCN	The International Union Conservation of Nature
IMER	Inspection, Monitoring, Evaluating and Reporting
ISP-LUP	The Integrated Spatial Planning and Land Use Planning
KM	Kilometer
LEMGP	Laos Environmental Matching Grant Program
LENS2)	Second Lao Environment and Social
LFND	Lao Front for National Development
LMP	Labour Management Procedures
LWU	Lao Women's Union
LT-LEDS	The Lao PDR's long-term low-emission development strategy
MAF	Ministry of Agriculture and Forestry
MOIC	Ministry of Industry and Commerce
MOF	Ministry of Finance
MONRE	Ministry of Natural Resource and Environment
MPWT	Ministry of Public Works and Transport
MEM	Ministry of Energy and Mine
MPI	Ministry of Planning and Investment
NCEC	The National Community Engagement Consultant
NSEDP-9	The 9 <sup>th</sup> National Social-Economic Development Plan
NGO	Non Government Organization
NUOL	National University of Laos
NRERI	Natural Resources and Environmental Research Institute
NPAP	National Plastic Action Plan
OHS	Occupational Health and Safety



PAD	Project Appraisal Document
PAP	Project Affected People
PCU	Project Coordination Unit
PMU	Project Management Unit
PONRE	Provincial Offices of Natural Resource and Environment
PPE	Personal Protective Equipment
PRC	Provincial Resettlement Committee
Pre-FS	Pre-Feasibility Study
Pre-ESIA	Preliminary Environmental and Social Impact Assessment
PTI	Public Works and Transport Institute
RAP	Resettlement Action Plan
RDF	Refuse-Derives Fuel
RPF	Resettlement Policy Framework
SCOC	Social Code of Conduct
SEA/SH	Sexual Exploitation and Abuse and Sexual Harassment
SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SIA-SMP	Social Impact Assessment and Social Management Plan
SDAs	Subproject Delivery Agencies
SMP	Social Management Plan
SOER	The National State of Environment Report
SWM	Solid Waste Management
SVK	Savannakhet province
UDAAs	Urban Development Administrative Authorities
UNFCCC	United Nations Framework Convention on Climate Change
US\$	United States dollar
UXO	Unexploded Ordnance
VAC	Violence Against Children
VCOMS	Vientiane City Office for Management and Service
VTC	Vientiane Capital
VTP	Vientiane Province
WB	The World Bank
WBG	World Bank Group



## ANNEX 1: PROJECT DESCRIPTION

### Project Development Objective

#### PDO Statement

The Project Development Objective (PDO) is to strengthen Laos' capacity for waste and pollution management, improve municipal solid waste management in targeted areas in Lao PDR, and provide immediate and effective response in case of an Eligible Crisis or Emergency. The EWMP will also contribute to the SEA-MaP program development objective, which is to reduce plastics consumption, increase recycling, and minimize leakages to prevent land- and sea-based marine plastic pollution in Southeast Asia.

#### PDO Level Indicator

Achievement of the EWMP PDO and SEA-MaP PDO will be measured by the following indicators:

- Projects with ECCs in full compliance with environmental risk management policies (Percentage)
- Increase coverage of municipal solid waste collection in Vientiane Capital (percentage)
- Solid waste recycled, composted and/or treated to reduce waste disposal volumes (percentage)
- Net greenhouse gas emissions reduction (metric tons/year)
- Plastics policies, guidelines, or standards developed (of which in alignment with the ASEAN Regional Action Plan) (number)

### Project Components

**Component 1. Supporting Policy Implementation and Capacity Enhancement).** 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 management 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.

#### **Subcomponent 1A: Capacity Support for Implementing Environmental Risk Management for Pollution Management, with the following activities:**

- 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) ESIA for the agriculture, mining, hydropower and industry sectors; (ii) developing and implementing SEA in the mining sector; and (iii) integrating climate risk and mitigation management as part of ERM interventions in the four priority sectors for environmental regulation.

**Subcomponent 1B: Policy and capacity support for solid waste and plastic management, with the following activities:**

- a. Develop a National Waste Management Decree on non-hazardous and hazardous waste and relevant sub-regulations on waste management measures 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.
- c. Provide technical assistance and finance for implementation, monitoring and enforcement of the National Plastics Action Plan (NPAP).<sup>1</sup>
- d. Strengthen the domestic plastic waste recycling sector through technical assistance for establishment of minimum standards, compliance system, sub-decree, and capacity building for authorities for monitoring and inspection. It will also establish a recycling market information system and explore the potential on refuse-derived fuel (RDF).
- e. 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.

**Component 2: Infrastructure for the integrated solid and plastic waste management system and capacity Building in waste management planning and operation.** This component aims to enhance the capacity of MPWT and VCOMS to improve their capacities in the policy development and implementation of solid and plastic waste management. Activities under Component 2 are organized as two subcomponents, and both contribute to Pillar 4 of the GCRF.

**Subcomponent 2A. Capacity building for waste management planning, operation, monitoring, waste service delivery, and cost recovery at the local level.** The sub-component will support enhancing the integrated solid waste management system and build capacity for waste management planning, operation, monitoring, waste service delivery, and cost recovery in the Vientiane Capital. Activities under this subcomponent will:

- a. Provide technical assistance to VCOMS for:
  - i. Development of regulations and capacity building for waste management planning and collection zoning; contract management and supervision of private waste operators; tariff setting; waste collection from waste service users and private waste operators; and landfill operations and management.
  - ii. Financing and cost recovery for the Vientiane Capital waste management system including developing a mobile application for waste fee collection.
  - iii. Development of a waste management plan for collection zoning per private waste operators, collection scheduling, collection truck and human resources management,

<sup>1</sup> At this time, the NPAP is under development led by MONRE and supported by the World Bank and other development partners.



service charge collection, contract management, engagement with waste service users, transfer stations operation, landfill operation, waste data collection and regular environmental monitoring.

- b. Develop operational manuals for integrated waste management facilities (sorting and recycling facilities and composting facilities) and landfill management including site selection, standard landfill design, and standard operational procedures for construction, operation, and closure of landfill.
- c. 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 C) of this PAD.
  - iii. Support measures for children engaged in waste picking described in Annex 2 of this PAD.
  - iv. Allowing informal waste workers to safely access incoming waste at the KM32 landfill.
- d. Support investment preparation for solid and plastic waste infrastructure, equipment, and their management including:
  - i. Detailed design of integrated solid waste and plastic waste management system and specifications for each waste management equipment and infrastructure.
  - ii. Site-specific Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs) and Livelihood Restoration Plans (LRPs) per project site according to the World Bank's Environmental and Social Management Framework.
  - iii. Bidding documents for each project site.

**Subcomponent 2B: Waste and Plastics Management Infrastructure Investments.** This component will finance solid waste landfill infrastructure, transfer stations and integrated waste management facilities (sorting, recycling, and composting facilities), and necessary equipment for Vientiane Capital. The investment at each project site is as follows. The actual technical design and infrastructure at each project site will be determined during the detailed design in the project implementation stage. Activities under this subcomponent will:

- a. Establish the Naxaythong transfer station and Integrated Waste Management Facility (in the north-west of Vientiane Capital) with financing for:
  - a. Civil works - a material recovery facility, composting plant, administration office building, and bathroom facilities for waste workers.
  - b. Equipment - sorting, washing, shredding plastics waste equipment; weighbridge; transportation truck, wheel loader, forklift and other equipment for transfer station operation.
- b. Upgrade the KM16 transfer station in Xaysettha District to be an Integrated Waste Management Facility<sup>2</sup> with financing for:
  - a. Civil works - waste collection, sorting, and material recovery facilities; upgrading the

<sup>2</sup> Currently, the transfer station does not have any sorting and recycling functions.





- existing composting plant; and bathroom facilities for waste workers.
- b. Equipment - a weighbridge; transportation truck, wheel loader, forklift and other equipment for transfer station operation.
  - c. Rehabilitate the KM32 landfill to extend its lifetime by at least 10 years with financing for:
    - a. 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<sup>3</sup>, developing hazardous waste storage, developing bathroom facilities for waste workers and upgrading of the administration office.
    - b. 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.
  - d. Establish riverine plastics collection at priority pollution hotspots with financing for:
    - a. Technical assistance for setting up viable plastics collection and disposal systems that are integrated into the general SWM system and involve communities in monitoring and reporting.
    - b. Civil works and equipment for plastics pollution monitoring stations.

**Component 3: Project Coordination and Reporting.** This component aims to maintain and enhance project management, monitoring, learning and coordination across the implementing agencies. Activities will be implemented through two subcomponents:

- a. Finance will be provided under subcomponent 3A for project management and administration support to strengthen the capacity of the EPF and the implementing agencies in project management, fiduciary management, results monitoring, impact assessments, and reporting. ESF implementation support will also be supported under this subcomponent.
- b. Finance will be provided under subcomponent 3B to strengthen the capacity of the EPF for coordination and communication, and fund raising for waste and pollution management and environmental protection.

**Component 4: Contingency Emergency Response Component.** This component will provide an immediate response to an Eligible Crisis or Emergency, as needed. In an Eligible Crisis or Emergency, the GoL can seek reallocation of project funds to support emergency response and recovery. This Component will contribute to WBG GCRF Pillar 3.

<sup>3</sup> During the Detailed Design at KM32, the project will determine the precise location of the new sanitary landfill cells within the KM32 landfill area.



## ANNEX 2: DETAILED NATIONAL LEGAL FRAMEWORKS

**The Constitution of Lao PDR**, ratified in 1991 (updated in 2003), uses the term ‘citizens of all ethnicity’ throughout. It specifically recognizes the need to incorporate the concerns of ethnic groups in developing policy in all sectors, and the Government has reaffirmed its commitment to strengthening the rights of all ethnic groups in various congresses, conferences, decrees, and laws since the 1980s (Articles 8 and 22). Article 75 of the Constitution states that the Lao language and script are the official language and script. Constitutionally, Lao PDR is recognized as a multi-ethnic society, and Article 8 of the Constitution states that all ethnic groups have the right to preserve their own traditions and culture, and those of the nation. Discrimination between ethnic groups is forbidden. Article 8 also declares that “the State pursues the policy of promoting unity and equality among all ethnic groups. All ethnic groups have the rights to protect, preserve and promote the fine customs and cultures of their own tribes and of the nation. All acts of creating division and discrimination among ethnic groups are forbidden. The State implements every measure to gradually develop and upgrade the economic and social level of all ethnic groups.”

Land acquisition and involuntary resettlement: Directly applicable to the land acquisition and involuntary resettlement is the Decree on Compensation and Resettlement of People Affected by Development Projects (No. 84/GOL, 5 April 2016). This revised Compensation and Resettlement (C&R) Decree describes the principles, regulations, and standards for mitigating adverse social impacts and compensating for damages resulting from unintentional acquisition or repossession of land and fixed or removal assets, including changes in land use. The decree aims to ensure that the people affected by the project (PAP) are compensated for and assisted in improving or, at least, maintaining their pre-project income and standard of living, and are not made worse off than they would without the project. The decree describes the strict principles of compensation, particularly for those PAPs which do not have legal land title, land use certificate or other acceptable documentation indicating their right to land use. Unlike ESS5, this government Decree does not provide neither any provision related to restriction of access to land and natural resources affecting community livelihood and income nor customary lands. In comparison with the previous Decree (No. 192, 2005), which granted this community of PAP the right to seek compensation not only for their lost assets but also for their lost rights and/or privileges of land use, the revised decree (No 84, 2016) only grants the right to claim for their lost properties, such as homes, trees and/or crops, if found to be located in state lands, and if the land users considered to illegal occupiers. There are also other laws and regulations pertaining to this issue, summarized in Box 2-1.

### Box A2-1 Legislation on land acquisition and 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 National Heritage (Amended), No. 11/NA, 16 November 2021
- The Law on Forestry, No. 08/NA, dated 13/06/2019
- The Law on Resettlement and Occupation, No. 086/NA, dated 15/06/2018
- The Law on Compensation and Resettlement of People Affected by Development Projects, No. 84/GoL, dated 05/04/2016
- The Decree on Environmental Impact Assessment, No. 21/GoL, dated 31/01/2019  
Public Road, No. 03/NA, dated 08/11/2016
- The Public Involvement Guidelines in ESIA Process, No. 707/MONRE, dated 05/02/2013

**The Law on Resettlement and Occupation (No. 086/NA, dated 16 June 2018):** This law was developed based on the compensation and resettlement Decree 84 (2016). The law, which applies for both government and private sector development projects, aims to define, regulate, manage and monitor resettlement and livelihood for Lao population of all ethnic groups to ensure that those who are in areas identified for resettlement and provided with stabilized residential and production land and occupation with ultimate goals to address illegal relocation, eliminate poverty, improve livelihood, security and social order, develop small villages into rural small towns contributing to national socio-economic development and national security.

**Law on Hygiene, Prevention and Health Promotion (Amended 2011):** focuses on controlling the elements of the environment which are dangerous or may be dangerous to the body, to mental health and social status of human (Article 2); promoting the investment in hygiene, prevention and health promotion (Article 5); community hygiene to be in place (Article 11); to ensure the building access to hygiene principles (Article 14); the care of working conditions for workers (Article 18); to ensure the cleanness of goods exposed, be far away from dirty sources, cemetery and rearing animal places (Article 22). All facilities to be in place particularly wastewater management, solid waste management systems and anti-fire management system.

**The Law on the Development and Protection of Women and Children (2004)** guarantees and promotes the roles of women, to define fundamental measures for developing and protecting the legitimate rights and interests of women, and to define the responsibilities of the State, society, and family toward women. It includes various aspects, such as gender equality; eliminating all forms of discrimination against women; and preventing and combating trafficking in women and children, and domestic VAWC. It encompasses domestic and public violence, including in educational institutions, workplaces, and alternative care settings.

**The Law on Preventing and Combating VAWC (2014)** defines the principles, rules, and measures for preventing and combating VAWC by prevention, protection, provision of



assistance to victims of violence, and handling of such violence to protect the rights and legitimate interests of women and children; aims to eliminate all forms of VAWC, uphold the roles and dignity of women and children, achieve gender equality. It specifically addresses VAWC that results in or is likely to result in danger, harm, or physical, psychological, sexual, property, or economic suffering by women and children.

**Ethnic Groups:** The guiding policy document to address ethnic group people's issues in the Lao PDR is the Constitution of the Lao PDR, revised in 2015. Its article 8, states that "The States implements policy on solidarity and equity between ethnic groups. All ethnic groups have the right to protect and promote traditions and culture of their own and the nation. All actions of discrimination are prohibited". The 1992 Part policy on ethnic groups focuses on realizing equality between ethnic groups and gradually improving the lives of ethnic groups while promoting their ethnic identity and cultural heritage. Lao PDR is a culturally diverse country, comprising of 50 ethnic groups, under 4 ethno-linguistic facilities, namely: the Lao-Tai (62.4 percent), Mon-Khmer (23.7 percent), Hmong-lu Mien (9.7 percent), and Chine-Tibetan (2.9 percent)<sup>4</sup>, which are officially divided into 50 ethnic groups<sup>5</sup>. In 2012, the Lao Front for National Development (LFND) released a National Guideline on Ethnic Group Consultation in line with the 2012 National Guideline on Public Involvement. It aims to ensure that all ethnic groups which benefit from a development project or are adversely affected by it, regardless of the source of funding, are fully involved in a meaningful consultation process at all stages from preparation to implementation. The guideline also aims to ensure that the potentially affected ethnic groups are fully informed of project objectives, as well as their potential positive and adverse impacts on their livelihood and their environment and provided with opportunities to articulate their concerns. The guidelines provide principles and processes to carry out meaningful consultations with, and obtain free, prior, and informed consent of, all ethnic groups affected by developments projects in a culturally sensitive manner. The guidelines consist of: a) objectives and scope of the guidelines, b) consultation processes with ethnic groups at respective stages of development projects, c) consultation approaches and methods for different ethnic groups in a culturally sensitive manner, d) expected outcomes of consultation at each stage, and e) implementation arrangement and responsibility. Key principles and procedures for consultation with ethnic groups in this guideline will be adopted into the ESMF and Ethnic Group Engagement Framework (EGEF). Box 2-2 summarizes legislation applicable to issues of ethnic groups.

<sup>4</sup> Lao Statistics Bureau. 2016. Results of Population and Housing Census 2015.

<sup>5</sup> Douangtavanh Kongphaly. 2018. List of all ethnicities in Laos on <http://web.archive.org/web/20190322092204/https://kongphaly.la/2015/10/26/list-of-all-ethnicities-in-laos/> (Accessed May 2020)



#### Box A2-2 Legislation on 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 Law on Media No. 01/NA, dated 4/11/2016;
- The Law on Land, No. 70/NA, dated 21/06/2019;
- The Law on National Heritage (Amended), No. 11/NA, 16 November 2021
- The Law on Forestry, No. 08/NA, dated 13/06/2019;
- The Law on Resettlement and Occupation, No. 086/NA, dated 15/06/2018;
- The Law on Compensation and Resettlement of People Affected by Development Projects, No. 84/GOL, dated 05/04/2016;
- The 8th National Socioeconomic Development Plan (NSEDP);
- The National Assembly of The Lao PDR –2009 and National Assembly Meeting No. VIII, 28/12/2018 for Ethnic Groups in Lao PDR.
- The National Guideline on Consultation with Ethnic Groups, 2013;
- The Guidelines for the Implementation of the State Decree on the Management and Protection of Religious Activities in the Lao PDR, no 16/Mol, 09/11/2016;
- The Public Involvement Guidelines in ESIA Process, No. 707/MONRE, dated 05/02/2013;
- Other applicable laws and regulations.

**Law on National Heritage (amended 2021):** The law addresses several environmental protection issues. The Law requires projects that may impact heritage conduct a heritage impact assessment to be endorsed by the Ministry of Information, Culture and Tourism. The Law states that socio-economic development shall proceed side by side with protection and conservation of the national heritage. It defines cultural, historical and natural heritage, noting that natural heritage may have scenic or ecological value. The Law also sets out zoning and measures for protection of heritage sites. Areas of national natural heritage shall be registered, especially those containing heritage of high value, such as biodiversity areas, conservation forests, wetlands, caves, and so on. Although it states that sources of biodiversity which have national natural heritage, e.g., wetlands, ponds and marshes, shall be administered by inspection and registration, as proposed by the concerned sectors. It also sets out regulations for protection of national heritage, such as the need to obtain prior approval for development in any national natural heritage area from the Ministry of Information and Culture (MIC) and other concerned sectors.



**The Lao Labour Law (2013)** defines the principles, regulations, and measures on administration and monitoring of labour skills development, recruitment, and labour protection. Article 5 requires that working conditions are safe. Article 59 stipulates prohibits unauthorized forced labour in any form. Article 119 requires employers to maintain a safe workplace and ensure good work conditions for the health of the employees. The employer shall supply information, training, and protection for employees so that they may undertake their work safely; and supply individual safety gear to employees according to international standards. Article 122 requires that the employer must inspect and assess risks to safety and health of the workplace regularly and report the results to the Labour Inspection Agency. Article 125 specifies how to deal with workplace accident or occupational disease that causes major injury or death. This law is detailed by the Decree on Occupational Health and Safety (2019) that requires employers to provide annual health check-ups for its employees, and re-enforces that work accidents and occupational diseases need to be recorded and reported to the Labour Management Authorities. An employer or the social security organization is responsible for covering the cost of treatment, allowances, and compensation to victims of work accidents or occupational diseases.

**Box A2-3 Laws and Decrees relevant to Labour and Labour Grievances a Codes**

- 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; and
- The Decree on Occupational Health and Safety, No. 22/GoL, dated 05/02/2019

**National Policy and Plan on Gender:** The activities indicated in the 9<sup>th</sup> National Socioeconomic Development Plan for 2021-2025 (NSED) are focused on the three transformative results aiming to; end maternal mortality, end unmet need for family planning, including among adolescent girls and end Gender-Based Violence (GBV) and



harmful practices such as early marriage; ensure youth receive age-appropriate comprehensive sexuality education through school curriculums nationwide and innovative adolescent youth friendly services; implement policies and Gender Equality Law; establish a referral pathway and make dignity kits available in humanitarian emergencies, increase investments for adolescents, especially young women through the “Noi Framework” of 2030. The 2030 Noi Framework provides a platform to address challenges Lao girls (10-19 years old) face in education, sexual and reproductive health, nutrition, employment and gender equality, as well as their opportunities to participate in decisions that matter to them.

**Law on Lao Women Union (No. 31/NA, 2013):** the government of Lao PDR promotes the development, protection and advancement of women and support their participation, decision-making and equitable benefit-sharing in all development activities according to the Article 4.

**GOL Policy and Procedure to combat COVID-19:** Since March 2020, considering the outbreak of COVID-19 pandemic in neighbouring countries such as China, Thailand, Vietnam, and others, the GOL took strict actions to prevent infection within Lao PDR. Three policy and guideline were issued on 13 March 2020 to control COVID-19 transmission and infection i.e. (a) guideline on prevention of the transmission and infection of COVID-19 at international airport, land border, and transportation stations; (b) guideline on prevention of the transmission and infection of COVID-19 at suspected to be infected area or temporary quarantine center; and (c) guideline on prevention of the transmission and infection of COVID-19 at public place (hotel, guesthouse, offices, schools, and others). On 29 March 2020, the Prime Minister issued an Order on Reinforcement Measures on Containment, prevention and full response to the COVID-19 pandemic (No. 06/PM, Vientiane Capital). This policy orders the restriction of people travelling and allows GOL officers to work from home during 1-19 April 2020.

Legislation on Gender-Based Violence (GBV), including domestic violence, Sexual Harassment (SH)/Sexual Exploitation and Abuse (SEA), human trafficking. Several laws apply to gender-based violence, including domestic violence, sexual harassment/exploitation and human trafficking. This is summarized below.

**Box A2-4 Laws and regulations on Gender-Based Violence (GBV)**

- The Law on Preventing and Combating Violence against Women and Children, Law No. 56/NA, 23/12/2014;
- The Law on Anti-Human Trafficking, No. 022/NA, dated 17 December 2015;
- The Law on the Development and Protection of Women, No.08/NA, dated 22/10/2004;
- The Law on Prevention of HIV Disease, dated 01/NA, dated 29/6/2010;
- The Family Law, No. 05/NA, dated 26/9/2008;



**Box A2-4 Laws and regulations on Gender-Based Violence (GBV)**

- The Law on the Protection of Children Rights and Benefits, No. 05/NA, dated 27/12/2006;
- Second National Plan of Action on Preventing and Elimination of Violence against Women and Violence against Children (2021-2025) and the Fourth National Plan of Action on Gender Equity (2021-2025)

**Ministerial Instruction on the Suspension of factories using plastic waste as raw material, No. 0930/MOIC, 31 July 2021**

Instruction has suspended all new proposed factories that use plastic waste material as material sources. Meanwhile, the factories that are in operation need to be checked and verified by the Department of Industry and Commerce department at the provincial or capital level. If factories and operation standards, including management of plastic waste and safety, are not acceptable, their operation certificate will be suspended.

**The Ministerial Decision on landfill management No. 521/MPWT, 23 February 2007**

This decision is the most detailed regulation on waste management in Laos. Article 5 states that an IEE/EIA should be conducted to ensure that all negative and positive impacts of landfills on both natural resources and communities nearby are identified, assessed and properly mitigated.

Articles 6 and 7 define Landfill siting criteria:

1. At least 7 km away from urban areas (for lowland) and 5 km from urban areas (for upland)
2. At least 3 km away from any airport
3. At least 300 m away from community
4. At least 1 km from historical or heritage sites
5. A potential landfill site shall be at least 300 m away from creeks, streams, lakes, reservoirs, wetlands, rivers, wells, irrigations unless otherwise installation of diversion and culverts,
6. Soil/material property at a potential landfill location shall have low permeability, and
7. The bottom/base of a potential landfill shall be at least 2 m above the groundwater table.

Article 10 defines the standards and criteria for landfill designs and development. The criteria include the installation of proper drainage systems and ponds/basins to receive leachate from landfills. However, these standards and criteria are for general/municipal waste treatment purposes. There are no specific landfill design standards for hazardous waste disposal.





Article 17 provides standards for landfill design and development. These include a requirement to provide landfill base with materials that can prevent seepage of leachate into groundwater systems. However, this requirement is for general/municipal waste disposal, there are no specific landfill design standards for hazardous waste disposal.

### **Institutional Responsibilities on Legislation**

From an institutional aspect, the Ministry of Natural Resources and Environment (MONRE) is the lead ministry responsible for implementation of the EPL and its regulations and/or guidelines. MONRE is also responsible for management of water, land, and environmental management. The Department of Environment (DOE) is now responsible for review of the Environment and Social Impact Assessment (ESIA) report and Environmental and Social Management and Monitoring Plan (ESMMP) including issuance of Environmental Compliance Certificate (ECC) while the Department of Pollution Control and Monitoring is responsible for compliance monitoring and inspection of implementation of the ESMMP.

According to the Decree on Environmental Impact Assessment (2019), MONRE is key agency on ESIA process in coordination with concerned ministries, government agencies, local authorities and project affected communities. Main duties and responsibilities of MONRE, line agencies and local authorities relevant to ESIA process include:

### **Main duties of MONRE in ESIA process**

- Reviewing and approving the scope of assessment and works for ESIA;
- Conducting field inspection and organizing consultation meetings during review of ESIA, ESMP and development plans;
- Engaging national or international specialist and/or establishing a panel of expert for the review of ESIA, ESMP and management plans for complex projects where necessary;
- Approving ESIA, ESMP and management plans;
- Issuing, suspending or withdrawing environmental compliance certificate;
- Monitoring the implementation of ESMP and management plans;
- Gathering grievance and complaints from project's affected people and related stakeholders with proposed resolutions;
- Conducting emergency and non-compliance issues in coordination with concerned ministries and local authorities; and
- Regularly summarizing and reporting the results of the management of ESMP and management plans to the GoL.

### **Main duties of Provincial Office of Natural Resource and Environment (PONRE) in ESIA process:**



- Collaborating and facilitating project developers on the conduct of ESIA process;
- Conducting field inspection and organizing consultation meetings during the review of ESIA documents;
- Appointing a panel of expert at provincial level to review ESIA reports;
- Providing recommendation to MONRE to suspend or withdrawal ECC where necessary;
- Requesting provincial governor to establish ad hoc committee to monitor environmental issues of investment projects and activities in case of emergency and where necessary;
- Gathering comments, feedback and complaints/grievances from project's affected people, and proposed resolutions; and
- Regularly summarizing and reporting the implementation of ESMP, and management plans of projects and activities to MONRE.

### **Main duties of District Office of Natural Resource and Environment (DONRE) in ESIA**

#### **Process**

- Participating in ESIA process and monitoring the ESMP implementation if investment projects and activities;
- Providing comments on ESIA, ESMP and management plans;
- Gathering comments, requests or complaints from people affected by development projects and activities and related stakeholders, and proposed solutions for any dispute;
- Coordinating with other stakeholders in ESIA process; and
- Regularly summarizing and reporting the implementation of environmental management activities to PONRE and local authorities.

#### **Rights in duties of sectoral agencies and local authorities in ESIA Process**

- Coordinating with the natural resources and environment sectors and related agencies in preparation of plans, budgets for environmental monitoring and inspection of projects and activities;
- Overseeing the implementation of environmental and social management and mitigation measures of projects and activities; and
- Encouraging development projects to apply environmental-friendly approaches and technologies in construction and operations of projects.

Lao Women's Union (LWU) is the leading agency in promoting women empowerment and gender equality. LWU is a mass organization, initially formed in 1955 to mobilize women's



participation in the Lao People's Revolution Party. LWU was officially established under the Constitution of Lao PDR in 1991 and given mandates to represent women of all ethnic groups, respond to women's development needs and promote the status and role of women nationwide. Since its establishment, LWU has extended its membership and networking. So far, LWU has more than one million members across government institutions at the village, district, province, ministry levels. LWU has implemented its functions by providing preventative measures to violence against women and children, protecting and supporting victims by offering healthcare, counselling, free legal support, temporary shelters, vocational training, and witnessing during the prosecution. At the village level, LWU takes part in the Village Mediation Unit, which typically consists of five to six community members, to solve village disputes, including cases associated with gender-based violence (GBV).

Advancing women and promoting gender equality are important development agendas in Lao PDR. In 2003, the Government established the Lao National Commission for the Advance of Women (NCAW). NCAW is an inter-agency that supports the government in formulating the national policies and strategies as well as mainstreaming gender in all sectors. Sub-CAW at provincial and districts also were established throughout the country to promote women equality. In addition, the NCAW worked collaboratively with LWU to implement and support the enforcement of laws and international treaties. In 2019 the Commission of Mother and Child was merged with NCAW, subsequently became the Lao National Commission for the Advancement of Women, Mother and Child (LNCAWMC).

MONRE has specific legislation in place to monitor investments in infrastructure and development projects that may have environmental and social impacts. MONRE, with support from development partners, has gained significant experience in the last fifteen years on the assessment and mitigation of project impacts and implementation of its EIA legislation. Meanwhile MPWT has broad experience on other World Bank projects, and therefore has experience in implementing GoL's environment legislation as well as aspects relating to compensation and resettlement. Nevertheless, MPWT recognizes the knowledge gaps, in particular regarding the WB's ESF which is still fairly new in Lao PDR. However, the active involvement of the Environment Research and Disaster Prevention Division (EDPD) of the Public and Transport Institute (PTI) of MPWT will be critical for ensuring guidance to MPWT to comply with the existing laws and legislations and the WB ESF.

Enforcement of each legislation can be the responsibilities of multiple institutions, not just one. Leading institutions responsible for each relevant legislation discussed above, however, are summarized in Box A2-5.



<b>Box A2-5: Enforcement responsibilities</b>	
<b>Institution</b>	<b>Enforcement responsibilities</b>
MONRE	<ul style="list-style-type: none"><li>• Law on Environmental Protection (2012)</li><li>• Law on Water and Water Resources (2017)</li><li>• National Environmental Standard (2017)</li><li>• Land Law (2019)</li><li>• Ministerial Instruction on Public Involvement in Project Environmental Impact Assessment Process (2013).</li><li>• Law on Grievance Redress (2014)</li><li>• Decree on Compensation and Resettlement of People Affected by Development Projects (2016).</li><li>• Decree on Environmental Impact Assessment (2016).</li><li>• The public involvement guidelines in ESIA Process (2013).</li></ul>
LFND	<ul style="list-style-type: none"><li>• Ethnic Minority Policy (1992)</li><li>• National Guideline on Consultation with Ethnic Groups (2013).</li><li>• Law on Lao Front for National Development (2018)</li></ul>
Ministry of Labour and Social Welfare	<ul style="list-style-type: none"><li>• Labour Law (2013)</li></ul>
Ministry of Public Health	<ul style="list-style-type: none"><li>• Law on Hygiene, Prevention and Health Promotion (2019)</li><li>• The Law on Prevention of HIV Disease (2010)</li></ul>
Ministry of Justice	<ul style="list-style-type: none"><li>• Law on the Protection of Children Rights and Benefits (2006)</li></ul>
Lao Women's Union and the Lao National Commission for the Advancement of Women, Mother and Child (LNCAWMC)	<ul style="list-style-type: none"><li>• National Policy and Plan on Gender</li><li>• Law on Lao Women Union (No. 31/NA, 2013)</li><li>• The Law on Preventing and Combating VAWC (2014)</li><li>• The Law on the Development and Protection of Women and Children (2004)</li></ul>



## ANNEX 3: SITE SELECTION CRITERIA FOR NAXAYTHONG AND NEW CONSTRUCTION MATERIALS SITES

Given that the Naxaythong site has not been confirmed yet, this annex will be applied for Naxaythong and any sites for construction materials (if any).

Criteria	Specific	Comments
Location	<ul style="list-style-type: none"><li>- Centrally located in the Naxaythong waste collection service area</li><li>- Does not flood in rainy season</li><li>- Easy access to utilities</li></ul>	Long haulage distances will increase operating costs (fuel, maintenance, travel time)
Land Ownership	<ul style="list-style-type: none"><li>- Government owned</li></ul>	In case of land acquisition compensation would need to be paid and ESS5 will apply.
Access to the site	<ul style="list-style-type: none"><li>- Road width sufficient for 2 waste trucks passing (travelling in opposite directions)</li><li>- Bridges with capacity at least 20T</li><li>- Avoiding villages, schools, markets, especially if road is not sealed.</li></ul>	
Proximity to sensitive social and environmental receptors	<ul style="list-style-type: none"><li>- Not a site of significant value for biodiversity (wetland, primary forest, protected forest/parks, et.)</li><li>- Not a site of significant value for cultural, archaeological/heritage, tourism, aesthetic, etc.</li><li>- Not a prime agriculture land.</li><li>- Preference for sites with prior human activity (modified habitat)</li><li>- More than 300m from nearest residential development, or commercial/industrial sites.</li><li>- Private or public drinking, irrigation or</li></ul>	<ul style="list-style-type: none"><li>- Consider a site already disturbed by construction of expressway or railway or other development.</li><li>- 300m is defined in Lao legislation</li><li>- The site will need to be assessed for possible social and</li></ul>



	<p>livestock water supply sources located down gradient should be further than 500 m away.</p> <p>- Perennial stream should not be located within 300 m down gradient of the proposed site</p>	<p>environmental impacts</p>
<p>Land area</p>	<p>- At least 3 hectares</p>	<p>The site should be large enough to accommodate all required functions (including onsite roads and car parking, buffer space from surrounding land use, contaminated leachate and drainage treatment), and possibly future expansion.</p>



## **ANNEX 4: GUIDANCE NOTE ON REGULATORY IMPACT ASSESSMENT FOR C1**

The risk related to the development of laws, decrees and regulations should be dealt through a regulatory impact assessments which is also required under the Lao Law, thus this ESMF proposed to include a guidance note on regulatory impact assessment.

### **I. Introduction**

#### **1.1. Regulatory Impact Assessment**

New legislation may have considerable and sometimes unexpected impacts not only on the budget but also on various parts of the economy, society as a whole and the environment. A Regulator Impact Assessment is a method developed to assess the full range of potential impacts, economic, social and environmental of a proposed legislation.

Regulatory impact assessment is a technique for improving the empirical basis for regulatory decisions. It does this by systematically and consistently examining potential impacts arising from government actions and communicating this information to decision makers. The potential impacts are identified as being positive (benefits) and negative (costs), and the information is conveyed to decision-makers in a way that allows them to consider the full range of benefits and costs that will be associated with the proposed regulatory change.

### **II. Background**

According to Article 29 of the Law on Making Legislation, No. 19 /NA, 12 July 2012, the authority responsible for drafting or amending legislation shall prepare an explanatory note and conduct an impact assessment of the draft legislation, which according to Article 36 shall be posted on a government website (the official Gazette of the Ministry of Justice or the authority's own website and other publication methods) together with the draft law for at least 60 days to allow people to give comments on the content of the draft law.

Once the consultations and review of the draft legislation have been completed, the authority in charge of drafting the legislation shall propose the draft law together with the explanatory note and impact assessment note to the Ministry of Justice (Article 40) or for provincial/capital decisions to the relevant Provincial/Capital Justice Department.

The Ministry of Justice will only accept a draft law for review and consideration if it is accompanied by the explanatory note and impact assessment note (Article 41).

The impact assessment shall consider all likely impacts on economy, social aspects, environment, and health and safety; and the significance of such impacts.

#### **2.1. Applicability**



According to Article 4 of the Decision on the Impact Assessment of Draft Legislation, No. 517/MOJ, 07 July 2014, the following types of legislation are required to undergo a regulatory impact assessment:

- Draft Laws;
- Draft Presidential Ordinances;
- Draft Government decrees, except draft government decrees for implementing a resolution of the National Assembly, resolution of the Standing Committee of the National Assembly, National social-economic development plan, and decrees on establishing and activities of a ministry and a government organisation;
- Draft Decisions of the Prime Minister, Ministers, Heads of Government authorities, governors of provinces, and governor of Vientiane Capital.

## **2.2. Objective**

The objective of the Regulatory Impact Assessment is to improve the quality of political and administrative decision-making by determining the risks, costs and benefits of the proposed legislation, and identifying who will be affected by the proposed legislation, while at the same time addressing the need for openness, public involvement and accountability.

A regulatory impact assessment is intended to ensure that any proposed legislation:

- Is necessary
- Is aimed at the right targets
- Is in proportion to the problem or issue being addressed
- Achieves its objectives and avoids unintended consequences.

## **2.3. Benefits of a Regulatory Impact Assessment**

A Regulatory Impact Assessment is not a technocratic tool that replaces other decision-making methods in the regulatory process. However, it can play an important role in strengthening the quality of the debate and understanding in the decision-making process.

A Regulatory Impact Assessment will help to:

- clarify the objectives of a draft legislation
- determine the full impact of draft legislation
- identify and assess alternative options for achieving the policy goal
- ensure that the consultations are meaningful and reaches the widest possible range of stakeholders
- determine whether the benefits justify the costs
- determine whether particular groups may be disproportionately affected





### III. CONTENT OF AN IMPACT ASSESSMENT NOTE

*This chapter provides basic guidance on the preparation of an impact assessment note with reference to the relevant sections in the format provided in Annex 1 to the Decision on the Impact Assessment of Draft Legislation, No. 517/MOJ, 07 July 2014.*

#### Outline of the Draft Legislation (Section 3 in the format)

##### 3.1. Purpose (section 3.1)

Set out briefly what the current situation is and the social, environmental or economic concerns that the proposal is intended to tackle.

Describe any current regulations or policies or legislation which already deal with the issue and set out who handles the current policies in this area, and how effective the policy has been.

##### 3.2. Objectives (section 3.2)

Define the objectives clearly so that they set out the outcomes the legislation is aiming for. Make the objectives clear, concise and specific.

This forms the basis for policy making and the options under consideration should be assessed and weighed against how likely they are to successfully delivering the objectives.

Objectives should be **SMART**:

**Specific:** Objectives should be precise and concrete enough not to be open to different interpretations.

**Measurable:** Objectives should define a desired future state of affairs in measurable terms. This will make it possible to verify whether the objective has been achieved or not. Such objectives are either quantified or based on a combination of description and scoring scales.

**Accepted:** If the objectives and target levels are to influence behaviour, they must be accepted, understood and interpreted in the same way by all those who are expected to take responsibility for achieving them.

**Realistic:** The objectives and target levels should be ambitious (setting an objective that only reflects the current state of play is not useful), but they should also be realistic within the time frames set so that the stakeholders see them as meaningful.

**Time-dependant:** Objectives and target levels remain vague if they are not related to a fixed date or period of time.

##### 3.3. Legislative Proposal (section 3.3)

Describe the rationale for the proposed government intervention and why the situation will not be resolved of its own accord, and why government needs to intervene.

Describe the impacts of taking action on existing regulations or policies.

Describe any drivers for action such as international conventions.



Describe the impact on the current situation if there is no government intervention. This will be the 'do nothing' option. Considering the 'do nothing' option will help to quantify the magnitude of the situation and will then help to design a proportionate policy.

Summarize the options considered and assessed for achieving the policy objective, and the risks and possible unintended consequences for each option.

### **3.4. Expected Impacts (Section 4)**

The assessment of impacts should consider impacts on different sectors and groups including:

- **Businesses** specific industries, firm types and businesses of different sizes
- **Consumers** and citizens more generally
- **Social groups** including groups of different ethnicity, gender, age, health and income. The proposals may also have different effects on disabled people, those living in different regions or in rural communities.
- **Public sector** Government departments, public bodies responsible for implementing and enforcing changes

Consider the impact of each option on different sectors and groups. The options may have beneficial impacts on some groups and negative impacts on others. It is important to determine who is affected to ensure that costs and benefits are as comprehensive as possible and to help those affected to assess the impact of a change on them. Include all groups that will be affected. Use informal consultation at an early stage to help identify groups likely to be affected.

Include those affected directly and indirectly. For example, a policy to reduce pollution will have a direct effect on a polluter who has to behave differently, but may have an indirect effect on the general population in the longer term as pollution is reduced and the environment improves.

#### **3.4.1. Analysis of costs and benefit**

The costs and benefits must be compared. In principle, where the costs exceed the predicted benefits, the proposal should be refined or in certain circumstances abandoned.

Costs and benefits must be quantified wherever possible.

Show costs and benefits as monetary values where this is possible. This will allow easier comparison between the costs and the benefits of each option. However there are many policy areas where costs and impacts are significant but where full monetisation of benefits is not possible. This may particularly arise in the context of environmental or social costs and benefits.

Note also that any option may have beneficial impacts on some groups of stakeholders and negative impacts on others. It is important to determine who will be affected by the option to ensure that costs and benefits are as comprehensive as possible and to help those affected to assess the impact of the change on them. For example, a policy to reduce pollution will have a



direct effect on a polluter who must behave differently; but it may also have an indirect effect on the general population in the longer term as pollution reduces and the environment improves.

Identify the costs by thinking about the aim of the proposal and what it will be requiring firms and consumers or the public sector to do.

Consider any indirect costs. There may be changes in behaviour such as fewer firms setting up in business, reduced consumer choice, less competition between firms, less innovation etc.

Where there is uncertainty, make it clear and spell out the assumptions used to arrive at the cost estimates.

Identify the benefits by thinking about the aim of the proposal and the risks being addressed.

Describe the process by which the changes in behaviour or activity or the act of complying are expected to lead to achieving the goals.

Consider any indirect benefits. For example, changes in behaviour that can have additional effects, e.g. more firms setting up in business as a result of reduced hiring costs or more people entering the labour market as a result of tax changes.

#### **3.4.2. Examples of unintended consequences**

- People may find ways of legally avoiding regulation. For example, to avoid regulation on air pollution, businesses may relocate to another country and pollute elsewhere. This could lead to a negative impact on the economy.
- Regulation may increase costs for businesses, causing competition issues. This could cause firms to leave, or be prevented from entering, a market.
- There may be 'offset' effects. For instance, consumers or workers may become less vigilant about safety if they feel protected by regulation.
- If firms or consumers are not given enough time to prepare for a new regulation coming into force, there may be unavoidable illegal activity. Or, if a product is banned before substitutes can be developed, stockpiles may build up.

#### **3.5. Research (Section 5)**

Identifying and screening a wide range of options will offer greater transparency. It is a way of informing policy-makers and stakeholders why some options have been discarded and thus makes it easier to justify the proposed choices.

At least three options should be considered, and each option should be clearly described and explained. The “do nothing/no policy change approach” should be included since it provides a useful benchmark against which to compare the other option.

Look at previous, similar policies. There may be useful evidence from policies in other countries.

Think about how to change the options to reduce the risks.



Think about any possible unintended consequences for each of the options. These are not easy to predict.

#### **IV. Costs and benefits checklist**

A screening procedure should be used to identify when a regulation is likely to have major effects on the economy, society or the environment. It is not necessary to write a detailed impact assessment note in all cases (proportionality principle). For example, if the costs and benefits of a proposal are likely to be small, then the impact assessment note can be quite short. Where the impact is likely to be substantial, more data and depth of analysis will be required.

This checklist will help to complete the costs and benefits section of the impact assessment note. The list of questions is not exhaustive and it is important to think further about the specific legislation and who it might impact on.

##### **4.1. Economic impacts**

- Will the proposal result in receipts or savings to the Government?
- Will the proposal affect the costs, quality or availability of goods or services?
- Will the proposal result in new technologies?
- Will the proposal result in a change in the investment behaviour into Lao?

##### **4.2. Social impacts**

- Will the proposal influence health-related behaviour or affect demand for health services?
- Will the proposal influence safety at work or affect the likelihood of accidents in the community?
- Will the proposal affect the levels of skills and education?
- Will the proposal affect the provision of facilities or services that support community cohesion or in other ways that affect the quality of life in the local community?

##### **4.3. Environmental impacts**

Will the policy option:

- Impact significantly on water quality?
- Impact on air quality?
- Involve any material change to the appearance of the landscape or townscape?
- Impact disproportionately on any sector/group of people?
- Disturb or enhance habitat of wildlife?



## **ANNEX 5: GUIDELINE FOR PREPARATION OF SITE-SPECIFIC ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR C2**

### **A5.C. ESIA Report Content**

This Annex will be implemented by the MPWT PMU with support from ESIA firm and PEDPD/PTI. MPWT PMU will prepare a full ESIA and ESMP reports for three sites including KM32, KM16 and Naxathong Site in compliance with the ESMF, Pre-ESIA and SIA-SMPs. The indicative Outline of ESIA includes:

#### **(a) Executive summary**

- Concisely discusses significant findings and recommended actions.

#### **(b) Legal and institutional framework.**

- Analyses the legal and institutional framework for the project, within which the environmental and social assessment is carried out, including the issues set out in ESS1, paragraph 26.46.
- Compares the GoL's existing environmental and social framework and the ESSs and identifies the gaps between them.
- Identifies and assesses the environmental and social requirements of the WB.

#### **(c) Project description**

- Concisely describes the proposed project and its geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS1 through 10.
- Includes a map of sufficient detail, showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

#### **(d) Baseline data**

The objective of this section is to characterize the current condition of the physical, biological, socio-economic and cultural components that may be affected by site-specific implementation. Baseline conditions will be compared to relevant national and international standards, where applicable, for example WBG EHS General Guidelines and EHS Guidelines for waste management facilities. The Consultant would review baseline data presented in the Pre-ESIA and other relevant studies and identify and fill gaps if exist.



The baseline topics in the full ESIA will:

- ❖ Sets out in detail the baseline data that is relevant to landfill and transfer stations location, design, operation, or mitigation measures. This should include a discussion of the accuracy, reliability, and sources of the data as well as information about dates surrounding project identification, planning and implementation.
- ❖ Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions.
- ❖ Based on current information, assesses the scope of the area to be studied and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences.
- ❖ Takes into account current and proposed development activities within the project area but not directly connected to the project. Baseline conditions should include the following aspects:
  - *Physical environment:* geology, soils, climate and meteorology, topography, surface and groundwater hydrology, water quality, air quality and noise and natural hazards. Primary data for some key parameters such as air quality, surface and groundwater quality need to be presented in the ESIA.

The Consultant shall consider the potential locations of the proposed facilities with regard to nature of surrounding land uses and proximity to homes and other establishments; the existing road and traffic conditions in the area of proposed facilities, versus proposed road and traffic conditions; the existing topography and proposed changes, including the areas which will be affected by visible aesthetic impacts; soils and geology; surface and ground water hydrology, and hydraulic connections between the proposed landfill site and the receiving waters down-gradient of the site; existing and proposed uses of receiving waters, including location of private and public water supply wells and intakes; climate and meteorology, including prevailing wind direction; socio-cultural environment: past uses of sites and consideration of any historic significance; land use and demographic character of surrounding neighborhoods; volumes of solid waste generated and percentage disposal volumes, planned development activities; education, awareness, and sensitivity of public to proposed siting of facility; and public concerns over traffic, insects, noise, dust, odor, smoke, or aesthetic issues.

- *Underlying geological and hydrogeological conditions:* Using existing information, the general geology and groundwater conditions should be described for the proposed landfill site down to and including any aquifers that could be affected by



the facility including location and depth of aquifers and geological structuring underlying the proposed facility as well as permeability of the soil at the site and environmental risks that could cause highly permeable conditions. The Consultant will accurately characterize the surficial geology, the groundwater flow system, and the groundwater chemistry at the proposed landfill.

- *Water quality assessment:*

The scope of the water quality studies is to provide baseline data on the basic surface water and groundwater parameters. Primary data on surface and groundwater parameters need to be presented. Particulate matter released into surface waters during the construction phase may reduce water quality and negatively affect benthic communities. Eutrophication is usually associated with sewage pollution and elevated nutrient levels (i.e., particularly Phosphorus levels in inland waters).

- *Biological and ecological environment:* Describe baseline of the biological environment, including flora, fauna, threatened species, native and/or sensitive habitats (e.g., wetlands delineation), including protected areas, significant natural sites, species of commercial importance and non-native invasive species, current status of aquatic life and terrestrial resources, species with potential to become nuisances, vectors or dangerous species; and rare, endangered, or commercially important species.
- *Socio-economic:* includes: population and communities; land use; planned development activities; community structure; employment; labor market; distribution of income, goods and services; recreation; public health; cultural properties; ethnic peoples; and customs, aspirations and attitudes; socio-cultural activities; the potential for increased accidents; waste generation including primary data on volumes of solid waste generated and percentage disposal volumes;; ethnicity and religion, administration, wealth and poverty, gender dimensions, vulnerable groups, local economies and livelihoods including natural resource use and ecosystem services, local infrastructure and services, education and literacy, community health and safety, and unexploded ordinance (UXO).
- The socio-economic studies should include the initial survey and census of the potential stakeholders at the current dumpsites and will also form the cut-off date for the determination of the Resettlement Action Plan and Livelihood Restoration Plan.
- Communication is the key instrument for the identification of social and economic welfare issues. The communication notifying the stakeholders (i.e., those who work



in and earn their living from the Site) on the transformation of the Dump Site. As far as the project is concerned, communication does not merely refer to the socialization of the government plan about the Dump Site's transformation, but also about delivering the message that the local government basically attempts to assist the stakeholders. The assistance is available by minimizing or even preventing the negative impacts of the Site transformation.

- The Baseline Data will describe the amount and specifics of the census of the formal and informal waste pickers and waste collectors and distinguishing between local waste pickers and non-local waste pickers: (i) livelihood and percentage of livelihood derived from waste picking/collecting versus other sources of income; (ii) waste pickers and waste collectors expenditures and assets and living condition as well as the location of the assets (specifically huts and houses and livestock) for determination whether resettlement would be required, (iii) the waste buyers sales and income; and (iv) the organization and system of the waste picking, waste collection and recyclables market. The baseline data will also provide information about female waste pickers, and children, waste collectors as well as other specific vulnerable groups.
- *Cultural heritage*: describe presence and nature (or absence) of archaeological material within or adjacent to the proposed landfill site.
- ***Environmental and Social Risks and Impacts and Benefits*** Based on the characteristics of the Project, baseline conditions and receptor sensitivity, the Consultant shall predict and assess the potential significant E&S impacts and risks that the proposed Project is likely to generate, in quantitative terms as far as possible. This will include the environmental and social risks and impacts specifically identified in ESS2–8, including the risks and impacts identified in ESS1, paragraph 28. The criteria for impact significance will be clearly defined. Project related impacts should be characterized according to: type (direct, indirect or residual; positive or negative); duration / temporal scope (permanent or temporary (short-term or long-term)); geographical extent (local, regional or national); and significance (low, moderate, substantial or high). The Consultant should also identify impacts that are unavoidable or irreversible. The assessment should consider the different stages of the life cycle, i.e., from pre-construction including demolishing of the existing structures, construction works, operation and maintenance. The full ESIA will also identify and assess, to the extent appropriate, the potential environmental and social risks and impacts of associated facilities. The assessment will also consider issues on resource efficiency; concept of reducing waste; reusing and recycling





resources and products (3Rs); estimation of project contribution of GHG emissions, legacy issues at the current waste dump sites (groundwater contamination, methane gas production). An assessment of the impacts of climate change on the design and operation of the project and the need for a climate change risk analysis, particularly with respect to groundwater quality, should also be prepared. The assessments will include occupational health and safety practices, and requirement for management of influx of non-domestic laborers to remote community areas among other issues. The Consultant should also characterize the extent and quality of available data, explaining significant information deficiencies and uncertainties associated with predictions of impacts.

**(e) Mitigation measures**

- Identifies mitigation measures and significant residual negative impacts that cannot be mitigated and, to the extent possible, assess the acceptability of those residual negative impacts.
- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.
- Assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the proposed mitigation measures.
- Specifies issues that do not require further attention, providing the basis for this determination.

**(f) Analysis of alternatives**

- Systematically compares feasible alternatives to the proposed project site, technology, design, and operation—including the "without project" situation—in terms of their potential environmental and social impacts;
- Assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; the institutional, training, and monitoring requirements for the alternative mitigation measures.
- For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

**(g) Design measures**

- Sets out the basis for selecting the particular project design proposed and specifies the applicable ESHGs, or if the ESHGs are determined to be inapplicable, justifies



recommended emission levels and approaches to pollution prevention and abatement that are consistent with GIIP.

**(h) Key measures and actions for the Environmental and Social Commitment Plan (ESCP)**

- Summarizes key measures and actions and the time frame required for the project to meet the requirements of the ESSs. This will be used in developing the Environmental and Social Commitment Plan (ESCP).

**(i) Appendices**

- List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
- References—set out the written materials, both published and unpublished, that have been used.
- Record of meetings, consultations, and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties.
- Tables presenting the relevant data referred to or summarized in the main text.
- List of associated reports or plans.

**A5.C. ESMP Report Content**

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. The MPWT PMU will (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements. The ESMP will be prepared as a standalone document. The content of the ESMP will include the following:

**(a) Brief Project description**

**(b) Overview of the Project location, including socioeconomic and environmental baseline information**

**(c) Legislative Framework (Lao laws and regulations, WB ESF and Gap Analysis)**

**(d) Mitigation**

The ESMP identifies measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The plan will include compensatory measures, if applicable. Specifically, the ESMP:



- Identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
- Describes—with technical details—each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
- Estimates any potential environmental and social impacts of these measures; and
- Takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, Indigenous Peoples, or cultural heritage).

#### **(e) Monitoring**

The ESMP identifies monitoring objectives and specifies the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP. Specifically, the monitoring section of the ESMP provides:

- A specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and
- Monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation.

#### **(f) Capacity development and training**

- To support timely and effective implementation of environmental and social project components and mitigation measures, the ESMP draws on the environmental and social assessment of the existence, role, and capability of responsible parties on site or at the agency and ministry level.
- Specifically, the ESMP provides a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- To strengthen environmental and social management capability in the agencies responsible for implementation, the ESMP recommends the establishment or expansion of the parties responsible, the training of staff, and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.



**(g) Implementation schedule and cost estimates**

- For all three aspects (mitigation, monitoring, and capacity development), the ESMP provides (i) an implementation schedule for measures that must be carried out as part of the project, showing phasing and coordination with overall project implementation plans; and (ii) the capital and recurrent cost estimates and sources of funds for implementing the ESMP. These figures are also integrated into the total project cost tables.

**Sample Table for ESMP**

potential negative Impact	Environmental and Social mitigation Measures	location	Estimated mitigation costs	Executing Agency	Supervising / MONITORING Agency
DETAILED DESIGN/ PRE-CONSTRUCTION MOBILISATION STAGE					
CONSTRUCTION STAGE					
CLOSURE PHASE					
OPERATION AND MAINTENANCE STAGE					



## **ANNEX 6A SIMPLE ENVIRONMENTAL AND SOCIAL CODE OF PRACTICES FOR C1 AND C3 COVERING CODE OF CONDUCT ON SEA/SH AND VAC**

This Annex presents a generic Environment and Social Code of Practices (ESCOPE) comprising an Environment Code of Practice (ECOP) (Part A6.1) and the Social Code of Conduct (SCOC) (Part A6.2). The ESCOP to be included in the 3R/GCB activities and civil works contract for small size construction and/or rehabilitation of works related to offices and/or facilities to be implemented under the under C1. The ECOP describes a general and key specific requirement for environmental management and monitoring for 3R/GCB activities and physical construction and renovation civil works while scope of SCOC describing obligations of contractor and workers to prevent social impacts during 3R/GCB activities and work contract.

Both the ECOP and SCOC will be included in bidding and contract documents (BD/CD) before procurement for contractors and/or before works contract can be signed as agreed with World Bank (WB). The implementation cost for ECOP and SCOC will be part of the works contract cost. For small civil works, Sub-component Implementing Agencies (SIA) of MONRE will assign field engineer (civil work contracts) to supervise and monitor contractor's compliance with the ECOP and SCOC on a day-to-day basis and results will be included in the progress report. EPFO PCU will conduct periodic monitoring contractor performance, as needed. EPFO PCU together with SIAs of MONRE and SIA of MPI will ensure that 3R/GCB activities are in compliance with this ESCOP during grant implementation and during construction, rehabilitation and/or renovation of civil works.

This generic ECOP and SCOC can be modified to suit specific issues/conditions observed/agreed during the preparation of the 3R/GCB activities and detailed works design and bidding and contract document.

The ECOP and SCOC aims to mitigate the possible negative impacts induced by project financed activities. Provision in the ECOP is to address relevant negative impact induced from construction/renovation works such as air pollution, noise, vibration, waste, safety risks, local traffic, etc. which could be mitigated through good housekeeping and construction practices while the SCOC aims to ensure that the contractor pay full attention to the behavior of its staff and workers related to environment, social, health, and safety (ESHS), especially, the occupational health and safety (OHS) as well as other social issues such as gender-based violence (GBV), violence against children (VAC) and other social aspects. If needed, results from consultation with local authorities and/or local communities should be incorporated into these documents



## A6.1 Scope of ECOP

The Environmental Codes of Practice (ECOP) is developed and will be applicable to some of 3R/GCB activities and contractors for the renovation of office buildings and associated infrastructure, representing the complexity and limited size of the planned construction civil activity within the scheme and the defined venue. The ECOP is developed in consultation with interested stakeholders during this project preparation.

### A6.1.1 Potential Risks & Proposed Mitigation Measures

**Table A6-1 Potential Risks & Proposed Mitigation Measures for Small Civil Works & some Matching Grants**

Risk/Issues	Mitigation Measures
1. Dust generation/Air pollution	<p>The Contractor implement dust control measures to ensure that dust generation is reduced and is not perceived by EPFO PU and SIAs as an annoyance, ensuring a healthy working environment, such as:</p> <ul style="list-style-type: none"><li>• All truckloads of loose materials are covered during transportation to the construction / renovation sites;</li><li>• Using mask when staying in the field and working; and</li><li>• Water spraying (if appropriate to prevent causing dust).</li></ul>
2. Noise and vibration	<ul style="list-style-type: none"><li>• Reduce the speed of vehicle movements for the equipment transformation, earthwork, and foundation work.</li><li>• Ensure that operations are designed to be undertaken with any directional noise emissions pointing away from noise-sensitive receptors.</li><li>• Vehicles and the mechanical plant will be maintained in a good and effective working order and operated to minimize noise emissions. The contractor will ensure that all plant complies with the relevant statutory requirements;</li><li>• Construction activities are only scheduled in the day-time (8 am to 5 pm), and hours of operation should be strictly enforced, and any deviations other than those previously identified will be with the consent of the local authority;</li><li>• When staying and/or working with loud machines, using earplug;</li><li>• Use of low noise equipment/gears or replacing a noisy item of equipment/gears is not viable or practicable options, consideration should be given to noise control “at source”.</li></ul>



	<ul style="list-style-type: none"><li>• Minimize obstructions between the vibration source and the sensitive receiver, e.g., old foundations, etc., which exacerbate the transmission of vibration; and</li><li>• Local hoarding, screens or barriers should be erected to shield particularly noisy and high vibration activities.</li></ul>
3. Solid waste	<ul style="list-style-type: none"><li>• The Contractor shall provide litter bins, containers, and recycling systems for waste at all places of work;</li><li>• There shall be no burning, burial, or disposal of hazardous waste on site; and</li><li>• Recyclable products such as wooden form work for trench works, concrete, scaffolding products, site keeping, packing materials, etc. shall be gathered on site and isolated for reuse, loading or disposal to approved local landfills.</li></ul>
4. Chemical or hazardous wastes	<ul style="list-style-type: none"><li>• Provide hard compacted, impervious, and bounded flooring to hazardous material storage areas.</li><li>• Label each container indicating what is stored within;</li><li>• Oil waste and other hazardous waste (including contaminated soil and oil spills) must be kept closed and separated from other wastes. This type of waste must be transported by licensed transporters to a licensed disposal facility;</li><li>• Train staff in safe handling techniques; and</li><li>• Hazardous waste shall be disposed of or stored at approved landfill or designated place.</li></ul>
5. Asbestos/asbestos containing material for renovation works	<ul style="list-style-type: none"><li>• If asbestos is located on the project site, mark it clearly as a hazardous material;</li><li>• When possible, the asbestos will be appropriately contained and sealed to minimize exposure;</li><li>• The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust;</li><li>• Asbestos will be handled and disposed of by skilled &amp; experienced professionals;</li><li>• If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately; and</li><li>• The removed asbestos will not be reused.</li></ul>
6. E-wastes	<ul style="list-style-type: none"><li>• Avoid purchasing refurbished or used electronic devices with a reduced shelf period, which is a common issue that results in E-waste production due to obsolescence.</li><li>• Project staff and workers who will use the electronic device should be</li></ul>



	<p>aware of how to properly dispose of them until they become obsolete, expired and/or end of life.</p> <ul style="list-style-type: none"><li>• All the e-waste must be separate in the specific bin for the other proposed, such as storing to be used recycling process and to proper disposal process later stage; and</li><li>• Ensure that all broken and/or expired electronic devices and equipment shall be disposed of or stored at an approved landfill or designated place.</li></ul>
7. Interruption of utility services	<ul style="list-style-type: none"><li>• Provide government staff with details on work schedules and the planned water/power disturbances at least 2 days in advance.</li><li>• Any damages to existing cable utility systems shall be reported to authorities and repaired as soon as possible.</li></ul>
8. Worker and public Safety	<ul style="list-style-type: none"><li>• Training workers on occupational safety regulations and providing workers with enough protective clothing in accordance with applicable national legislation.</li><li>• Ensure workers do use appropriate Personal Protective Equipment when they are working; and</li><li>• Install fences, barriers, and danger warning / prohibition signs across the building area indicating possible threat to government staff.</li></ul>
9. Communication between contractors/3R/GC B activities and EPFO PCU (including SIAs and local communities)	<ul style="list-style-type: none"><li>• Disseminate project details prior to the start of construction;</li><li>• Contact information which stakeholders may access and obtain updates on site activities, project progress and outcomes of implementation of the project;</li><li>• Respect local culture and customs;</li><li>• Timetable for construction and work, service interruption, if appropriate; and</li><li>• Notification boards shall be established at the construction site containing project information, as well as contact details on the site manager, environmental staff, health and safety staff, telephone numbers and other contact information so that any concerned government staff and the affected public may have the opportunity to express their complaints and suggestions.</li></ul>

#### **A6.1.2 Implementation of “Chance Find” Procedures**

If the Contractor discovers archaeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor will carry out the following steps:

- Stop the construction activities in the area of the chance find;





- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the National Culture Administration take over;
- Notify the project engineer, supervisor, and/or the project owner (EPFO PMU/DPC and/or PHO) who in turn will notify the responsible local authorities and the provincial Culture Department immediately (within 24 hours or less);
- Responsible local authorities and the provincial Culture Department would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of National Culture Administration. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible authorities and the provincial Culture Department. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Construction work could resume only after permission is given from the responsible local authorities or the provincial Culture Department concerning safeguard of the heritage.

#### ***A6.1.3 Guideline to prevent risk due to COVID-19 outbreak***

To protect COVID-19 impacts on workforce, the measures provided in Box A6.1 will be applied as appropriate taking into account the Government procedures and regulations and/or agreements with local authority and/or the WB.

#### **Box A6.1. Guideline to prevent risk due to COVID-19 outbreak**

- Develop a contingency plan for work force in line with the guideline provided under the WBG's response to COVID19 on development of contingency plan for workforce [including an arrangement for accommodation, care and treatment for: (a) Workers self-isolating; (b) Workers displaying symptoms; and (c) Getting adequate supplies of water, food and supplies.
- The guidelines also require that (i) the Contingency plans will consider arrangements for the storage and disposal arrangements for medical waste, which may increase in volume and which can remain infectious for several days (depending upon the material); (ii) Ensure medical facilities are stocked with adequate supplies of medical PPE, as a minimum: (a) Gowns, aprons; (b) Medical masks and some respirators (N95 or FFP2); (c) Gloves (medical,



and heavy duty for cleaners); and (d) Eye protection (goggles or face screens); (iii) Medical staff at the facilities will be trained and be kept up to date on WHO advice and recommendations on the specifics of COVID-19; and (iv) The medical staff/management will run awareness campaigns and posters on site advising workers: (a) how to avoid disease spread (cough/sneeze in crook of elbow; keep 1m or more away, sneeze/cough in tissue and immediately through tissue away, avoid spitting, observe good hygiene); (b) the need to regularly wash hands with soap and water – many times per day; (c) to self-isolate if they think they may have come in contact with the virus; and (d) to self-isolate if they start to display any symptoms, but alert and seek medical advice; (v) Wash stations e provided regularly throughout site, with a supply of clean water, liquid soap and paper towels (for hand drying), with a waste bin (for used paper towels) that is regularly emptied; and (vi) Wash stations should be provided wherever there is a toilet, canteen/food and drinking water, or sleeping accommodation, at waste stations, at stores and at communal facilities. Where wash stations cannot be provided (for example at remote locations), alcohol-based hand rub should be provided.

- Enhanced cleaning arrangements should be put in place, to include regular and deep cleaning using disinfectant of catering facilities/canteens/food/drink facilities, latrines/toilets/showers, communal areas, including door handles, floors and all surfaces that are touched regularly (ensure cleaning staff have adequate PPE when cleaning consultation rooms and facilities used to treat infected patients)
- Worker accommodation that meets or exceeds [IFC/EBRD worker accommodation](#) requirements (e.g. in terms of floor type, proximity/no of workers, no 'hot bedding', drinking water, washing, bathroom facilities etc.) will be in good state for keeping clean and hygienic, and for cleaning to minimize spread of infection.
- To minimize pressure on PPE resources: WHO advice on the effectiveness and use of PPE by general public should be followed to ensure that the supplies are not exhausted through ineffective use – this is equally important on construction sites.
- Other measures (such as working water sprinkling systems at crushers and stock piles, covered wagons, water suppression or surfacing of haul roads etc.) should be used for dust suppression on site before relying upon the use of dust masks (which could unnecessarily reduce the availability of N95/FFP2 masks for use by medical staff performing some duties)

## A6.2 Scope of SCOC

In Lao PDR, although Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH), and Violence Against Children (VAC) are not commonly discussed, there are several key issues associated with SEA/SH and VAC. These issues include, but not limited to the following: (i) both urban and rural communities, more so among women and ethnic group communities, accept and justify certain forms of violence; (ii) quite a high prevalence of physical, emotional and sexual violence was reported and recorded in recent surveys; (iii) despite Lao PDR having substantial legal frameworks to safeguard the rights and interests of women



and children, services and help systems are limited; and (iv) the issue is only vaguely understood at all administrative levels and at the individual level.

### **A6.2.1 Code of Conduct (CoC) to prevent and manage SEA/SH and VAC**

The Project has incorporated SEA/SH and VAC, youth, child protection in its reporting system and grievance redress mechanisms. The project is a promote zero tolerance of child abuse and it is mandatory reporting of confirmed or suspected child abuse.

SEA/SH and VAC, youth and child protection trainings will be provided for project staff, the survey/outreach team and ICT centres with the objective of raising awareness of existing and potential SEA/SH and VAC risks.

The Code of Conduct (CoC) to eliminate Gender Based Violence and Sexual Exploitation and Child Abuse and Exploitation (CAE) is presented in Box A6-1. This CoC must be signed by all contractor and MAG's staffs.

#### **BOX 1: CODE OF CONDUCT (COC) TO PREVENT AND MANAGE SEA/SH AND VIOLENCE AGAINST CHILDREN (VAC).**

I, \_\_\_\_\_, acknowledge that preventing gender-based violence (SEA/SH) and violence against children (VAC) is important. The company considers that SEA/SH or VAC activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. All forms of SEA/SH or VAC are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit SEA/SH or VAC may be pursued if appropriate.

I agree that while working on the project I will:

- Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual activity with children—including grooming or through digital media. Mistaken belief regarding the age of a child and consent from the child is not a defence.
- Not engage in sexual favours or other forms of humiliating, degrading or exploitative behaviour.
- Not have sexual interactions with members of the communities surrounding the workplaces that are not agreed to with full consent by all parties involved in the sexual act. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual” within the scope of this Code.



- Report through the GRM or to my manager suspected or actual GBV and/or CAE by a fellow worker, whether in my company or not, or any breaches of this code of conduct.
- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children into my home, unless they are at immediate risk of injury or in physical danger.
- Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor's permission, and ensure that another adult is present if possible.
- Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any medium
- Refrain from physical punishment or discipline of children.
- Refrain from hiring children for domestic or other labour, which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
- Comply with all relevant local legislation, including labour laws in relation to child labor.
- When photographing or filming a child for work related purposes, I must:
  - Before photographing or filming a child, assess and endeavour to comply with local traditions or restrictions for reproducing personal images.
  - Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
  - Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
  - Ensure images are honest representations of the context and the facts.
  - Ensure file labels do not reveal identifying information about a child when sending images electronically.

*I understand that it is my responsibility to avoid actions or behaviors that could be regarded as SEA/SH or VAC or breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to SEA/SH and VAC. I understand that any action inconsistent with this Individual Code of Conduct or failure to take action mandated by this Individual Code of Conduct may result in disciplinary action and may affect my*



*ongoing employment.*

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**A6.2.2 Do and Don't Guideline for GBV/SEA/SH/VC**

The following are basic things to do and not do in response to a reported incident of GBV/ SEA/SH/VC by someone associated with the Project. This document is intended to give interim guidance to contractors and 3R/GCB activities while handling and referring the case. It does not replace comprehensive guidance or specialist expertise.

<b>Receiving the Disclosure</b>	
<b>DO</b>	<b>DO NOT</b>
<ul style="list-style-type: none"> <li>• Show the person empathy and compassion.</li> <li>• Use a survivor-centre approach – this means treating the survivor with dignity and respect, making every effort to protect their safety and well-being, and not taking any actions without their consent.</li> <li>• Prioritize the survivor’s rights, needs and wishes in all decisions.</li> <li>• Make sure that a safe, comfortable place is chosen for speaking to the survivor alone.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not judge.</li> <li>• Do not show or communicate doubt or disbelief.</li> <li>• Do not ask for details about their experience.</li> <li>• If translation/interpreting is needed, request support from GBV service providers in finding an appropriate female interpreter. Do not recruit someone from the local community.</li> </ul>
<b>Services</b>	
<b>DO</b>	<b>DO NOT</b>
<ul style="list-style-type: none"> <li>• Give the survivor (or the person who reports the GBV/SEA/SH incident) the best</li> </ul>	<ul style="list-style-type: none"> <li>• Do not try to determine if the incident is project-related or not before ensuring access to</li> </ul>



<p>information that you have about GBV services (health, psychosocial (including counselling, case management) police, and justice) in your area. (Include all kinds of relevant service providers – government agencies, development organizations, non-government and civil society organizations.)</p>	<p>services – all survivors should receive care regardless of whether the perpetrator is associated with the project or not.</p>
<b>Safety</b>	
<b>DO</b>	<b>DO NOT</b>
<ul style="list-style-type: none"> <li>• Take all possible steps to protect the safety of the survivor.</li> <li>• Make adjustments to the schedule or location of the alleged perpetrator – or the survivor, if needed – to protect the survivor’s safety while an investigation is being conducted.</li> <li>• Involve a GBV service provider and/or specialist in the assessment of risk.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not take any decisions or actions without the permission of the survivor.</li> </ul>
<b>Confidentiality</b>	
<b>DO</b>	<b>DO NOT</b>
<ul style="list-style-type: none"> <li>• Keep any identifying information in a locked drawer or cabinet, and limit access to this information.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not share any information that can identify the survivor with anyone (including members of the project team), without their direct permission.</li> </ul>
<b>Support</b>	
<b>DO</b>	<b>DO NOT</b>
<ul style="list-style-type: none"> <li>• Seek specialist guidance as soon as possible. The WB task team has GBV specialists who can support you.</li> <li>• In seeking support, share ONLY non-identifying information.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not share any information that could be used to identify the survivor or perpetrator in seeking support.</li> <li>• Do not encourage anyone associated with the project to seek information or ask questions</li> </ul>



	that may compromise confidentiality or put the survivor at risk.
<b>Informing the World Bank</b>	
<ul style="list-style-type: none"> <li>• All incidents of GBV must be reported through the LSB and must be reported to the World Bank within 24-48 hours.<sup>6</sup></li> <li>• Share ONLY non-identifying information. If available, share:             <ul style="list-style-type: none"> <li>○ the type of incident;</li> <li>○ age &amp; sex of the survivor;</li> <li>○ whether the perpetrator is known to be associated with the project;</li> <li>○ whether the survivor was referred to services.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Do not share any information that could be used to identify the survivor or perpetrator in seeking support.</li> </ul>

### **A6.2.3 Referral pathway services for GBV-SEA/SH/VC**

The pathway and referral mechanism are a critical piece of a working and responsive national system that aims to protect and respond to women and girl victims/survivors of violence in a timely manner and in times of crisis. A functioning referral pathway will allow victims/survivors of violence to access with ease the services available per sector and will improve coordination among the sectors. The collaboration will also invest in the positive role men and boys can play to prevent VAWC by rolling out in nine communities a manual on engaging men and boys for GBV prevention. **Contact point: LWU +856 21312 253 – 211; 030 51185532; [Saolao\\_1@yahoo.com](mailto:Saolao_1@yahoo.com).**

<sup>6</sup> The Environment and Social Incident Response Toolkit from WB’s Good Practice Note on Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing involving Major Civil Works, outlines the requirements for reporting SEA/SH cases and has a protocol that defines incidents using three categories. “Indicative” events are addressed within the Task Team and “Serious” events need to be elevated to the Country Manager/Director, Global Practice Manager, Social and Environmental Practice Managers, Relevant Program Leaders, and Environmental and Social Standards Advisor (previously called Regional Safeguards Advisor), who may then advise the appropriate Vice Presidents. Finally, a “Severe” event should be reported to the Vice Presidents by the Task Team within 24-48 hours of notification. GBV incidents are classed as Severe events.



The United Nations Population Fund is taking the lead in providing support to establish an Essential Services Package (ESP) to GoL for gender equality and GBV prevention-related interventions. The ESP is a guidance tool that provides a coordinated set of essential and quality multi-sectoral services to be provided to all women and girls who have experienced GBV. It includes services that should be provided by the health, social services, police and justice sectors. The ESP translates international commitments on ending and responding to GBV into concrete actions to be implemented at the country level through a survivor-centered approach. The ESP is remarkable because it is the first global guideline to set out the coordinated quality service provision that survivors of violence should receive – everywhere and anywhere. **Contact point: Ms. Sisouvan Vorabouth, Gender Program Analyst: [vorabouth@unfpa.org](mailto:vorabouth@unfpa.org).**

Reachoutlaos: Mental and emotional hotline service available over Facebook 24/7 or telephone Sundays & Wednesdays 6–9 p.m. (English/Lao). **Contact point: <https://www.facebook.com/reachout.laos.9>.**

**The Environment Protection Fund Office (EPFO)**

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Sydamdouan Road, Chanthabouly District, Vientiane Capital

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## ANNEX 6B SIMPLE DO AND DON'T MEASURES FOR 3R AND GCB ACTIVITIES UNDER C1

The project under Component 1 will scale up the existing community-based recycling program called 'waste recycling bank' that is proven to contribute to the increase of recycling rate in Vientiane Capital. The community-based waste bank is recognized as effective in increasing the citizen's participation in waste reduction and recycling, and it is a systematic approach to developing markets for certain streams such as plastic, metal, and glass. The project will support setting up and operationalizing waste banks in communities and schools to increase recycling.

Type of minor civil works under GCR/3B will only relate to waste bank activities (construction and operation of small plastic waste, paper waste, and recyclable wastes storage on public land (school, temple, market, etc.). The following are the Do and Don't Measures for 3R and GCB activities under Component 1:

### A. Do Measures:

- Separate or Segregation of Waste Items

Require to separate or dispose of trash into different bins. For instance, plastic waste would go in one bin whereas non-recyclable waste has to be dumped in a different bin. The same does apply for metal and glass waste.

- Plastic Bags Should be Recycled Separately

Plastic bags aren't meant to go to the recycling bin; however that doesn't mean that they are not recyclable or reused. Plastics are to be processed separately and for this, participating communities and schools shall separate bins meant to dispose of plastic bags for reuse.

- Recycling or Junk Shop Local Requirements

Different recycling or junk shops handle different kinds of waste; hence ask and understand what items would be collected for recycling. Also, confirm that plastic waste would be collected by the center to process and recycle.

- Ensure Separation E-Waste

Most E-Waste and electronic items can be recycled, but this could be done in an advanced and more secure recycling facility that is different from a regular recycling or junk shops.

### B. Don't Measures:

- Don't Recycle Food Products

Food products are compostable, but they are not recyclable. Hence make sure that the bottles, food containers or cans are all free from food residue, before dumping them in the recycling bin.



- **Avoid Recycling Toxic Containers**

Containers that have toxic materials are not recyclable. Some examples include oil containers, paint cans, house cleaner bottles, pesticide containers, and others.

- **Don't Dispose Other Waste in the Recycling Bin**

Do not dispose all other waste into both the garbage and recycling bins. Just like food waste, yard waste, including grass and tree trimmings, are not recyclable.

- **No Burning of Non-recyclable Waste**

No burning of non-recyclable or non-reusable waste in the area, particularly grass and tree trimmings, plastics and food waste, that were collected from the area.



## ANNEX 7: EXECUTIVE SUMMARY OF PRE-ESIA FOR THE KM32

### DRAFT Preliminary Environmental and Social Impact Assessment (Pre-ESIA) of the Rehabilitation and Development of an Engineered Landfill at the Existing Km 32 Landfill Site in Vientiane Capital (the Km 32 Landfill Project)

The Rehabilitation and Development of an Engineered Landfill at the Existing Km 32 Landfill Site is among the activities being considered for funding under Component 2B of the proposed Environmental Waste Management Project (EWMP), a project being developed for World Bank financing. The preliminary ESIA study is part of the environmental and social framework instruments being prepared for the Project as agreed with World Bank. The main objective of the preliminary ESIA is to conduct a preliminary identification and assessment of the potential environmental and social risks and impacts of the initial project design and to carry out an initial analysis of possible design alternatives, and based on the results, to recommend the preferred design and the associated environmental and social management, mitigation and monitoring measures.

#### 1.1 PROJECT LOCATION

The Km 32 Landfill Project is proposed to be developed at Vientiane Capital's existing Km 32 landfill located in Ban Naphasouk, Xaythany District, Vientiane Capital (see *Figure 1*). The landfill is connected to Road No. 13 South by a 2.8 km two-lanes unpaved access road. The total area of the landfill site is 100 hectares of which 50 hectares on the north side are granted as a 50-year concession to Khouanmouang Group Company, where the concessionaire plans to make a waste complex management system that includes recyclable waste plants and a Refuse Derived Fuel (RDF) plant. This part is currently inactive. The southern part of the site (50 ha) is managed by Vientiane City Office for Management and Service (VCOMS). VCOMS has a contractual arrangement with a private company under which the company implements waste management-related administrations, fee collection, data collection, waste collection, and landfill operation and management. The 50 ha large southern part managed by VCOMS constitutes the Km 32 Landfill Project site.

The facility currently handles about 400 tons of unsorted waste per day. The landfill started operating in 2009 and based on an analysis of historical Google Earth images; the total area used for waste dumping on both the Khouanmouang Group Company's area and on the VCOMS site over the course of the landfill history is roughly 53 ha. The estimated amount of waste (legacy waste) at the VCOMS site is 390,000 m<sup>3</sup> covering roughly 30 ha.

The VCOMS landfill compound includes a controlled entrance and fence, administration office, weighbridge, waste incineration plant for medical waste, two sludge ponds, wheel-washing, storm-water ponds, recyclable plant (one active, and one disabled), and a garage, truck parking,



and recyclable waste storage. The landfill has a simple barbed-wire perimeter fence but the fence is broken in many places.

The VCOMS landfill has an estimated life expectancy of 5-7 years if the rate of waste deposited at the landfill is maintained. Currently 400 tonnes of waste per day is deposited at the landfill.

VCOMS has currently registered 264 waste pickers at the Km 32 landfill. A total of about 10-15 t/day recyclables (plastic, metal cans, scrap metal, paper, cardboard, glass) are being collected and sold to Thai and Vietnamese middle-companies for export and further processing.

The landfill is operated as an unsanitary open dump without daily cover and without leachate collection and treatment systems. Thus, contaminated untreated wastewater is directly discharged to the surrounding area. Fires have occurred twice at the Km 32 landfill in the past. As reported by VCOMS, measures currently implemented to prevent occurrence of landfill fire include watering of the landfill 2 times/day during the dry season, establishment of 6-7 m buffer zone around the landfill.

The Km 32 site access road used by waste collection trucks is unsealed and in poor condition. Maintenance is the responsibility of VCOMS but the budget is quite limited. According to information from VCOMS, the access road will be rehabilitated and maintained. In addition, a guideline for waste transportation which will require waste trucks to be registered is under preparation by VCOMS.

The waste received at the Km 32 Landfill is composed of about 58% organic (kitchen, vegetation) waste, 18% plastic, 5% paper and cardboard, 4% glass, 2% textile, rubber and leather, 1% metals, stone and ceramics and 12% of unclassified waste types.

## **1.2 PROJECT CONCEPTUAL DESIGN AND FACILITIES**

The “Integrated Waste Management System (IWMS)” concept which attempts to address the whole waste value chain is applied for the technical design of the EWMP. The project will overall help to reduce waste to the KM32 landfill in Vientiane Capital through interventions at different nodes along the waste value chain. As part of EWMP IWMS, two waste transfer stations (at Km16 and Naxaythong district), and each will be equipped with sorting facilities to extract the recyclable wastes and compostable waste and minimize residual waste that will be brought to the KM 32 landfill in line with 3R principle.

The rehabilitation and development works will involve:

- construction of two new fenced engineered landfill cells (Cell 10 and 11 in Figure 2) with a total capacity of 1.15 million m<sup>3</sup> over a design life of 10 years, covering an area of 11.45 ha



- Excavation and onsite relocation and capping of about 156,000 m<sup>3</sup> of waste at a 4.12 ha large area to make space for the new landfill cells. The excavated waste will be relocated to Cell 5 within the landfill site.
- Full rehabilitation of legacy waste .
- Construction of a 900 m<sup>2</sup> floor area hazardous waste storage facility for temporary storage of small amount of residue hazardous waste in incoming municipal waste.
- Construction of a leachate treatment facility comprising a combination of an Up-flow Anaerobic Sludge Blanket Reactor (UASB) and an aerobic rotary disc system and including a HDPE lined regulating pond with a surface area of 38,000 m<sup>2</sup> and a volume of 140,000 m<sup>3</sup> for the leachate coming from the new landfill cells.
- construction of waste reception area where waste picker can access waste and a 3,200 m<sup>2</sup> floor area administration building with a weighbridge, a solar power system, and one kilometre, 7 m wide internal concrete roads.
- Upgrading of the existing waste recycling facilities to improve the working conditions and increase the value of recyclables.
- Recycling equipment for the waste management community center in the KM32 landfill.
- Construction of four (4) groundwater monitoring wells.

## **2 ANALYSIS OF DESIGN ALTERNATIVES AND RECOMMENDED DESIGN ELEMENTS**

### **2.1 ANALYSIS OF DESIGN ALTERNATIVES**

The Pre-ESIA has undertaken an analysis of key project design and location alternatives and determined the preferred options. The analyses of alternatives are based on the initially proposed design elements contemplated in the Pre-feasibility study (see *Figure 2*).

*The “do nothing alternative”.* Doing nothing will continue to expose landfill workers, waste pickers and residents to a range of health and safety risks and will continue to constitute a high risk of groundwater and surface water contamination with significant adverse effects on the environment and public health. The preferred option is to develop and implement the proposed Km 32 Landfill Project.

*Landfill siting.* Alternative (a): Construct the proposed new landfill facilities on a 50 ha large area bordering the existing Km 32 Landfill. This alternative would involve acquisition of land from farmers and would require resettlement, compensation and livelihood assistance. This would be a costly option but would on the other hand not necessitate relocation of waste. Alternative (b): Construct the proposed new landfill facilities within the existing VCOMS site. This alternative would not require any land acquisition, but waste would have to be relocated



to make space for the proposed landfill cells. The preferred option is Alternative (b) as this option avoids land acquisition. It should also be noted that when compared to the siting criteria of the World Bank and the Lao PDR guideline siting criteria, for both options (the sites are next to each other), the siting does not fully meet the recommended siting criteria and distances to sensitive receptors. However, this does not necessarily mean that the location is unacceptable or incompatible, in fact it may very well be difficult to find a place within reasonable distance of Vientiane Capital that would satisfy all criteria – but it does point towards the need for high quality landfill design and consistent and proper execution of landfill operations and maintenance.

*Landfill liner systems.* Alternative (a) see *Figure 3*: A single liner composed of (from top to bottom): A drainage layer with leachate collection, protective geotextile, and 1.5 mm HDPE geomembrane on top of the intact soil. Alternative (b) – see *Figure 5*: A composite liner composed of (from top to bottom) to be installed at the new landfill cells, the cell for the relocated waste and under the leachate regulating pond: A drainage layer with leachate collection, protective geotextile, 1.5 mm HDPE geomembrane, and 1 m compacted clay on top of the intact soil. The preferred option is alternative (b) a composite liner system as this provides a double layered high level of protection against groundwater pollution superior to the single liner alternative. It is also standard engineering design for municipal solid waste disposal and recommended by the World Bank EHS Guidelines and has been applied by recent ADB funded landfill projects in Laos and Cambodia.

*Final Waste Cell Cap.* Alternative (a): A 2 m thick soil layer and landfill gas collection. Alternative (b): A topsoil layer (150 mm), intermediate layer (150 to 300 mm), barrier layer (600 mm) and a gas collection layer (150 to 300 mm) with landfill gas ventilation wells. The preferred option is alternative (b) as this is standard landfill engineering design and in accordance with World Bank EHS Guidelines, it will provide long term environmental protection by preventing direct or indirect contact of living organisms with the waste materials, minimize infiltration of rainwater into the waste and the subsequent generation of leachate, control landfill gas migration, and minimize long term maintenance needs.

*Closure of Legacy Waste.* Alternative (a): Do nothing and leave the legacy waste as it is. Alternative (b): Full rehabilitation of legacy waste according to EHS guidelines of the World Bank and international conventional technical standards for landfills. The preferred option is alternative (b) as this is a relatively low-cost method that will provide a significant protection against groundwater and surface water pollution and prevent direct or indirect contact of living organisms with the waste materials and effectively prevent landfill fires, and emission of malodour from decomposing waste.



### 3 ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS OF THE PROPOSED SITE

#### 3.1 METEOROLOGY

The climate in Vientiane Capital is classified as tropical wet and dry climate with dry winter (*Aw*) in the Köppen and Geiger Climate Classification System. Meteorological data shows a trend towards increasing annual mean temperatures in Vientiane Capital from around 25°C in the 1950'ies to about 26.5°C in 2020. The mean annual rainfall, on the other hand, shows a decreasing trend with annual mean rainfall decreasing with about 200 mm over the same period. The city is located in the region of low seismic hazards. The prevailing wind speed is moderate at 2.0 to 2.7 m/s. Vientiane Capital is located in a region with low cyclone/typhoon hazards. The landfill is likely located within the 1:100-year riverine flood line.

#### 3.2 TOPOGRAPHY AND LAND USE

The landfill site is surrounded by paddy fields and other agricultural land (paddy field and garden) with patches of secondary low forest vegetation. Three waste recycling businesses are located along the access road to the landfill and the wider area can be generally characterized as rice cultivation farmland with urbanized strips with small and medium size industries along the road network.

#### 3.3 HYDROGEOLOGY AND WATER QUALITY

The site sits on sedimentary sandstone which is a good aquifer which is an important source of domestic water supply. Information on the groundwater level indicates an unsaturated zone of 5-7 m based on drillings near the site. Groundwater is widely used as the main source of water supply in the area. There are two groundwater wells on the site, and two private wells within about 500 m of the site.

Surface water from the site drains into the Nam Ngum River about 7.5 km from the landfill site. There are several ponds inside and near the sites, some of these serve as primary treatment ponds for leachate (see *Figure 6, Figure 7, Figure 8, Figure 9 and Figure 10*).

Soil samples collected near one pond inside the landfill stands out with very high concentrations of arsenic (123 mg/kg) and cadmium (27.3 mg/kg), which corroborates with the high concentrations of cadmium detected in the wastewater sample from the outlet of the pond.

The surface water samples taken within the site have high COD and BOD concentrations, indicating impact of leachate from the waste dump. Coliform bacterial counts are also high especially inside the landfill where chloride concentration is also high. A sample collected from a small 500 m southwest of the landfill indicated that both BOD and COD are unusually high for



surface water (COD exceeds standard), and in particular the high COD would not normally be caused by agricultural activities; however, clear evidence that these high concentrations are caused by landfill activities have not been established. The level of coliform bacteria is also high (exceeding the standard) but not unusually high and may be caused by domestic animal faeces. It should also be noted that as reported by the Pre-Feasibility Study a community complaint from Nakao Village (located about 2.8 km to the north of the landfill) to VCOMS claimed that black water from the km 32 landfill had caused a reduction in their rainfed rice yield, and that farmers had experienced skin rashes when getting in contact with the water. However, clear evidence that these incidents were caused by the landfill have not been established. Groundwater samples taken from the wells on and near the landfill also showed high total dissolved solids, high bacterial counts, and unusually high concentrations of faecal coliform. The water from wells inside and outside Km32 landfill has been used mainly for washing purposes. However, one household use a well as the main water supply for washing, cooking, and livestock raising.

### **3.4 AIR QUALITY AND NOISE**

The air quality measurements taken from monitoring stations indicate compliance with the relevant Lao ambient air quality standards for all the monitored parameters. However, PM10 concentrations were two times higher than the WHO recommended air quality guidelines. Noise measurements carried out in the same stations are all within government and IFC EHS guideline values.

### **3.5 FLORA AND FAUNA**

The landfill site is not within or near any biodiversity conservation area. It is surrounded by rice paddies, grazing lands and patches of secondary growth forests. Domestic animals including cows, buffalos and goats roam around and inside the landfills due to broken fences in many sections. The field survey did not identify any sensitive flora, fauna, or habitats and no threatened species on the landfill site and its vicinities.

### **3.6 SOCIAL PROFILE**

The landfill is situated in an area dominated by agriculture and small and medium size businesses along the access road and Road No. 13 South. The nearest village is about 2.5 km south of the landfill. A new residential area is being established about 1.4 km southwest of the landfill consisting of about 20 units, but these appear to be still unoccupied. More than 90% of the people in the villages are engaged in farming, particularly paddy rice, vegetables, livestock, and fisheries. Other income sources include small businesses, wage labour, and employment in the government. A small minority derive their incomes from waste picking.





The people directly affected by the project are the waste pickers and waste collectors. VCOMS has registered 264 waste pickers. They have established their camp on leased land immediately outside the landfill where they temporarily store collected recyclables (see *Figure 9*). A few of them also live in the camp. Waste collectors numbering about 113, are employees of waste collection companies as members of the collection truck crews.

The population in the Xaythany District is composed of four main ethnic groups: LaoTai-Lao, Mon-Khmer, Sino-Tibetan, and Hmong-lumien. Of the population in the district, 90.6%, 7.2%, and 2.2% are Buddhist, animist, or Christian, respectively. All households in the three villages near to KM32 identified themselves as Lao, which falls under the Tai-Kadai family, also being referred to as Lao-Loum. The vast majority (90%) of the population in the three villages are Buddhist; the remaining few are Animists (7.2%) and Christians (2.2%). Most of the waste pickers are Lao Tai.

### **3.7 PREVAILING ENVIRONMENTAL AND SOCIAL ISSUES**

Based on interviews and dialogues with the villagers and waste pickers, the prevailing issues associated with the existing landfill operation include: (a) exposure of villagers from air pollution coming from burning waste at the landfill, causing respiratory problems especially for the elderly; (b) broken and poorly maintained fences enable farm animals to enter and feed on the waste making them sick; (d) contamination of rice fields from leachate-laden runoff during the rainy season affecting the rice crop and causing skin rashes to farmers; (e) collection trucks causing litters along the hauling routes because of overloading and absence of cover; (e) waste pickers working conditions, particularly the lack of water and sanitation facilities at the site and lack of training in handling hazardous waste; and, (f) presence of child labour among waste pickers.

### **3.8 POSITIVE ENVIRONMENTAL AND SOCIAL IMPACTS**

The potential benefits of the Project will be enhanced by:

- a) Offering waste pickers skills and vocational training on literacy, numeracy, entrepreneurship among others to improve their livelihoods and prevent job loss.
- b) Implementing additional support for children and women including additional child protection measures and tangible support such as setting up social protection schemes.
- c) Offering opportunities for waste pickers to move into safer roles in the informal sector, into formal employment in the waste sector, and/or to access skills and vocational training for employment outside of the sector.
- d) Implementing interventions for improving female workers' access to jobs in the waste sector
- e) Ensuring 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.



- f) Improving the working conditions by upgrading the recycling facilities, providing training in waste handling, hazardous waste and by providing PPE.
- g) Pegging 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.

The proposed preferred design of the new landfill cells and capping of the legacy waste combined with proper implementation of the operational mitigation measures will minimise the risk to groundwater and effectively stop the current pollution of surface water bodies draining from the landfill site and prevent future adverse impacts on surface water and agricultural fields.

The occupational and community health and safety conditions will be improved through proper landfill operations including a complete stop for open burning of waste, daily cover of incoming waste, and reduced littering. Furthermore, the Project will contribute to reducing emission of landfill gas into the atmosphere and thereby contribute to mitigation of climate change.

Upon closure, the design of the final capping of the engineered landfill cells will allow a range of recreational or productive land uses such as sports, cultivation of crops and grazing for cattle, goats or other domestic animals.

## **4 ADVERSE ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS**

### **4.1 CONSTRUCTION PHASE**

**The environmental and social impacts and risks associated with the construction works are assessed to be moderate, temporary, and localized. These risks will be effectively mitigated by conventional construction methods and standard mitigation measures.**

**The potential environmental and social risks to be addressed and mitigated include:**

- a) Risks related to labour management and working conditions, including (i) employment discrimination, (ii) denial of basic labour rights; (iii) unresolved labour disputes, (iv) sexual exploitation and abuse and sexual harassment, (v) child labour; (vi) accidents and injuries involving heavy equipment; and (vii) 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.
- b) Community health and safety related to construction site hazards such as the movement of heavy equipment, construction dust and noise and malodour from excavating and relocating waste. Nearby residents and farmers working downwind could potentially be exposed to dust and malodour 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.

- c) Dusts and noise generated by construction works and project related traffic, and malodour from excavating and relocating legacy waste can affect construction workers, landfill workers, waste pickers and collectors and nearby residents.
- d) Earthmoving activities may generate sediment-laden runoff at the construction site and at borrow pits potentially affecting nearby surface water bodies.
- e) Impacts on flora and fauna from construction activities are considered negligible because the landfill site is already a disturbed area with waste dumped on most part to the site and there is no flora or fauna of conservation value at or near the site. However, establishing new borrow pits or spoil disposal sites may generate impacts on flora and fauna. These risks can be avoided through proper siting of borrow pits and disposal areas.
- f) The site is fully owned by VCOMS and there are no marginalized ethnic minorities claiming collective ownership or cultural connection to the landfill site and surrounding areas.
- g) Sourcing of construction materials from borrow pits may involve loss of private or communal land including agriculture land and products.
- h) Disruption or restrictions on recycling activities with risk of causing reduction in income of the waste collectors and waste-pickers and other groups who rely on income from the waste stream
- i) Risk of spreading COVID-19, HIV and other communicable diseases to local communities.
- j) Community health and safety risks and road damages due to the increased heavy traffic, including garbage trucks and construction vehicles going back-and-forth to the landfill.
- k) Risk of accidents involving children and vendors working close to the access roads.
- l) Risk of impacts on potential heritage assets or values including discovery of artifacts or relics during operation of borrow pits.

## 4.2 OPERATIONAL PHASE

**The environmental and social impacts and risks associated with the operations of the proposed project activities at Km32 landfill are assessed to be substantial; however, the risks are increased to high when taking into account (i) weak legal and institutional capacity on waste management; and (ii) the existing waste at the Km32 Site and associated legacy risks and impacts. The potential operational phase environmental and social risks to be addressed and mitigated include:**

- a) Risks related to labour management and working conditions, including risk of (i) employment discrimination, (ii) denial of basic labour rights; (iii) unresolved labour disputes, (iv) sexual exploitation and abuse and sexual harassment, (v) accidents involving fire and explosion of landfill gas and accidental spills of hazardous waste and leachate; (vi) health risks from exposure to flies and other vermin attracted by the future incoming waste.
- b) Risk of groundwater pollution from leachate leaking through liner systems in the new landfills cells, the cell for relocated waste or the leachate regulation pond.



- c) Pollution of surface water by uncontrolled discharge of leachate or seepage from waste piles due to improper landfill operations impacting on agricultural production, aquatic flora and fauna, and human health.
- d) Pollution of the ambient air due to open burning of waste, dust from handling of waste and daily traffic, malodour from decomposing waste, and emission of landfill gas including greenhouse gasses.
- e) 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.
- f) Health and safety risks for communities along the hauling route due to accidents involving daily waste truck traffic.
- g) Impacts to property values and aesthetics of nearby areas.
- h) 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. A focus group discussion with seasonal and registered waste-pickers indicates that many of them expect a reduction in recyclables arriving at the Km 32 landfill because of the proposed investments in integrated waste management facilities at the Naxaythong and Km 16 sites.

#### **4.3 POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS ASSOCIATED WITH THE LEGACY WASTE**

**It is estimated that there is about 390,000 m<sup>3</sup> of legacy waste on the Km 32 VCOMS site of which about 156,000 m<sup>3</sup> is proposed to be relocated onsite to make space for the proposed new landfill cells. Waste arriving at the landfill until the new landfill cells come into operation will increase the legacy waste with about 165,000 m<sup>3</sup>/year. The key potential environmental and social risks and impacts associated with the legacy waste include:**

- i) Historic and on-going infiltration of polluted leachate from the legacy waste at the VCOMS site pose and will, if not mitigated, continue to pose significant long-term risks to the regional groundwater resources that are currently or may in the future be used for domestic water supply, and which is therefore an important resource for long-term water supply.
- j) 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.
- k) Surface water contamination may affect 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 in the area nearby Km32 landfill; and may in general render the water resources in the affected streams unusable.
- l) Pollution of the ambient air due to open burning of legacy waste, malodour from decomposing legacy waste, and emission of landfill gas including greenhouse gasses. Smoke and bad smells from frequent burning from the current landfill operation has also been reported as concern



from nearby residents. This risk will likely be long-term, moderate in magnitude and occurring within the radius of Km32 landfill and nearby villages.

- m) 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.
- n) 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.

#### **4.4 CLOSURE PHASE**

The most relevant closure phase risks and impacts to be addressed and mitigated include:

- a) Exposure to waste by people or animals.
- b) Spread of diseases by vectors and vermin.
- c) Odour nuisances, windblow litter and risk of fire.
- d) Breach of capping and ponding in depressions leading to increased infiltration and increased generation of leachate, erosion and crop death.
- e) Uncontrolled use of the land incompatible with the design of the caps or the integrity and stability of the cells.
- f) Risk of pollution of surface water by leachate or seepage from waste impacting on agricultural production, aquatic flora and fauna, and human health.
- g) Risk of groundwater contamination due to failure of the liner and the leachate collection and treatment system. The likelihood of liner failure may increase over time as the liner weakens but over time, the strength of the leachate will likely decrease.

### **5 MITIGATION MEASURES**

#### **5.1 PRE-CONSTRUCTION PHASE**

Recommended Design Element In addition to the analyses of the key alternative landfill design elements, it is further recommended to take the following design recommendations into account when developing the final detailed design of the project:

- a) Adoption of a simple pond and wetland system to treat leachate instead of the proposed UASB and rotating disc technology which requires power and could easily breakdown.
- b) Inclusion of a leachate recirculation system to minimize discharge of treated leachate to the environment and to accelerate waste decomposition and reach the stabilization phase earlier.



- c) To minimize the volume of leachate that goes into the leachate treatment system, the leachate collection system should be designed such that rainwater from the inactive parts of a cell are collected and discharged separately as clean stormwater and only waste-leachate are conveyed into the leachate treatment unit. Each section of a cell should be equipped with an interchangeable pipe system that can switch between discharge to stormwater and the leachate transport system.
- d) Installation of stormwater drains system throughout the entire site to divert stormwater away from roads, landfill cells, buildings, and facilities, and to avoid mixing with leachate. This will prevent contamination of stormwater with leachate.

The Project will commission a full scale ESIA study in conjunction with the detailed engineering design of the project. The ESIA report shall be reviewed and approved by the MPWT, World Bank and finally by MONRE for issuance of an Environmental Compliance Certificate. The final ESIA shall also cover the EWMP investments in the Km 16 and Naxaythong sites. The local communities and other stakeholders shall be informed and consulted regarding the findings of ESIA study.

## **5.2 CONSTRUCTION PHASE**

The contractor will be required to prepare a Construction Environmental Management Plan (CEMP) based on the recommended measures in the final ESIA. The CEMP shall address environmental impacts of construction activities such as localized erosion and sedimentation, generation of noise and vibration, generation of dusts, generation of construction wastes, and domestic wastes at labour camps. The CEMP shall also include the contractors plan for sourcing of borrow material, and acquisition of sites and easements and the required government clearances (including UXO clearance) for its temporary facilities such as labour camp, workshop and laydown areas, borrow pits, and spoil disposal sites (if any).

To address labour management-related risks, the contractor will be required to prepare a labour management plan and an Occupational Health and Safety Plan. These plans shall address potential issues of employment discrimination, ensures access to a grievance redress mechanism, minimises the risks of sexual exploitation and abuse and sexual harassment in the workplace, prevents child labour, ensures occupational health and safety and other requirements in compliance with the World Bank ESS 2, the Lao Labour Law and ILO conventions ratified by the Lao PDR.

To manage potential social impacts related to labour influx such as increase in substance abuse, increasing incidences of sexual harassment, gender-based violence, and spread of diseases, the Project will promote local recruitment of workforce and require the contractor to adopt a Workers' Code of Conduct. The Project will also provide awareness training through third party



service providers, on sexual exploitation and abuse and sexual harassment, substance abuse, gender-based violence, and prevention of disease transmission.

The Project will enforce speed limits on all project vehicles especially in populated sections of the construction routes. Throughout the construction period, the contractor will be required to undertake regular repair and maintenance works on roads it frequently uses.

To minimize the risk of damage to ecologically sensitive areas and damage to cultural properties and chance finds of artifacts at borrow pits, the contractor will be required to apply the Negative List, undertake ES Screening on prospective sites based on the ESMF and develop and monitor the implementation of site-specific management plans as part of the CEMP. The contractor shall also adopt a chance find procedure for archaeological artifacts.

To mitigate possible disruption or restrictions on recycling activities of waste pickers due to construction work, the Project will encourage contractors to hire the waste pickers as laborers in the construction.

### 5.3 OPERATIONS PHASE

**Operations and Maintenance Manual.** An Operations and Maintenance Manual to be support under Sub-component 2A should also contain the following guidelines and procedures: (a) Procedures for compacting waste; (b) Controlling and minimizing windblown waste (c) procedures for handling of non-hazardous waste; (d) Procedures for controlling and recording waste disposed of at the landfill, including origin, quantity, type of waste, collector; (e) Operational procedures for leachate management (f) Procedures for handling of hazardous waste including determining if the waste is acceptable for temporary storage in the hazardous waste storage facility, transportation, labelling, temporary storage, separation according to their type and risks, and permanent disposal - in line with local and international regulations; (g) Pest management procedures (h) Occupational health and safety measures and use of PPEs; (i) Community relations and health and safety plan; and (j) Emergency response plan.

The PMU and the landfill operator should conduct on-the-job training on the Operations and Maintenance Manual.

**Groundwater pollution.** The risks of groundwater pollution from leachate leaking through the bottom of the new waste cells will be minimised through installation of composite liner systems combined with leachate collection and treatment systems.

**Surface water pollution.** The risks of surface water pollution from leachate-laden runoff or discharge of untreated or poorly treated leachate will be minimised through leachate collection and treatment systems, stormwater site drainage, and implementation of proper landfill operations including regular inspection, maintenance and repair of structures and leachate treatment facilities, and separation and safe isolation of hazardous waste.



**Air pollution.** The risks of air pollution from open burning of waste, malodour emissions by decaying organic waste and dust from handling of waste will be effectively minimised through implementation of proper landfill operations including regular soil cover of waste, landfill gas capture, and construction and maintenance of a perimeter fence.

**Livelihood impacts.** 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 upgrading of the existing recycling facility and the waste reception area, providing training in waste handling, hazardous waste and providing PPE.

**Community health and safety.** To address community health and safety, such as risk of accidents involving vendors and children close to the access roads, and community exposure to dusts, noise, smells, litters, water pollution and road safety issues, the project will rehabilitate/pave the access road to the landfill. The road shall be provided road safety measures such as adequate sidewalks and road signs.

#### **5.4 LEGACY WASTE MITIGATION MEASURES**

The Project design includes full rehabilitation of the VCOMS Km 32 Landfill site, and the key environmental and social mitigation measures to deal with the legacy waste include the following.

**Health and safety.** The risks to waste pickers' and landfill workers' health and safety due to exposure to landfill leachate from the legacy waste and infectious diseases from vectors attracted by the legacy waste are proposed mitigated through the following measures: (i) Capping of the current legacy waste early in the construction phase, (ii) early construction of the waste reception area to ensure that sorting of incoming waste during the construction phase can take place under proper and safe conditions, (iii) physical zoning and access control to tipping areas, (iv) regular compaction and soil cover of waste after the waste pickers have segregated recyclables at the waste reception area.

**Groundwater pollution.** The risk of future groundwater pollution from leachate seeping into the subsoil underneath the legacy waste will be minimised through installation of a final cap based on the preferred design option. The cap is designed to minimise infiltration of rainwater and thus generation of leachate.

**Surface water pollution.** The risks of surface water pollution from leachate-laden runoff or seepage from the legacy waste will be minimised through installation of the preferred final cap





and by regular inspection and aftercare of the cap. The cap is designed with a drainage layer between the topsoil and the infiltration barrier which will drain clean water to the surrounding stormwater systems.

**Air pollution.** The risks of air pollution from open burning of waste, and malodour emissions by decaying organic waste will be effectively minimised through the installation of the preferred final cap on the legacy waste. In the interim period until the proposed new landfill cells come into operation, incoming waste will be compacted, build into regular cells and provide with regular soil cover.

## 5.5 CLOSURE PHASE

Operational and Maintenance Manuals to be prepared under the EWMP project TA will include closure plan for Km32. The preparation of the closure plan shall include consultations with landfill staff, waste pickers, local authorities and MONRE.

The key closure phase mitigation measures include:

- a) Access control to ensure that waste is not received for disposal at the site/cell after landfill operations cease
- b) Inspection and aftercare of the leachate collection and treatment systems, stormwater drainage systems and gas ventilation system.
- c) Inspection and aftercare of the final cap and vegetation cover including repairing effects of erosion, slumping and settlements.
- d) Inspection and monitoring of landfill gas generation/migration, odour, dust and litter.

## 6 ENVIRONMENTAL AND SOCIAL MONITORING

The Project will implement comprehensive environmental quality and social monitoring programmes over the course of the project development and implementation phases from pre-construction, through construction, operation and closure of the landfill cells. The environmental quality monitoring at the site and its immediate surroundings aims at obtaining reliable data to determine and assess project related impacts and the need for any corrective actions.

During the pre-construction phase the environmental monitoring will be carried out under the full ESIA study to establish a robust baseline and will include air and noise monitoring, surface water quality monitoring of water bodies receiving drainage from the landfill, monitoring of aquatic life in the receiving water bodies, indications of impacts on crops in nearby fields, monitoring of leachate and monitoring of groundwater in existing groundwater wells near the landfill. The social monitoring will comprise a baseline census and socioeconomic survey,



monitoring of grievances and recording of results of consultations with potentially affected people and beneficiaries.

During the construction phase the environmental quality monitoring will include monitoring of noise and air quality, surface water quality monitoring, monitoring of aquatic life in the receiving water bodies, indications of impacts on crops in nearby fields and monitoring of groundwater quality and groundwater table from newly constructed monitoring wells.

The social monitoring during the construction phase will comprise complaints from workers and local authorities and surrounding communities, compliance of workers' welfare facilities with World Bank standards, workers or waste pickers (with gender, age and ethnic groups segregated data) hired for construction activities at the worksite, safe working conditions and use of PPE and occupational health and safety statistics for construction workers and waste pickers, and child labour, and compliance with the Lao Labour Law and ESS2 including gender and worker discrimination, and unfair wage or salary.

During the operational phase the environmental quality monitoring will include monitoring of untreated and treated leachate, surface water quality in the water body receiving treated leachate, monitoring of aquatic life in the receiving water bodies, indications of impacts on crops in nearby fields and monitoring of groundwater quality and groundwater table, and monitoring of landfill gas and odour. In addition, the integrity and maintenance status of the landfill facilities and infrastructure will be inspected.

The social monitoring during the operational phase will comprise complaints from workers and local authorities and local residents associated with the operation of the landfill, number of workers or waste pickers (with gender, age and ethnic groups segregated data) hired for operations at the landfill and its facilities, safe working conditions and use of PPE, occupational health and safety statistics for landfill workers and waste pickers, child labour, gender and worker discrimination, and unfair wage or salary, social conflicts between the labour and waste pickers, SEA/SH and VAC and use of weapon/violence related to drug and alcohol consumption of the waste pickers, amounts and types of recyclables collected and sold, demography, and welfare and socioeconomic status of the waste pickers and waste collectors.

During the closure phase the monitoring will include leachate quality, groundwater and methane gas, and the land use, integrity of the landfill cell caps, vegetation cover, and drainage lines will be inspected. A full E&S monitoring program will be further developed in a full ESIA that will be prepared during the detailed design phase.



## Attachment A7-1 – Project Location and Conceptual Design

Figure 1 Project Location





Figure 2 Pre-Feasibility Study Conceptual Layout Design of the Km 32 Landfill Project

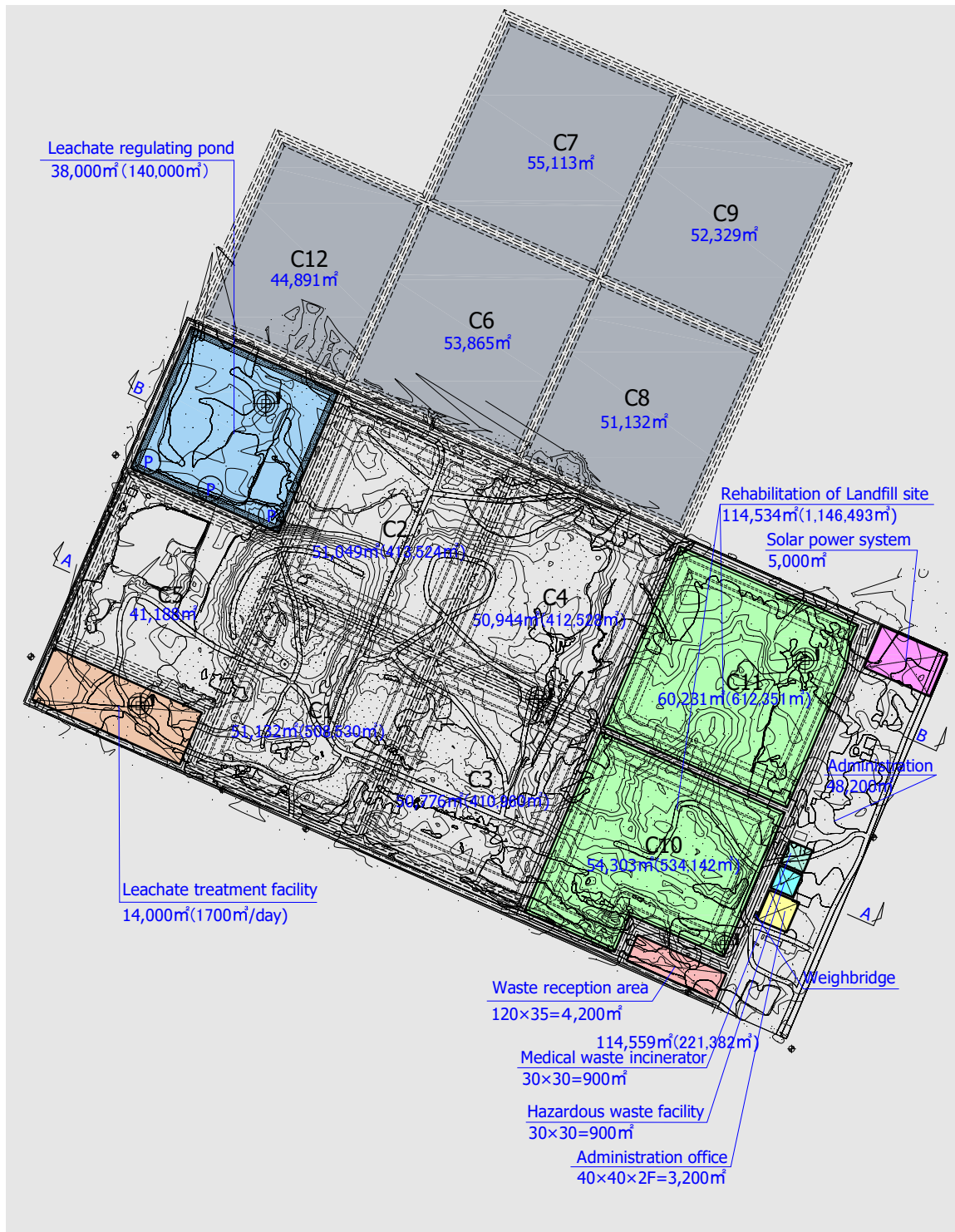




Figure 3 Alternative (a) Pre-Feasibility Study Conceptual design of the Landfill Liner

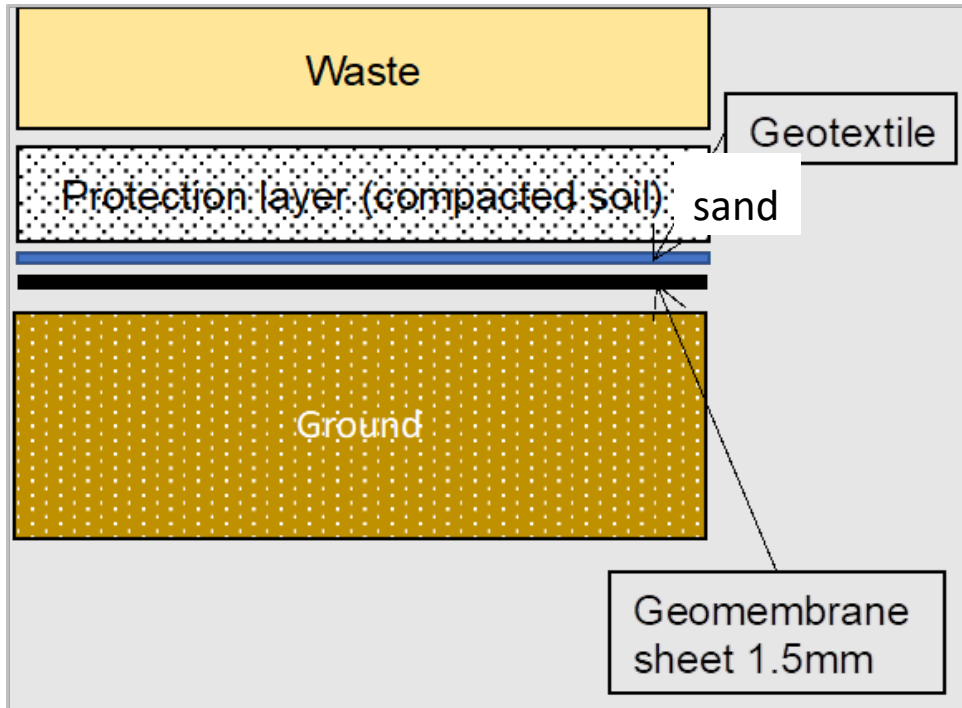


Figure 4 Conceptual design of the leachate collection pipes

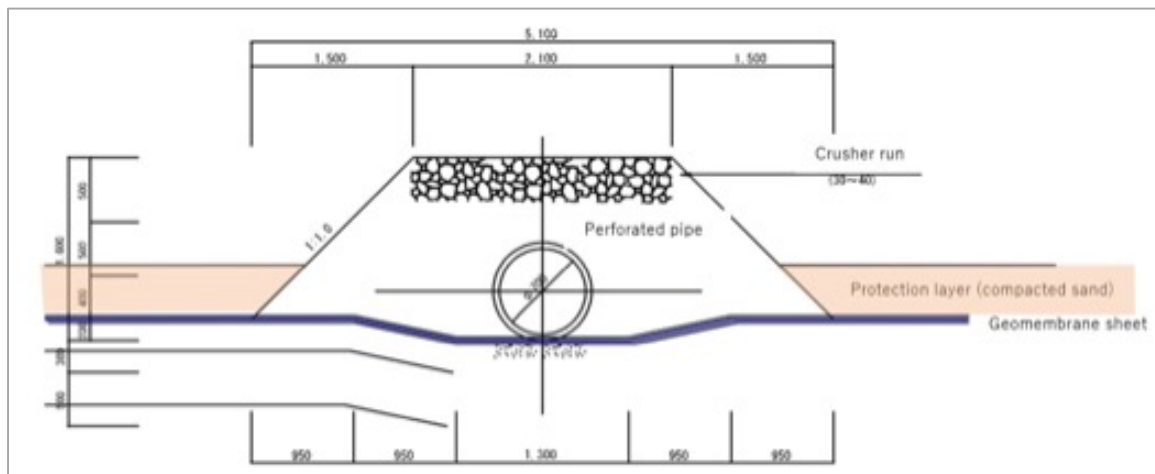
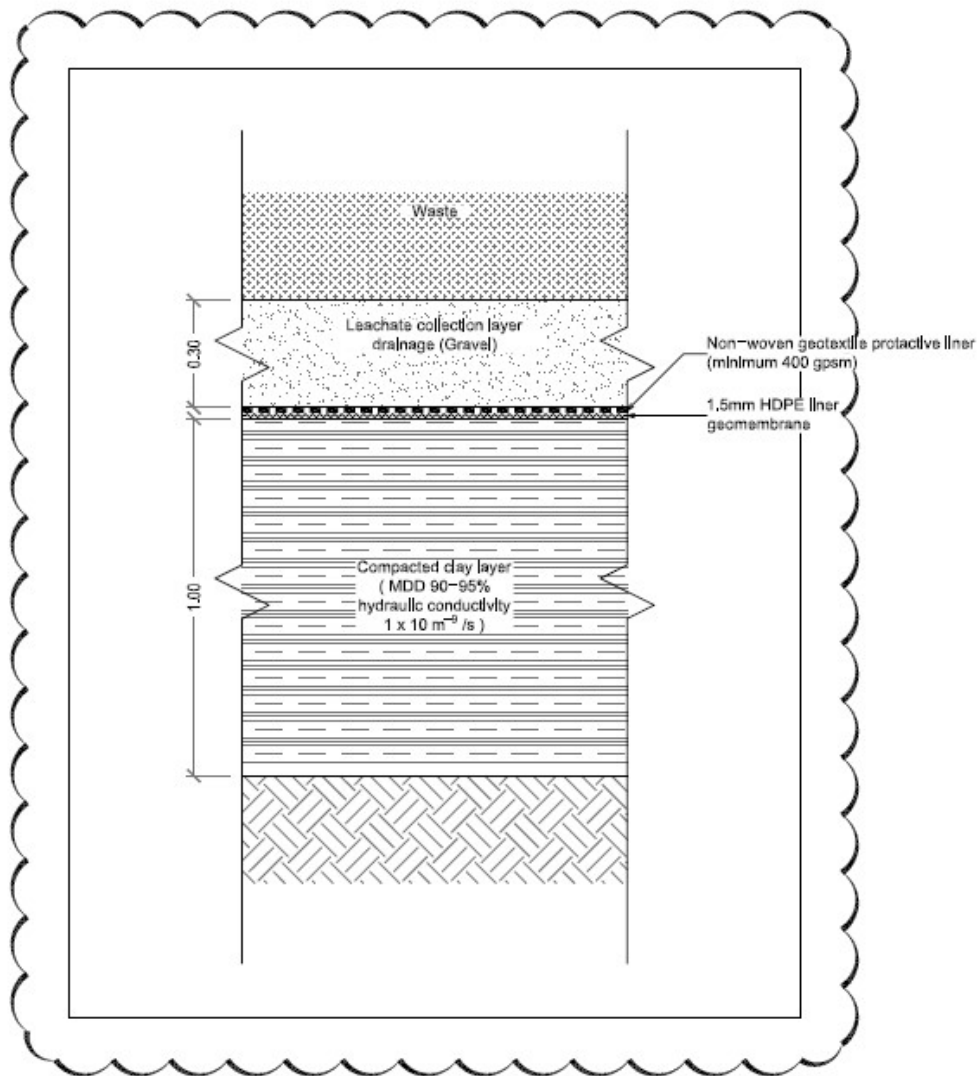




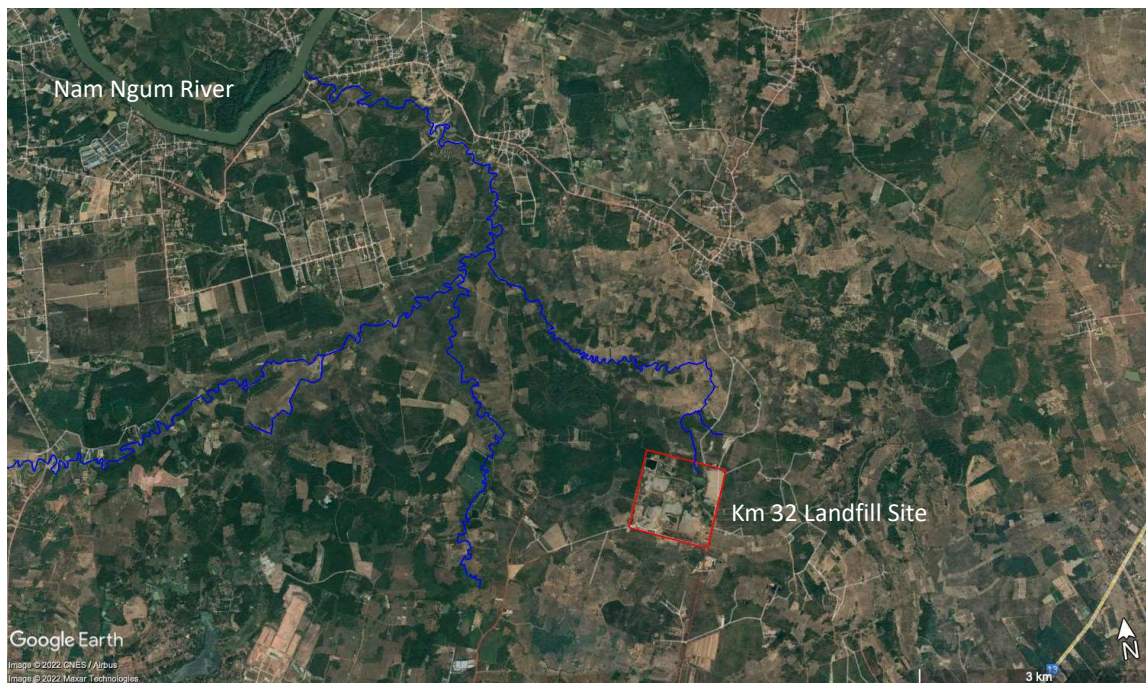
Figure 5 Alternative (b) Composite Liner System – the Preferred Option



## EXISTING ENVIRONMENTAL AND SOCIAL CONDITIONS



**Figure 6 Local Hydrology**



**Figure 7 Leachate drainage from the northern part of the Km 32 Landfill**

### Leachate and Surface Runoff





**Figure 8 Leachate drainage from the Km 32 Landfill**



**Figure 9 The Waste Pickers' camp**







**Figure 10 Ponds on the Km 32 Landfill, 06 September 2022**



## ANNEX 8: DETAILED OF THE ESTIMATED ESMF BUDGET

No.	Description	Notes	Q'ty	# of Man-Month	Unit Cost	Total (USD)	Remarks
I	<b>ESMF Implementation for C1 and 3</b>				-	<b>606.000</b>	-
1.1	<b>Consultants and Supporting Staffs</b>					<b>453.000</b>	-
1.1.1	chief technical advisor (CTA) (oversee ESF implementation as well)	Part time basis	1	240	750	180.000	As part of #2.1 of C3 Budget
1.1.2	One National E&S Consultant	Full time during first 3 years and part-time working days during the last 4 years	1	54	3.500	189.000	As part of #1.10 of C3 Budget
1.1.4	Two E&S Supporting staffs (new graduated)	1 Environmental and 1 Social	2	84	500	84.000	As part of #1.11 of C4 Budget
1.2	<b>Implementation, Internal Monitoring and Evaluation of ESMF (ESMP, EGEP and SEP including GRM)</b>					<b>153.000</b>	
1.2.1	Training/Capacity Building on the WB ESS and ESMF implementation for Subproject Implementing Agencies (SIA)	2 training workshops in the first year and 1 training workshop from Y2-6	lump sum			48.000	As part of #3.2 of C3 Budget
1.2.2	Implementation of GRM		lump sum			10.000	



No.	Description	Notes	Q'ty	# of Man-Month	Unit Cost	Total (USD)	Remarks
1.2.3	Implementation of EGEP		lump sum			10.000	
1.2.4	Implementation of SEP	Consultation, development and translation of communication materials on the ESMF	lump sum			55.000	As part of # VI of C3 Budget: Outreach and stakeholder engagement
1.2.5	Internal monitoring and evaluation by EPFO PMU	SDA Activities in targeted area	lump sum			30.000	As part of #7.1 of C3
<b>1.3</b>	<b>Procurement of logistic supports and office facilities</b>	<b>included in PMU operational cost</b>					
1.3.1	Vehicle, fuel, insurance, office space and office supplies for ESF consultants and E&S supporting staffs	included in PMU operational cost					
<b>II</b>	<b>ESMF Implementation for C2</b>					<b>620.000</b>	<b>-</b>
<b>2.1</b>	<b>Consultants and Supporting Staffs</b>					<b>280,000</b>	<b>-</b>
2.1.2	One international E&S consultant as a Team Leader	Part time (days)	1	200 days	500	100.000	
2.1.2	Two National E&S Consultants	Full time during first year of construction and part-time from year 2	2	45	2000	180.000	



No.	Description	Notes	Q'ty	# of Man-Month	Unit Cost	Total (USD)	Remarks
<b>2.2</b>	<b>Implementation, Internal Monitoring and Evaluation of ESMF (ESMP, EGEP and SEP including GRM)</b>					<b>40.000</b>	
2.2.1	Training on the ESMP, ARAP/RAP, EGEP, SEP and CESMP	2 training workshops in the first year and 1 training workshop from Y2-4	lump sum			10.000	
2.2.2	Implementation of GRM		lump sum			5.000	
2.2.3	Implementation of EGEP		lump sum			5.000	
2.2.4	Implementation of SEP	Consultation, development and translation of communication materials on the ESMF	lump sum			10.000	
2.2.5	Internal monitoring and evaluation by MPWT PMU	VTE Capital	lump sum			10.000	
2.2.6	Internal monitoring and evaluation by VCOMS and PONRE	VTE Capital	28			10.000	
<b>2.3</b>	<b>Preparation of Full ESIA and ESMP</b>					<b>300.000</b>	
2.3.1	Conduct full ESIA and ESMP study	KM32, KM16 and Naxaythong	1			350.000	
<b>2.4</b>	<b>Procurement of logistic supports and office facilities</b>	<b>included in PMU operational cost</b>				-	



No.	Description	Notes	Q'ty	# of Man-Month	Unit Cost	Total (USD)	Remarks
2.4.1	Vehicle, fuel, insurance, office space and office supplies for ESF consultants and E&S supporting staffs	included in PMU operational cost					
<b>Total Budget Plan 2023-2029 (I+II)</b>						<b>1.226.000</b>	
Notes: This budget is ONLY for ESS activities NOT including budget for compensation and resettlement, TA, capacity building and activities and procurement of equipment for other SIAs							



## ANNEX 9: TOR FOR INTERNATIONAL AND NATIONAL CONSULTANTS



**Lao People's Democratic Republic**  
**Peace Independence Democracy Unity Prosperity**



**Lao Environmental and Waste Management Project (P175996)**

### **TERMS OF REFERENCE (TOR)**

**For National Environmental and Social Consultant (NESC) – Team Leader**  
**(Fulltime - time-based contract)**

**Reference No. \_\_\_\_\_**

Apply/modify to all EPFO PCU and MPWT PMU)



## I. INTRODUCTION

### (a) Project Background

The Lao People's Democratic Republic achieved rapid growth and significant poverty reduction between 2005 and 2020, though inequality widened. Gross domestic product (GDP) has averaged around 8 percent growth per year since 2000. The poverty rate declined from 34 percent in 2003 to 23 percent in 2013, reaching 18 percent in 2019. Yet, the Gini coefficient increased from 32.5 to 38.8 during the same period, reflecting lower gains for the bottom 40 percent. COVID-19 has added economic burdens on the country and economic growth declined to 0.4 percent in 2020, the lowest level in three decades.

Key economic activities underpinning Lao PDR's economic dynamism include agriculture, mining, hydropower, and service industries. While these activities provide important economic gains, they have also resulted in high rates of natural resource depletion and environmental degradation. Climate change hazards such as drought and floods are predicted to increase, altering the landscape, fauna, flora and vegetation, but also destroying public infrastructure, property, productive land, agricultural assets and harvests and subsequently further degrading natural resources.

Due to the increasing urbanization in Vientiane and secondary cities and despite improvements, cities and districts suffer from increasing pollution levels, which combined with weak capacity in planning and enforcement and lack of infrastructure and municipal services mean that there are severe difficulties in coping with the associated environmental, social and health impacts. As elsewhere in the world, the vulnerable people are more likely to be exposed to and suffer from the pollution.

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.

Solid waste generation has increased substantially over the years. Sound waste data is missing in the country and is often inconsistent and unverifiable. Waste generation is rapidly increasing in cities and towns due to urbanization, economic growth and changing lifestyles, as well as in tourism hotspots which have seen rapidly increasing numbers over the last decade. During the last decade, household waste generation is estimated to have almost doubled in Vientiane (around 0.80 kg per person per day), same as in the previous decade. As in many other developing countries, the major portion of municipal waste generated in Lao PDR is composed of organic materials. Food, garden, wood and green waste makes up 57 percent of the waste while dry recyclables such as glass, plastics, metal, paper and cardboard account for 22 percent of the waste.

Waste collection in the country is largely limited to the urban centres but remains at low levels. While no accurate figures exist, it is estimated that in Vientiane city only around 30-



50% of the waste generated, and only about 25% of household waste, is collected and transported to the landfill sites. Similar figures are estimated for secondary cities such as Savannakhet, Luang Prabang and Champassak. 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.

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

Women and children in the informal waste sector face multiple disadvantages and are exposed to health and social threats posed by inadequate solid waste management. Their contributions to recovery and recycling of valuable plastics in the face 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.

Plastics pollution is an increasing concern in the country. The amount of plastic waste is continuously increasing particularly in urban areas and often remains uncollected. In Vientiane, plastics constitute around 12 percent of the total waste stream. In a series of studies, the priority plastic items ending up in the environment and waterways were identified as: drinking bottles; caps and lids; bags; cups; food containers; and straws. In major cities such as Vientiane, Savannakhet, and Pakse, plastic waste is a key factor in blockage of drainage systems causing sudden flooding during rains. In key tourism hotspots such as Luang Prabang or Vang Vieng, widespread plastics littering poses a substantial threat to the touristic value. Fishers throughout the country report catching plastics almost every single time they are out fishing, and a study at the largest marshland of Vientiane





found high amounts of microplastics in fish, surface water, and sediments. In addition, burning of plastics is widespread, contributing to air pollution and causing respiratory health issues. Lao PDR has seen an almost 10-fold increase in plastic waste imports from 2018 to 2019 due to the recent import regulations by China and other countries in the region. The quality and recyclability of the waste imports are unknown, and the capacity to cope with the large amounts of plastic waste in Lao PDR is not present.

There is no systematic collection of data about waste generation and waste management in Lao PDR. The most reliable data is from Vientiane Capital where the waste generation has been estimated to 0.65 kg/person/day<sup>7</sup>. It is generally the case that waste generation is higher in urban areas than in rural areas and assuming a waste generation in urban areas of 0.65 kg/person/day, a waste generation in rural areas with road access of 0.5 kg/person/day and a waste generation in rural areas without road access of 0.3 kg/person/day, the total annual waste generation in 2020 would then amount to approximately 1.48 million tonnes. Currently, only 48% of wastes are collected and 60 % of the wastes are disposed in open dumps. Hazardous waste is not collected or treated separately from general waste, resulting in toxic materials and medical waste being disposed of together with municipal waste.

However, a clear institutional and specific regulatory framework for solid waste management is missing. At the national level, two main bodies are responsible for issues related to solid waste management: The Ministry of Public Works and Transport (MPWT), mainly responsible for construction of infrastructures, and the Ministry of Natural Resources and Environment (MONRE), tasked with a regulatory, supervisory and supporting role. The specific responsibilities of different central governmental agencies are however not clearly defined. MONRE's main tasks and responsibilities include the preparation of environmental laws and regulations, however few of these specifically target the solid waste sector. Urban Development Administrative Authorities (UDAAs), at provincial level are the main bodies tasked with solid waste management issues but undefined responsibility at the national level affects solid waste management at the local level in policy implementation, budget allocation, and provision of services.

In addition, regulatory oversight of solid waste management is limited, and local governments (LGs) lack capacities for solid waste operations. Solid waste services are often outsourced to the private sector with limited financial sustainability of operations. While the responsibility for solid waste management lies with the province, UDAAs are not equipped with sufficient budget and staffing to provide the regulatory oversight and services required. UDAA's do not receive public funding from the government for solid

<sup>7</sup> Global Green Growth Institute 2018, Solid Waste Management in Vientiane, Lao PDR, Situation assessment and opportunities for waste-to-resource



waste management and generate revenue through waste collection and landfill tipping fees which are spent for O&M. Many UDAs outsource (part of their) waste collection and disposal to private companies while sometimes also running direct operations in selected service areas. For example, in Vientiane around 10 collection companies currently operate in addition to UDAs' own collection services. Services are however hampered by the general (i) lack of performance benchmarks and key performance indicators in the contracts and lack of regulation, monitoring and reporting; and (ii) a lack of financial sustainability to extend services. Typically, waste fee collection is the responsibility of the provincial governments, who use the revenues for payment of services. In Lao PDR, waste collection companies collect fees directly from households typically upon collection of waste. There is no enforcement mechanism for households to pay for waste services, thus resulting in low waste fee collection rates. Consequently, the collection companies limit their services to more profitable urban centers and areas with ability and willingness to pay as well as to public institutions, and the commercial sector in order to achieve cost recovery.

The priority challenges within the solid waste sector can be summarized as follows. (a) lack of a clear legal framework for solid waste and pollution management and policies and regulations on pollution and solid waste management; (b) lack of capacities at national level to provide regulatory oversight; (c) lack of monitoring and enforcement capacities for environmental pollution (d) local governments are in charge of solid waste management but lack of capacities for operations, monitoring and regulations; (e) lack of financial sustainability due to limited fee collection leading to partial services; (f) lack of proper treatment, recycling and disposal infrastructure causing environmental pollution and severe health and economic impacts; (g) strong increase of single-use plastic items and widespread plastics pollution. The project will be designed to address these key challenges and priorities at both national and local levels.

**(b)** The Project Development Objective (PDO) is to strengthen Laos' capacity for waste and pollution management, improve municipal solid waste management in targeted areas in Lao PDR, and provide immediate and effective response in case of an Eligible Crisis or Emergency. The EWMP will also contribute to the SEA-MaP program development objective, which is to reduce plastics consumption, increase recycling, and minimize leakages to prevent land- and sea-based marine plastic pollution in Southeast Asia.

#### PDO Level Indicator

Achievement of the EWMP PDO and SEA-MaP PDO will be measured by the following indicators:

- Projects with ECCs in full compliance with environmental risk management policies (Percentage)
- Increase coverage of municipal solid waste collection in Vientiane Capital (percentage)
- Solid waste recycled, composted and/or treated to reduce waste disposal volumes



(percentage)

- Net greenhouse gas emissions reduction (metric tons/year)
- Plastics policies, guidelines, or standards developed (of which in alignment with the ASEAN Regional Action Plan) (number)

### **Project Components**

**Component 1. Supporting Policy Implementation and Capacity Enhancement).** 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 management 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.

#### **Subcomponent 1A: Capacity Support for Implementing Environmental Risk Management for Pollution Management, with the following activities:**

- f. 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.
- g. 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.
- h. 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.
- i. Provide technical assistance for enhancing capacity in other priority areas of ERM including on (i) ESIA's for the agriculture, mining, hydropower and industry sectors; (ii) developing and implementing SEA in the mining sector; and (iii) integrating climate risk and mitigation management as part of ERM interventions in the four priority sectors for environmental regulation.

#### **Subcomponent 1B: Policy and capacity support for solid waste and plastic management, with the following activities:**

- a. Develop a National Waste Management Decree on non-hazardous and hazardous waste and relevant sub-regulations on waste management measures 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.
- c. Provide technical assistance and finance for implementation, monitoring and enforcement of the National Plastics Action Plan (NPAP).<sup>8</sup>
- d. Strengthen the domestic plastic waste recycling sector through technical assistance for establishment of minimum standards, compliance system, sub-decree, and capacity building for authorities for monitoring and inspection. It will also establish a recycling market information system and explore the potential on refuse-derived fuel (RDF).
- e. 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.

**Component 2: Infrastructure for the integrated solid and plastic waste management system and capacity Building in waste management planning and operation.** This component aims to enhance the capacity of MPWT and VCOMS to improve their capacities in the policy development and implementation of solid and plastic waste management. Activities under Component 2 are organized as two subcomponents, and both contribute to Pillar 4 of the GCRF.

**Subcomponent 2A. Capacity building for waste management planning, operation, monitoring, waste service delivery, and cost recovery at the local level.** The subcomponent will support enhancing the integrated solid waste management system and build capacity for waste management planning, operation, monitoring, waste service delivery, and cost recovery in the Vientiane Capital. Activities under this subcomponent will:

- a) Provide technical assistance to VCOMS for:
  - Development of regulations and capacity building for waste management planning and collection zoning; contract management and supervision of private waste operators; tariff setting; waste collection from waste service users and private waste operators; and landfill operations and management.
  - Financing and cost recovery for the Vientiane Capital waste management system including developing a mobile application for waste fee collection.

<sup>8</sup> At this time, the NPAP is under development led by MONRE and supported by the World Bank and other development partners.



- Development of a waste management plan for collection zoning per private waste operators, collection scheduling, collection truck and human resources management, service charge collection, contract management, engagement with waste service users, transfer stations operation, landfill operation, waste data collection and regular environmental monitoring.
- b) Develop operational manuals for integrated waste management facilities (sorting and recycling facilities and composting facilities) and landfill management including site selection, standard landfill design, and standard operational procedures for construction, operation, and closure of landfill.
- c) Provide support for improving waste pickers working conditions through:
  - Vocational skills building and training, provision of protective equipment and health and safety training.
  - Interventions for improving female workers' access to jobs in the SWM sector described in the Gender assessment (Section C) of the PAD (December 2022).
  - Support measures for children engaged in waste picking described in Annex 2 of this PAD (December 2022).
  - Allowing informal waste workers to safely access incoming waste at the KM32 landfill.
- d) Support investment preparation for solid and plastic waste infrastructure, equipment, and their management including:
  - Detailed Design (DD) of integrated solid waste and plastic waste management system and specifications for each waste management equipment and infrastructure.
  - Site-specific Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs) and Livelihood Restoration Plans (LRPs) per project site according to the World Bank's Environmental and Social Management Framework.
  - Bidding documents for each project site.

**Subcomponent 2B: Waste and Plastics Management Infrastructure Investments.** This component will finance solid waste landfill infrastructure, transfer stations and integrated waste management facilities (sorting, recycling, and composting facilities), and necessary equipment for Vientiane Capital. The investment at each project site is as follows. The actual technical design and infrastructure at each project site will be determined during the detailed design in the project implementation stage. Activities under this subcomponent will:

- a) Establish 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. Separate bathroom facilities including changing room for males and 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.
- b) 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.
- c) Rehabilitate the KM32 landfill to extend its lifetime by at least 10 years with financing for:
- 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 for waste workers and upgrading of the administration office.
  - 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.
- d) Establish riverine plastics collection at priority pollution hotspots with financing for:
- Technical assistance for setting up viable plastics collection and disposal systems that are integrated into the general SWM system and involve communities in monitoring and reporting.
  - Civil works and equipment for plastics pollution monitoring stations.

**Component 3: Project Coordination and Reporting.** This component aims to maintain and enhance project management, monitoring, learning and coordination across the implementing agencies. Activities will be implemented through two subcomponents:

- a. Finance will be provided under subcomponent 3A for project management and administration support to strengthen the capacity of the EPF and the implementing agencies in project management, fiduciary management, results monitoring, impact assessments, and reporting. ESF implementation support will also be supported under this subcomponent.
- b. Finance will be provided under subcomponent 3B to strengthen the capacity of the EPF for coordination and communication, and fund raising for waste and



pollution management and environmental protection.

**Component 4: Contingency Emergency Response Component.** This component will provide an immediate response to an Eligible Crisis or Emergency, as needed. In an Eligible Crisis or Emergency, the GoL can seek reallocation of project funds to support emergency response and recovery. This Component will contribute to WBG GCRF Pillar 3.

## II. OBJECTIVE OF ASSIGNMENT

The objective of this assignment is to provide technical support to the Project Management Unit of MPWT under Component 3 in management, monitoring, and reporting on the implementation progress of ESCP, SEP, RAPs, EGEPs, ESMPs (including LMP and GBV aspects) and other environmental and social aspects based on the ESMF of EWM project for ensuring successful and timely completion of the activities. Main responsibilities will include, but not limited to, the following:

- i) Assist the EDPD/PTI Director and/or main coordinator responsible for EWM project to manage, monitor, and report on the implementation of ESMF, ESCP, SEP, RAPs, EGEPs, ESMPs, LMP and GBV aspects and other environmental and social aspects issues including ensuring close coordination and consultation with the PMU of MPWT, responsible for EWM Project, the WB and other agencies on issues related to ESCP, SEP, RAPs, EGEPs, ESMPs, and other environmental and social aspects.
- ii) Provide implementation support to the Project Resettlement Committees (PRCs), DHUP and DPWT and local authorities during the implementation of ESCP, SEP, RAPs, EGEPs, ESMPs, LMP and assist in addressing other environmental and social standard requirements and monitoring as per ESMF of the project including consultation and GRM monitoring of contractor performance especially on social compliance and consultation with local community. It is important to ensure that compensation is completed before works can begin.
- iii) Work closely with one full time national social-community consultant and other consultants/staff of EDPD/PTI, DHUP, DPWT and local authorities, and the site engineers of the supervision consulting firm and the contractors hired for EWM project implementation to supervise environmental and social performance of civil work and monitor standards (ESCP, SEP, RAPs, EGEPs, ESMPs, LMP and other environmental and social requirements) compliance.

## III. SCOPE OF ASSIGNMENT

The Consultant (NESC) is a team leader of E&S consultants. She/he will report to the Director of EDPD/PTI and/or the main coordinator responsible for standard implementation and monitoring of the EWM project. The main objective of the NESC is the supervision and monitoring of the implementation of site-specific RAPs (if any), EGEPs (if any), ESMPs, LMPs, SEP, VAC action plan and ESCP. The Consultant is expected to also liaise and work with



concerned government agencies such as DHUP and DPWT including (but not limited to) EPFO-MONRE and their local offices (PONREs, DONREs), and local authorities, Project Resettlement Committees (PRCs) and concerned project committees or technical teams from DHUP and DPWT assigned for the project under Component 2 including those working with VCOMS, landfill operators/private companies.

The Consultant will provide technical and management support to EDPD/PTI to carry out the following tasks:

#### Task 1. Environmental and Social Commitment Plan (ESCP)

- Develop the Alignment Sheet of E&S aspects for the EWM Project;
- Develop Implementation Work Plan for the ESCP with a clear timeframe, roles and responsibilities of agencies involved, organizational chart, weekly and monthly milestones monitorable indicators of the ESCP implementation, a mechanism to deal with delays, development of a database, documentation process. The Workplan must be prepared and updated in line with the Project's construction timelines, Result Framework and Annual Work Plan of the project;
- Supervise and work closely with EDPD/PTI to provide ESCP implementation support and report back to the Director of EDPD;
- Ensure the achievement of milestones specified in the workplan and recommend immediate corrective actions if milestones are not met or are not on track;
- To work with concerned government agencies such as DHUP, DPWT including (but not limited to) EPFO-MONRE and their local offices (PONREs, DONREs), local authorities, PRCs and concerned project committees or teams assigned for Component 3 to obtain required information and approval of required government clearances as required by the relevant national legislation.
- Assist EDPD/PTI to prepare progress reports on ESCP implementation and completion report for submission to the World Bank and other agencies)
- Undertake other related tasks that may be assigned and agreed with the EDPD/PTI Director.

#### Task 2. Resettlement Action Plan (RAP), Stakeholder Engagement Plan (SEP) and Environmental and Social Management Plan (ESMP).

- Develop Implementation Work Plan for the RAP, SEP, and ESMP monitoring with a clear timeframe, roles and responsibilities of agencies involved, organizational chart, weekly and monthly milestones monitorable indicators of the RAP, SEP, and ESMP Reports implementation, a mechanism to deal with delays, development of a database, documentation process and financial flow system to ensure timely processing of payments. The Workplan must be prepared and updated in line with the Project's construction timelines, the prepared ESMPs, RAPs, SEP, Result Framework and Annual Work Plan of the project;
- Supervise, train and work closely with EDPD/PTI and PRCs to provide RAP, SEP, and ESMP Reports implementation support and report back to the Director of EDPD;





PRCs, consultancy firm and local authorities (to consultation with Affected Households, compensation payment, reporting and etc.)

- Ensure the achievement of milestones specified in the workplan and recommend immediate corrective actions if milestones are not met or are not on track;
- Monitor and maintain consolidated log and report on status of grievances with the PRCs, train PRCs on the GRM, and concerned local authorities and village level grievance/resettlement committee (locally known as village mediation unit) established and trained to handle project related grievances that may be received from PAPs/PAHs and who believe they are PAPs/PAHs with respect to resettlement process.
- Conduct regular visit to the project sites and PAPs/PAHs to review the RAP implementation progress and provide advisory and guidance to address issues and grievance that may be raised and identified during the site visit. Special attention shall be paid to the vulnerable, ethnic and female headed PAHs to ensure that they have been provided with compensation and entitlements and that their livelihood will not get worse than that of pre-project level.
- Assist EDPD/PTI to prepare progress reports on RAP, SEP, and ESMP Reports implementation and completion report for submission to the World Bank and other agencies;
- Provide advice and mentoring support for EDPD/PTI including its junior staff, support staff, and junior consultants (young graduated students) mobilized and hired under the Project to build its in-house capacity on RAP, SEP, and ESMP Reports, resettlement management, planning, monitoring and reporting for Component 3 of this Project
- Undertake other related tasks that may be assigned and agreed with the EDPD/PTI Director.

### Task 3. Ethnic Group Engagement Plan (EGEP), if any.

- Implement, monitor and report on the EGEP implementation.
- Conduct ethnic community participation and meaningful consultation with the ethnic groups and PAPs during the preparation of EGEP and project implementation.
- Work closely with PRCs and concerned agencies including Lao Front for National Development to ensure successful implementation of EGEP in line with the government and the World Bank policy of ESS 7.
- Conduct regular site visits to Project sites, particularly the ethnic communities affected by the Project activities, observe and interview ethnic PAPs/PAHs to review the EGEP implementation progress and provide advisory and technical support to address issues and grievance that may be raised and identified during the site visit.



- Ensure that their grievances and feedback received are reviewed, responded and recorded in the tracking system.

#### Task 4. Assisting EDPD/PTI and Capacity Building.

- Undertake / Lead / Ensure that ESF training is provided to all project implementing staff, contractors, workers ( proportionate to their roles) prior to start of works
- Perform activities as agreed with EDPD/PTI.
- Priority will be given to deliver trainings to contractors, local authorities and EDPD/PTI staffs on the ESCP, RAP, EGEP, SEP, ESMP reports and other ES reports, preparation, **supervision, and monitoring.**

#### **IV. QUALIFICATIONS REQUIRED**

The Consultant should have the following qualifications and experiences required to undertake her/his assignment:

- A Master's degree in either of the following: environmental sciences or environmental engineering, or social sciences or social development or community or rural development or related field of expertise.
- A minimum of 8 years' experience in environmental and social impact assessment and resettlement action plans under infrastructure projects.
- Having experience and knowledge on World Bank's ESF (an advantage), or safeguards requirements of other international agencies, and GOL environment and social safeguard requirements especially those related to Resettlement and Compensation Decree and other concerned regulations on environmental and social safeguards related to waste management or landfill subprojects will be highly desired.
- Experience in working with government agencies to support and develop their institutional capacity would be an advantage.
- Good spoken and written English with ability to prepare report in English language, and computer literacy (Microsoft Office and Excel) will be necessary.
- Willingness and ability to travel to project site frequently.

#### **V. EXPECTED DELIVERABLES**

During the course of her/his assignment, the Consultant will deliver the following outputs to the EDPD/PTI:

- Updated the Alignment Sheet of E&S aspects for the EWM Project;
- Updated workplan for the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports, implementation and monitoring with PMU-MPWT, EDPD/PTI, the World Bank and her/his own comments or suggestions incorporated based on field observations and discussions. The workplan should include agreed actions, expected outputs or key milestones, responsibilities and timeframe.



- Monthly progress report on the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports, implementation to be submitted to the Director of EDPD/PTI no later than 3 working days after the final date of each calendar month. The monthly progress report shall cover overall status of the ESCP, RAP, EGEP, SEP, ESMP reports and other ES reports, implementation, status of compensation and livelihood support for PAPs, issues faced, and actions taken, grievances received and addressed and next steps
- Bi-annual progress report on the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports, implementation to be submitted to the Director of EDPD/PTI no later than 5 working days after the last date of sixth month. The bi-annual report summarizes the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports, implementation status and highlight main issues faced, action taken, status of grievances received and addressed and next steps or priorities for the next 6 months.
- Activity proposals and plans for safeguards implementation and supervision and capacity building activities prepared and finalized with support and input from the consultant
- Reports on findings of site visits, training and study or exchange visit finance under the project, minutes of consultations and meetings which could be submitted as annexes to the progress reports.

## VI. DURATION OF ASSIGNMENT:

This shall be a time-based contract. The Consultant (NESC) is expected to start her/his assignment on \_\_\_\_, 2023 or as soon as her/his contract has been signed. S/he will work for a period of 12 months on a full-time basis from \_\_\_\_2023 to \_\_\_\_20\_\_ – a critical period of the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports. The contract can be then extended on a part-time basis depending on the need, performance and availability of funds. The Consultant's principal place of work shall be at PMU-MPWT, EDPD / PTI, Vientiane, Lao PDR.

There will be a 3-month probation period for the Consultant, at the beginning of the assignment, during which the Client may terminate the contract with a 2-week advance notice. For the purpose of contract extension, Consultant's performance shall be assessed based on the following performance indicators:

### 1. Technical Performance

#	Description of Result Area	Result indicators
1	Updated the Alignment Sheet of E&S aspects	Satisfactorily completed within 1 <sup>st</sup> month of activity.
2	Updated workplan for the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports	Satisfactorily completed within 1 <sup>st</sup> month of activity.
3	Monthly progress report on the ESCP, RAP, EGEP, SEP,	Submitted within 1 <sup>st</sup> 3 days of the



	ESMP, LMP reports and other ES reports	next month.
4	Bi-annual progress report on the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports	Submitted within 1 <sup>st</sup> 3 days of the next month.
5	Activity proposals and plans for safeguards implementation and supervision and capacity building activities	Regularly and timely submitted within limits requested by the Client.
6	Reports on findings of site visits, training and study or exchange visit finance under the project, minutes of consultations and meetings	Timely submitted within limits requested by the Client.

## 2. Behavioral Performance

#	Description of Performance Area	Result indicators
1	Drive for results- makes things happen, is proactive, committed to project goals	Confirmed by Coordinator and/or team members
2	Team work- collaborates with others, acknowledges other people's contribution, will seek help when needed	Confirmed by Coordinator and/or team members
3	Learning and knowledge sharing- open to new ideas, shares knowledge and applies knowledge in daily work	Confirmed by Coordinator and/or team members
4	Managerial skills- coaching, mentoring and management	Confirmed by Coordinator and/or team members

## VII. REPORTING AND PAYMENT

The Consultant will prepare and submit the following reports or deliverables in English to EDPD/PTI with key parts of the documents to be translated into Lao. The report format and content of each report will be agreed with EDPD/PTI. For each report submitted an electronic copy will be provided. Electronic copies will be in the format used in their preparation will all links, formulas, and fields active. For all reports an executive summary will be included:

- Inception Report: The Consultant will, within two weeks of Commencement of Services or any other date as agreed with EDPD/PTI, submit an Inception Report to EDPD/PTI setting out the activities and work plan to be carried out during the consulting services including the Consultant's manning schedule and other clear inputs and outputs to be provided including a plan for submission of invoices. The report will also provide a section summarizing the existing status of the project activities and implementation progress and environment and social requirements and next steps.



- E&S standards capacity assessment report and workplan capacity development for EDPD/PTI, DHUP, DPWT, and PRC to be delivered 45 days after the Consultant's contract has been signed.
- Progress Reports (Quarterly during the first 6 months): The consultant will assist EDPD/PTI to prepare and submit quarterly progress report to keep the World Bank updated on the status of the safeguard assessment and instrument preparation during the first 6 months of her/his assignment or as required. The progress reports should also include consultant's input provided to the safeguard documents reviewed. After that s/he will assist EDPD/PTI to prepare and submit the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports, implementation monitoring report required for the World Bank every six month and annually. The Consultant will prepare and submit these compliance monitoring reports to EDPD/PTI at least 14 days before the final submission date as agreed with WB. The report will summarize all progress of the ESCP, RAP, EGEP, SEP, ESMP, LMP reports and other ES reports, implementation and records on GRM and other aspects related to road safety, community health and safety and workers, etc.
- Completion Report: At the end of the service, the Consultant will prepare and submit a Completion Report to EDPD/PTI and WB in a manner satisfactory to EDPD/PTI including: a summary of the activities conducted; successes, problems, and lessons learned during the services; extent to which the outputs and targets agreed have been achieved, together with an analysis of any variance from agreed targets; and recommendations for improvement including an estimated budgets, schedules and implementation arrangements, for follow on work to the services.

21. The payment will be made through EDPD/PTI. The Consultant shall submit an invoice to claim payments along with the working days, trips undertaken and days worked outside office, list of deliverables and reports outlining key activities undertaken and outputs to facilitate the payment.

#### VIII. RESOURCES TO BE PROVIDED BY EMPLOYER:

22. EDPD/PTI will provide i) office space and basic office furniture including photocopier and telephone landline, ii) technical counterparts, iii) basic office assistance, iv) transportation for field work, and v) per-diem and allowance and accommodation expenses (when working out of Vientiane Capital)

23. The Consultant will be responsible for other services that may be required and agreed with EDPD/PTI, including: i) translation of the reports in Lao language; ii) international telecommunication arrangement; iii) organization of the workshops, training and study visit; iv) other assignment related work required for performing the services.



**Lao People's Democratic Republic**  
**Peace Independence Democracy Unity Prosperity**



**Lao Environmental and Waste Management Project (P175996)**

**TERMS OF REFERENCE (TOR)**  
**For National Social Community Engagement Consultant (NSCEC)**  
**(Fulltime - time-based contract)**  
**Reference No. \_\_\_\_\_**

(Apply/modify to all EPFO PCU and MPWT PMU)



## I. INTRODUCTION

### (a) Project Background

The Lao People's Democratic Republic achieved rapid growth and significant poverty reduction between 2005 and 2020, though inequality widened. Gross domestic product (GDP) has averaged around 8 percent growth per year since 2000. The poverty rate declined from 34 percent in 2003 to 23 percent in 2013, reaching 18 percent in 2019. Yet, the Gini coefficient increased from 32.5 to 38.8 during the same period, reflecting lower gains for the bottom 40 percent. COVID-19 has added economic burdens on the country and economic growth declined to 0.4 percent in 2020, the lowest level in three decades.

Key economic activities underpinning Lao PDR's economic dynamism include agriculture, mining, hydropower, and service industries. While these activities provide important economic gains, they have also resulted in high rates of natural resource depletion and environmental degradation. Climate change hazards such as drought and floods are predicted to increase, altering the landscape, fauna, flora and vegetation, but also destroying public infrastructure, property, productive land, agricultural assets and harvests and subsequently further degrading natural resources.

Due to the increasing urbanization in Vientiane and secondary cities and despite improvements, cities and districts suffer from increasing pollution levels, which combined with weak capacity in planning and enforcement and lack of infrastructure and municipal services mean that there are severe difficulties in coping with the associated environmental, social and health impacts. As elsewhere in the world, the vulnerable people are more likely to be exposed to and suffer from the pollution.

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.

Solid waste generation has increased substantially over the years. Sound waste data is missing in the country and is often inconsistent and unverifiable. Waste generation is rapidly increasing in cities and towns due to urbanization, economic growth and changing lifestyles, as well as in tourism hotspots which have seen rapidly increasing numbers over the last decade. During the last decade, household waste generation is estimated to have almost doubled in Vientiane (around 0.80 kg per person per day), same as in the previous decade. As in many other developing countries, the major portion of municipal waste generated in Lao PDR is composed of organic materials. Food, garden, wood and green waste makes up 57 percent of the waste while dry recyclables such as glass, plastics, metal, paper and cardboard account for 22 percent of the waste.

Waste collection in the country is largely limited to the urban centres but remains at low levels. While no accurate figures exist, it is estimated that in Vientiane city only around 30-



50% of the waste generated, and only about 25% of household waste, is collected and transported to the landfill sites. Similar figures are estimated for secondary cities such as Savannakhet, Luang Prabang and Champassak. 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.

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

Women and children in the informal waste sector face multiple disadvantages and are exposed to health and social threats posed by inadequate solid waste management. Their contributions to recovery and recycling of valuable plastics in the face 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.

Plastics pollution is an increasing concern in the country. The amount of plastic waste is continuously increasing particularly in urban areas and often remains uncollected. In Vientiane, plastics constitute around 12 percent of the total waste stream. In a series of studies, the priority plastic items ending up in the environment and waterways were identified as: drinking bottles; caps and lids; bags; cups; food containers; and straws. In major cities such as Vientiane, Savannakhet, and Pakse, plastic waste is a key factor in blockage of drainage systems causing sudden flooding during rains. In key tourism hotspots such as Luang Prabang or Vang Vieng, widespread plastics littering poses a substantial threat to the touristic value. Fishers throughout the country report catching plastics almost every single time they are out fishing, and a study at the largest marshland of Vientiane





found high amounts of microplastics in fish, surface water, and sediments. In addition, burning of plastics is widespread, contributing to air pollution and causing respiratory health issues. Lao PDR has seen an almost 10-fold increase in plastic waste imports from 2018 to 2019 due to the recent import regulations by China and other countries in the region. The quality and recyclability of the waste imports are unknown, and the capacity to cope with the large amounts of plastic waste in Lao PDR is not present.

There is no systematic collection of data about waste generation and waste management in Lao PDR. The most reliable data is from Vientiane Capital where the waste generation has been estimated to 0.65 kg/person/day<sup>9</sup>. It is generally the case that waste generation is higher in urban areas than in rural areas and assuming a waste generation in urban areas of 0.65 kg/person/day, a waste generation in rural areas with road access of 0.5 kg/person/day and a waste generation in rural areas without road access of 0.3 kg/person/day, the total annual waste generation in 2020 would then amount to approximately 1.48 million tonnes. Currently, only 48% of wastes are collected and 60 % of the wastes are disposed in open dumps. Hazardous waste is not collected or treated separately from general waste, resulting in toxic materials and medical waste being disposed of together with municipal waste.

However, a clear institutional and specific regulatory framework for solid waste management is missing. At the national level, two main bodies are responsible for issues related to solid waste management: The Ministry of Public Works and Transport (MPWT), mainly responsible for construction of infrastructures, and the Ministry of Natural Resources and Environment (MONRE), tasked with a regulatory, supervisory and supporting role. The specific responsibilities of different central governmental agencies are however not clearly defined. MONRE's main tasks and responsibilities include the preparation of environmental laws and regulations; however few of these specifically target the solid waste sector. Urban Development Administrative Authorities (UDAAs), at provincial level are the main bodies tasked with solid waste management issues but undefined responsibility at the national level affects solid waste management at the local level in policy implementation, budget allocation, and provision of services.

In addition, regulatory oversight of solid waste management is limited and local governments (LGs) lack capacities for solid waste operations. Solid waste services are often outsourced to the private sector with limited financial sustainability of operations. While the responsibility for solid waste management lies with the province, UDAAs are not equipped with sufficient budget and staffing to provide the regulatory oversight and

<sup>9</sup> Global Green Growth Institute 2018, Solid Waste Management in Vientiane, Lao PDR, Situation assessment and opportunities for waste-to-resource



services required. UDAA's do not receive public funding from the government for solid waste management and generate revenue through waste collection and landfill tipping fees which are spent for O&M. Many UDAA's outsource (part of their) waste collection and disposal to private companies while sometimes also running direct operations in selected service areas. For example, in Vientiane around 10 collection companies currently operate in addition to UDAA's own collection services. Services are however hampered by the general (i) lack of performance benchmarks and key performance indicators in the contracts and lack of regulation, monitoring and reporting; and (ii) a lack of financial sustainability to extend services. Typically, waste fee collection is the responsibility of the provincial governments, who use the revenues for payment of services. In Lao PDR, waste collection companies collect fees directly from households typically upon collection of waste. There is no enforcement mechanism for households to pay for waste services, thus resulting in low waste fee collection rates. Consequently, the collection companies limit their services to more profitable urban centers and areas with ability and willingness to pay as well as to public institutions and the commercial sector in order to achieve cost recovery.

The priority challenges within the solid waste sector can be summarized as follows. (a) lack of a clear legal framework for solid waste and pollution management and policies and regulations on pollution and solid waste management; (b) lack of capacities at national level to provide regulatory oversight; (c) lack of monitoring and enforcement capacities for environmental pollution (d) local governments are in charge of solid waste management but lack of capacities for operations, monitoring and regulations; (e) lack of financial sustainability due to limited fee collection leading to partial services; (f) lack of proper treatment, recycling and disposal infrastructure causing environmental pollution and severe health and economic impacts; (g) strong increase of single-use plastic items and widespread plastics pollution. The project will be designed to address these key challenges and priorities at both national and local levels.

**(b)** The Project Development Objective (PDO) is to strengthen Laos' capacity for waste and pollution management, improve municipal solid waste management in targeted areas in Lao PDR, and provide immediate and effective response in case of an Eligible Crisis or Emergency. The EWMP will also contribute to the SEA-MaP program development objective, which is to reduce plastics consumption, increase recycling, and minimize leakages to prevent land- and sea-based marine plastic pollution in Southeast Asia.

#### PDO Level Indicator

Achievement of the EWMP PDO and SEA-MaP PDO will be measured by the following indicators:



- Projects with ECCs in full compliance with environmental risk management policies (Percentage)
- Increase coverage of municipal solid waste collection in Vientiane Capital (percentage)
- Solid waste recycled, composted and/or treated to reduce waste disposal volumes (percentage)
- Net greenhouse gas emissions reduction (metric tons/year)
- Plastics policies, guidelines, or standards developed (of which in alignment with the ASEAN Regional Action Plan) (number)

### **Project Components**

**Component 1. Supporting Policy Implementation and Capacity Enhancement).** 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 management 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.

#### **Subcomponent 1A: Capacity Support for Implementing Environmental Risk Management for Pollution Management, with the following activities:**

- j. 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.
- k. 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.
- l. 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.
- m. Provide technical assistance for enhancing capacity in other priority areas of ERM including on (i) ESIA's for the agriculture, mining, hydropower and industry sectors; (ii) developing and implementing SEA in the mining sector; and (iii) integrating climate risk and mitigation management as part of ERM interventions in the four priority sectors for environmental regulation.

#### **Subcomponent 1B: Policy and capacity support for solid waste and plastic management, with the following activities:**



- f. Develop a National Waste Management Decree on non-hazardous and hazardous waste and relevant sub-regulations on waste management measures and establish a cross-ministerial National Solid Waste Management Coordination Committee to support implementation of the Decree and regulations.
- g. Develop a national waste and pollution data and information system.
- h. Provide technical assistance and finance for implementation, monitoring and enforcement of the National Plastics Action Plan (NPAP).<sup>10</sup>
- i. Strengthen the domestic plastic waste recycling sector through technical assistance for establishment of minimum standards, compliance system, sub-decree, and capacity building for authorities for monitoring and inspection. It will also establish a recycling market information system and explore the potential on refuse-derived fuel (RDF).
- j. 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.

**Component 2: Infrastructure for the integrated solid and plastic waste management system and capacity Building in waste management planning and operation.** This component aims to enhance the capacity of MPWT and VCOMS to improve their capacities in the policy development and implementation of solid and plastic waste management. Activities under Component 2 are organized as two subcomponents, and both contribute to Pillar 4 of the GCRF.

**Subcomponent 2A. Capacity building for waste management planning, operation, monitoring, waste service delivery, and cost recovery at the local level.** The sub-component will support enhancing the integrated solid waste management system and build capacity for waste management planning, operation, monitoring, waste service delivery, and cost recovery in the Vientiane Capital. Activities under this subcomponent will:

**Subcomponent 2A. Capacity building for waste management planning, operation, monitoring, waste service delivery, and cost recovery at the local level.** The sub-component will support enhancing the integrated solid waste management system and build capacity for waste management planning, operation, monitoring, waste service delivery, and cost recovery in the Vientiane Capital. Activities under this subcomponent will:

<sup>10</sup> At this time, the NPAP is under development led by MONRE and supported by the World Bank and other development partners.



- e. Provide technical assistance to VCOMS for:
  - i. Development of regulations and capacity building for waste management planning and collection zoning; contract management and supervision of private waste operators; tariff setting; waste collection from waste service users and private waste operators; and landfill operations and management.
  - ii. Financing and cost recovery for the Vientiane Capital waste management system including developing a mobile application for waste fee collection.
  - iii. Development of a waste management plan for collection zoning per private waste operators, collection scheduling, collection truck and human resources management, service charge collection, contract management, engagement with waste service users, transfer stations operation, landfill operation, waste data collection and regular environmental monitoring.
- f. Develop operational manuals for integrated waste management facilities (sorting and recycling facilities and composting facilities) and landfill management including site selection, standard landfill design, standard operational procedures for construction, operation, and closure of landfill.
- g. 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 C) of this PAD.
  - iii. Support measures for children engaged in waste picking described in Annex 2 of this PAD.
  - iv. Allowing informal waste workers to safely access incoming waste at the KM32 landfill.
- h. Support investment preparation for solid and plastic waste infrastructure, equipment, and their management including:
  - i. Detailed design of integrated solid waste and plastic waste management system and specifications for each waste management equipment and infrastructure.
  - ii. Site-specific Environmental and Social Impact Assessments (ESIAs), Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs) and Livelihood Restoration Plans (LRPs) per project site according to the World Bank's Environmental and Social Management Framework.
  - iii. Bidding documents for each project site.

**Subcomponent 2B: Waste and Plastics Management Infrastructure Investments.** This component will finance solid waste landfill infrastructure, transfer stations and integrated waste management facilities (sorting, recycling, and composting facilities), and necessary equipment for Vientiane Capital. The investment at each project site is as follows. The actual technical design and infrastructure at each project site will be determined during the detailed design in the project implementation stage. Activities under this subcomponent will:

- e. Establish the Naxaythong transfer station and Integrated Waste Management Facility (in the north-west of Vientiane Capital) with financing for:
  - a. Civil works - a material recovery facility, composting plant, administration office building, and bathroom facilities for waste workers.
  - b. Equipment - sorting, washing, shredding plastics waste equipment; weighbridge; transportation truck, wheel loader, forklift and other equipment for transfer station



operation.

- f. Upgrade the KM16 transfer station in Xaysettha District to be an Integrated Waste Management Facility<sup>11</sup> with financing for:
  - a. Civil works - waste collection, sorting, and material recovery facilities; upgrading the existing composting plant; and bathroom facilities for waste workers.
  - b. Equipment - a weighbridge; transportation truck, wheel loader, forklift and other equipment for transfer station operation.
- g. Rehabilitate the KM32 landfill to extend its lifetime by at least 10 years with financing for:
  - a. 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<sup>12</sup>, developing hazardous waste storage, developing bathroom facilities for waste workers and upgrading of the administration office.
  - b. 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.
- h. Establish riverine plastics collection at priority pollution hotspots with financing for:
  - a. Technical assistance for setting up viable plastics collection and disposal systems that are integrated into the general SWM system and involve communities in monitoring and reporting.
  - b. Civil works and equipment for plastics pollution monitoring stations.

**Component 3: Project Coordination and Reporting.** This component aims to maintain and enhance project management, monitoring, learning and coordination across the implementing agencies. Activities will be implemented through two subcomponents:

- c. Finance will be provided under subcomponent 3A for project management and administration support to strengthen the capacity of the EPF and the implementing agencies in project management, fiduciary management, results monitoring, impact assessments, and reporting. ESF implementation support will also be supported under this subcomponent.
- d. Finance will be provided under subcomponent 3B to strengthen the capacity of the EPF for coordination and communication, and fund raising for waste and pollution management and environmental protection.

**Component 4: Contingency Emergency Response Component.** This component will provide an immediate response to an Eligible Crisis or Emergency, as needed. In an Eligible Crisis or Emergency, the GoL can seek reallocation of project funds to support emergency response and recovery. This Component will contribute to WBG GCRF Pillar 3.

<sup>11</sup> Currently, the transfer station does not have any sorting and recycling functions.

<sup>12</sup> During the Detailed Design at KM32, the project will determine the precise location of the new sanitary landfill cells within the KM32 landfill area.



## **II. OBJECTIVE OF ASSIGNMENT**

The objective of this assignment is to provide support to the National Environment and Social Consultant of Project Management Unit of MPWT under Component 3 in the implementation of ESMF with emphasis on SEP applied under the EWM Project in coordination with the EDPD/PTI. The National Community Engagement Consultant (NCEC) will report to and be supervised by National E&S Consultant and EDPD/PTI under Component 3 of the Project Management Unit of MPWT. Detailed tasks and responsibilities of the NCEC are described below.

### **III. Detailed Task and Responsibilities:**

- Work closely with the National Environmental and Social Consultants (NESC) of Component 3 to support the PMU-MPWT and EDPD/PTI to prepare and update the ESF implementation workplan;
- Work closely with the NESC and a Training Expert to prepare and deliver ESF training plans for capacity building activities to implement the ESF instruments with greater emphasis on the ESMF; SEP and ESCP;
- Provide support and assistance to the EWM project in organizing of ESF related workshops, meetings, and consultations with the PAPs and community;
- Participate in site visits and implementation support missions conducted by the World Bank to monitor and report implementation status on the SEP, RAP and EGEP, if any;
- Jointly prepare and submit a ESF monitoring report to the PMU-MPWT and the World Bank at least every six months;
- Support the PMU-MPWT and EDPD/PTI to engage the concerned stakeholders including the community and project affected persons in the project activities;
- Assist the PMU-MPWT, EDPD/PTI, DHUP and DPWT to organize and facilitate meaningful consultation with the stakeholders and communities and establish a Free, Prior and Informed Consent (FPIC) particularly with ethnic village or ethnic groups;
- Implement continuous consultations on planned Project activities and plans, as well as Environmental;
- Social risks and mitigation measures; and guide and monitor in such consultations;
- Provide support in the preparation of other environmental and social instruments (such as ESMPs, COC, CHS plans) through field level data collection and stakeholder engagements;
- Social risks and mitigation measures; and guide and monitor in such consultations;



- Main findings and information from the ESF monitoring report will be summarized as an input to the overall project progress reports (annual and semi-annual) for submission to the World Bank (WB);
- Ensure to address all environmental measures (such as ESMP, ESCOP, do and don't, wastes, etc.) as needed too;
- To be the focal contact point responsible for establishing a project level Grievance Redress Mechanism (GRM) built on the existing national system, collecting grievances, facilitating grievance resolution and keeping GRM records as well as monitoring and reporting on the status of the grievances received and addressed or pending. The NSCC will prepare a summary of GRM status as part of her/his input for overall project progress reports to be prepared and submitted by the PMU-MPWT to the World Bank on an annual and semi-annual basis; and
- To participate in the design, maintenance and dissemination of the Project's Grievance Redress System in cooperation with the National and International E&S Consultants of the EWM Project.

#### IV. **Deliverables**

- a. Submission of GRM Monitoring, recording and reporting
- b. Preparation of quarterly, 6-months and annual reports

#### V. **Duration of the Assignment:**

This shall be a time-based contract. The Consultant (NSCC) is expected to start her/his assignment on \_\_\_\_, 2023 or as soon as her/his contract has been signed. S/he will work for a period of 12 months on a full-time basis from \_\_\_\_2023 to \_\_\_\_20\_\_ – a critical period of the SEP, ESMP, LMP reports and other ES reports. The Consultant's will be based at PMU-MPWT, EDPD / PTI, Vientiane, Lao PDR.

There will be a 3-month probation period for the Consultant, at the beginning of the assignment, during which the Client may terminate the contract with a 2-week advance notice.

#### VI. **Minimum Qualifications:**

The candidate should at least have:

- A minimum of Bachelor degree (or higher) in either Social Sciences or Environment, Community Development or another related field;
- A minimum of 5 years of relevant experience working with community development projects, social assessment and participatory community or rural development;
- Knowledge on (old) safeguard policies or (new) Environmental and Social Framework (ESF) and Environmental and Social Standards of the World Bank Group particularly in relation to indigenous people or ethnic groups and stakeholder engagement would be an advantage;
- Good knowledge of spoken and written English and Good communication skills;
- Good computer literacy in Microsoft office (e.g., Word, Excel, PowerPoint); and





- Ability to travel to and work in in the field and villages.