# ESMP REPORT

## *ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN*

**XE BANG HIENG RIVER BASIN**

**SAVANNAKHET PROVINCE, LAO PDR**

Economic Research & Development

**Implemented by:**

IWRM-EbA Project

**Integrated Water Resources Management and Ecosystem based Adaptation in Xe BangHieng River basin and Luangprabang City**

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# EXECUTIVE SUMMARY

The *Environmental and Social Management Plan (ESMP)* has been developed for the UNDP-supported "Integrated Water Resources Management (IWRM) and Ecosystem-based Adaptation (EbA) Project being implemented by the Department of Water Resources (DWR) of the Ministry of Agriculture and Environment (formerly Ministry of Natural Resources and Environment (MoNRE). This plan outlines the framework for managing environmental and social risks and impacts arising from project activities, particularly those involving infrastructure development in flood and drought-prone communities across Savannakhet Province.

The ESMP has been prepared in keeping with Lao PDR's Environmental Protection Law (2013), Decree on Environmental Impact Assessment (EIA) No. 389/GoI (2022), 10-year Natural Resources and Environment Strategy (2016-2025). Decree on Climate Change )2019) and in accordance with UNDP's Social and Environmental Standards (SES). This plan is intended to be used by the Department of Water Resource's Project Management Unit, contractors and other stakeholders implementing the protective infrastructure construction activities of the IWRM-EbA project.

The ESIA has recommended various measures to mitigate social and environmental adverse impacts. The project's Environmental and Social Management Plan is based on the findings of the ESIA study report, including other legal policy and regulatory frameworks of the government of Lao PDR and UNDP. However, since the project falls within the low to medium risk category according to the international standards, there is a need to ensure that each construction site has limited environmental and social implications that fully comply with UNDP's Social and Environmental Standards (SES) whilst compliance to Lao PDR's statutory legal requirements is considered mandatory.

This plan is expected to address any potential environmental and social impacts that will be comprehensively addressed in keeping with more tough performance requirements which are explained either in national laws or other international obligations such as the UNDP SES. This plan will guide the project team as well as contractors and community stakeholders to address environmental and social safeguards issues arising from the project during its lifespan. Accordingly, this plan is subject to be amended following further development of mitigation and management measures.

The ESMP supports two key interventions:

- Conservation zone management and ecological restoration in protected areas and degraded headwaters of six villages in Nong and Sepone districts.
- Construction of protective infrastructure—including pond improvements, flood levees, evacuation shelters, riverbank stabilization, and water tanks—in ten villages across five districts (Champone, Nong, Sepone, Songkhone and Xonnabouly).

ESMP identifies and assesses potential environmental and social impacts across project phases, including:

- Natural regeneration process and enrichment planting
- Air pollution, noise and vibration, soil erosion, water quality, hazardous waste
- Habitat loss, ecological fragmentation, and biodiversity disruption.
- Physical hazard, labour and working conditions
- Occupational and community health and safety risks.
- Social concerns such as land acquisition, cultural heritage disruption, and community conflict over shared infrastructure.

Each identified impact is accompanied by tailored mitigation measures, supported by a robust monitoring framework, capacity-building plan, and grievance redress mechanism (GRM). Special attention is given to vulnerable groups, including ethnic minorities, with Free, Prior and Informed Consent (FPIC) processes embedded.

Stakeholder engagement is a cornerstone of the ESMP. Consultations were conducted at national, provincial, and village levels from 2020 to 2025, ensuring broad participation and ownership. The ESMP aligns with UNDP's Social and Environmental Standards and the Lao PDR's national environmental laws and policies.

In sum, this ESMP provides a strategic roadmap to minimize risks, strengthen environmental and social performance, and ensure that project benefits—climate resilience, ecosystem restoration, and community safety—are equitably delivered and sustained.

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| CBOs | Community Based Organization |
| CCAP | Climate Change Action Plan |
| CCAs | Conservation Agreements |
| CITES | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| DAF | Department of Agriculture Land Management |
| DAFO | District Agriculture and Forest Offices |
| DALAM | Department of Agriculture Land Management |
| DCC | Department of Climate Change |
| DEQP | Department of Environmental Quality Promotion |
| DG | Diesel Generator |
| DIC | Department of International Coordination |
| DMH | Department of Meteorology and Hydrology |
| DO | Dissolved Oxygen |
| DOA | Department of Agriculture |
| DoESIA | Department of Environmental and Social Impact Assessment |
| DOF | Department of Forestry |
| DONRE | District Office of Natural Resources and Environment |
| DOP | Department of Planning |
| DOSWF | Department of Social Welfare |
| DPWT | Department of Public Works and Transport |
| DTEAP | Department of Technical Extension and Agro-processing |
| DWR | Department of Water Resources |
| EbA | Ecosystem-based Adaptation |
| EG | Ethnic Group |
| EGPF | Ethnic Group Planning Framework |
| EIA | Environmental Impact Assessment |
| EIS | Environmental Impact Statement |
| ESIA | Environmental and Social Impact Assessment |
| ESMF | Environmental and Social Management Framework |
| ESMMP | Environment and Social Management and Monitoring Plan |
| EWS | Early Warning System |
| FPIC | Free, Prior, and Informed Consent |
| GBVH/SEAH | Gender based Violence and Harassment |
| GCF | Green Climate Fund |
| GDP | Gross Domestic Product |
| GEF | Global Environment Facility |
| GNI | Gross National Income |
| GoL | Government of Lao |
| GPP | Gross Provincial Product |
| GRET | Groupe de Recherches et d'Echanges Technologiques |
| GRM | Grievance Redress Mechanism |
| GVB | Gender Based Violence |
| ICM | Integrated catchment Management |
| IEE | Initial Environmental Examination |
| ILO | International Labour Organization |
| IPCC | Intergovernmental Panel on Climate Change |
| IUCN | International Union for the Conservation of Nature |
| IWRM | Integrated Water Resource Management |
| KOICA | Korea International Cooperation Agency |
| LDC | Least Developed Country |
| LDCF | Least Developed Country Fund |
| LFNC | Lao Front National Construction |
| LPC | Luang Prabang City |

| | |
|---|---|
| LPRP | Lao People's Revolutionary Party |
| LPWHMD | Luang Prabang World Heritage Management Division |
| LSB (MPI) | Lao Statistics Bureau |
| LWCA | Lao Wildlife Conservation Association |
| LWU | Lao Women Union |
| MAE | Ministry of Agriculture and Environment |
| MAF | Ministry of Agriculture and Forestry |
| MICT | Ministry of Information, Culture and Tourism |
| MLSW | Ministry of Social Welfare |
| MMIS | Modified Mercalli Intensity Scale |
| MoF | Ministry of Finance |
| MoLSW | Ministry of Labour and Social Welfare |
| MoNRE | Ministry of Natural Resources and Environment |
| MPI | Ministry of Planning and Investment |
| MPWT | Ministry of Public Works and Transport |
| MRC | Mekong River Commission |
| NAFRI | National Agriculture and Forestry Research Institute |
| NAPA | National Adaptation Programme of Action |
| NBSAP | National Biodiversity Strategy and Action Plan |
| NDC | Lao PDR Nationally Determined Contribution |
| NGOs | Non-Governmental Organizations |
| NSCC | National Strategy on Climate Change |
| NSEDP | National Socio-Economic Development Plan |
| NTFPs | Non-Timber Forest Products |
| NUoL | National University of Lao PDR |
| OHS | Occupational Health and Safety |
| OPWT | Office of Public Works and Transport |
| PAFO | Provincial Agriculture and Forest Office |
| PBs | Project Board |
| PC | Project Coordinator |
| PISCA | Partnership for Irrigation and Commercialization of Small Stakeholder Agriculture |
| PMU | Project Management Unit |
| PONRE | Provincial Office of Natural Resources and Environment |
| POPP | Programme and Operations Policies and Procedures |
| PPE | Personal Protective Equipment |
| PPG | Project Proposal Grant |
| SEA/SH | Sexual Exploitation and Abuse and Sexual Harassment |
| SEAH | Safeguarding against sexual exploitation and abuse and harassment |
| SEP | Safeguard and Enhancement Plan |
| SES | Social and Environmental Standards |
| SESA | Strategic Environmental and Social Assessment |
| SESP | Social and Environmental Screening Procedure |
| SNC | Second National Communication |
| SO | Safeguard Officer |
| UNDP | United Nations Development Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UNPF | UN Partnership Framework |
| VAC | Violence Against Children |
| VEC | Value Ecosystem Components |
| WCS | Wildlife Conservation Society |
| XBH | Xe Bang Hieng River Basin |

# LIST OF TABLES

# 1 INTRODUCTION

## 1.1 Project Rationale

Lao PDR is a landlocked Least Developed Country in Southeast Asia, with a population of about 7.1 million and an economy heavily reliant on natural resources. Agriculture makes up around 30% of GDP and supports most of the population. The country is highly vulnerable to flooding and drought, with major events in recent years causing significant losses, such as the 2018 floods with $370 million in damages.

Recent decades have seen rising temperatures and changing rainfall patterns, with projections of 1.4°C to 4.3°C warmer temperatures and up to 30% more annual rainfall by 2100, resulting in longer dry seasons and more severe droughts. Population density is low, but urbanisation is increasing quickly, particularly along the Mekong and in Vientiane. Rapid urban growth has not sufficiently incorporated climate change impacts, exposing cities to greater flood risks. Integrated and sustainable planning is needed to boost resilience in urban areas as climate change intensifies.

In response to the need and problem mentioned above, Integrated Water Resource Management and Ecosystem-based Adaptation (EbA) in the Xe Bang Hieng River Basin and Luang Prabang city (IWRM-EbA) is developed to increase the climate resilience of vulnerable communities in the two provinces. First, the Xe Bang Hieng river basin in Savannakhet Province will address its vulnerability to the projected increase in both droughts and floods. This is a major rice-producing area and is particularly important for the country's food security. It is also one of the areas in the country which is most vulnerable to droughts and experienced severe flooding in 2017, 2018, and 2019. Second, the city of Luang Prabang is one of the cities in Lao PDR that is most vulnerable to flooding, as well as being an important cultural heritage site[1]. While urban flood risk management is being addressed in four other vulnerable cities in Lao PDR through a GCF project[2], Luang Prabang was not included. The project consists of three important components:

- Component 1: Developing national and provincial capacities for Integrated Catchment Management (ICM) and integrated urban Ecosystem-based Adaptation (EbA) for climate risk reduction.
- Component 2: Ecosystem-based Adaptation (EbA) interventions, with supporting protective infrastructure115, and livelihood enhancement.
- Component 3: Knowledge management and Monitoring and Evaluation (M&E).

The Environmental and Social Management Plan sets out the principles and procedures for managing the environmental and social aspects of the project based on the potential risks to environmental and social aspects of the construction of small-scale protective infrastructure sites in ten target villages of five districts of Savannakhet Province. The rationale for applying EMSP is that specific details of the project activities will only be known during project implementation.

## 1.2 Project Development Objective and Project Components

The overall objective of the project is to promote the integrated management of target sites in the Mekong River Basin, aiming to increase the climate resilience of communities in Savannakhet Province and Luang Prabang City, which are vulnerable to floods and droughts. In these communities, the impacts of floods and droughts are projected to worsen under future climate change, as projected by the greenhouse gas emissions scenarios.

The purpose of this plan is also to guide the Department of Water Resources as the main implementing partner on behalf of the Government of Lao PDR on how to screen and assess the activities and manage any issues during its implementation phase.

The Project Components, Outcomes, and Activities are as follows:

**Component 1: Developing national and provincial capacities for Integrated Catchment Management (ICM) and integrated urban Ecosystem-based Adaptation (EbA) for climate risk reduction.**

*Outcome 1: Enhanced national and provincial capacities for integrated catchment management and integrated water resource management in target rural and urban communities.*

[1] The 'Town of Luang Prabang' is one of Lao PDR's three UNESCO World Heritage Sites and was the first site designated.

[2] The GCF Simplified Approval Process project entitled *Building resilience of urban populations with ecosystem-based solutions in Lao PDR* was approved in 2019 and will target the cities of Vientiane, Paksan, Pakse and Savannakhet.

Output 1.1: Climate risk modelling and integrated planning strengthened through capacity building of central and provincial government officials on flood- and drought-risk mapping in the Xe Bang Hieng River Basin and an economic evaluation of urban ecosystem services and protective options in Luang Prabang.

Output 1.2: Integrated Climate-Resilient Flood Management Strategies developed for Luang Prabang and the Xe Bang Hieng River Basin, supported by an updated hydrometeorological monitoring network, EWS and revised emergency procedures for the Xe Bang Hieng River Basin.

**Component 2: Ecosystem-based Adaptation (EbA) interventions under an Integrated Water Resource Management (IWRM) framework, with supporting protective infrastructure and livelihood enhancement.**

*Outcome 2: Reduced flood risk through headwater conservation, restoration and protective infrastructure, supported by climate-resilient and alternative livelihoods.*

Output 2.1: Ecosystems conserved and restored through conservation zone management, Ecosystem-based Adaptation, and protective infrastructure, supported by innovative communication and knowledge management tools/technology.

Activities under this Output will include:

- Activity 2.1.1: Conserve Xe Bang Hieng protected forests through enhanced conservation zone management and enhanced natural regeneration and restore Xe Bang Hieng degraded headwater conservation zones and implement EbA interventions to improve ecological integrity for the delivery of ecosystem services.
- Activity 2.1.2: Construct protective infrastructure to reduce flood risk (through cascading weirs and drainage channels) and drought risk (by means of reservoir networks and rainwater harvesting).
- Activity 2.1.3: Develop and distribute communication and knowledge management tools and technologies (such as mobile phone apps and community radio) and train communities on their use to support headwater conservation zone management and increase their resilience to floods and droughts.

Output 2.2: Climate-resilient and alternative livelihoods promoted in headwater and lowland communities through Community Conservation Agreements (CCAs) and diversified livelihood opportunities.

**Component 3: Knowledge management and Monitoring and Evaluation (M&E).**

*Outcome 3: Effective knowledge management and M&E through awareness/advocacy and monitoring of climate change impacts and adaptation opportunities in target rural and urban communities.*

Output 3.1: Training and awareness/advocacy campaigns conducted to enhance knowledge management, M&E and information exchange on climate change impacts on agricultural production and socioeconomic conditions and lessons disseminated on community-based adaptive solutions.

In implementing Output 2.1, which concentrates on ecosystem conservation and restoration through conservation zone management, Ecosystem-based Adaptation (EbA), and protective infrastructure, it is crucial to carry out comprehensive Environmental and Social Impact Assessments (ESIA) for activities 2.1.1 and 2.1.2. These activities, as detailed in the Environmental and Social Management Framework (ESMF), pose significant potential impacts that must be properly assessed and managed to promote sustainable and inclusive results.

The output of the ESIA will be an ESIA report and an Environmental and Social Management Plan (ESMP) for each activity or site. The ESMP will define the desired social and environmental management outcomes and specify social and environmental indicators, targets, or acceptance (threshold) criteria to monitor ESMP implementation and effectiveness.

## 1.3 Project Location and Scope of Work of ESMP

The ESMP will focus mainly on the mitigation measures and/or actions to minimize the potential impacts identified based on the results from the ESIA study conducted through extensive stakeholder and community consultation process. This management plan will focus on the construction of various small scale protective infrastructures such as evacuation shelter, riverbank stabilization, wetland modification/pond improvement, gravity-fed water supply and levee construction in ten target villages of five districts of Savannakhet Province.

This document was prepared as a site-specific Environmental and Social Management Plan (ESMP) for the integrated management due to the inclusion of infrastructure construction, the following are subject to ESIA.

The project location and scope of works have been addressed by activity of the project.

Under Activity 2.1.1: The conservation zone management and natural regeneration and restoration of Xe Bang Hieng Headwater will be applied for 6 villages of 2 target districts.

- Nong District: Savue village, Nongvilay village, and Tang Alai Neu village
- Sepone district: Kenghuapa village, Sopsalou village, Thamae village

Under Activity 2.1.2: The protective infrastructure will be applied for 10 villages of all target districts.

- Champhone district: Piaka village, Dongmeuang village, and Sivilay village
- Nong district: Tangalai Nuea village
- Sepone district: Sopalou village and Thamae village
- Songkhone district: Songkhone village
- Xonnabouly district: Mueanghong village, Nachanyai village, and Nonesevang village

## 1.4 Methodology of ESMP

The methodology of ESMP is quite similar to ESIA. Both processes emphasize the importance of assessing environmental impacts and engaging stakeholders throughout the project lifecycle. However, ESMP goes a step further by focusing on the implementation of mitigation measures and monitoring their effectiveness over time.

The methodology applied for the execution of the ESMP study is as provided below,

- The ESMF, ESIA, Feasibility Report and other relevant documents were reviewed to understand the proposed project component;
- Regulatory review was undertaken to understand the applicable, local and national legislation and regulatory frameworks;
- A detailed social and environmental assessment of the site and surrounding areas was undertaken through the following methods,
    - Review of the Google Imagery of the proposed site to understand site specific issues and associated facilities;
    - Discussions with the beneficiary communities including the project affected communities and identification of key issues;
    - Baseline data collection through third party including discussions held with village heads in the study area with respect to ecology and socio-economic conditions;
    - Ecological assessment on flora and fauna of the site and study area through secondary sources and primary data on aquatic ecology.
- Collation of secondary information on socio-economic profile of the area was supplemented by information available in existing reports and institutional stakeholders with regard to the proposed project and its activities. The approach included,
    - Consultations with project affected communities (by the national consultants and project team);
    - Data compilation from secondary sources;
- Assessment of environmental and social impacts based on understanding of the project activities and existing baseline status;
- Preparation of Environment and Social Management and Monitoring Plan.

## 1.5 Preparation of ESMP

The ESMP is prepared by the Consultant on behalf of DWR (MAE) and UNDP to be applicable for implementing this ESMP. Detailed arrangements for implementation are described in Section 8 of this ESMP.

## 1.6 Objectives of ESMP

The primary objective of the ESMP is to ensure that the protective infrastructure construction activities does not pose any risk to the environmental and social aspects of the project community. It serves as a management tool to assist in minimizing the impact to the local environment and social aspects and reach a set of objectives to address the same.

The site-specific ESMP provides details on environmental and social risks and potential impacts, mitigation measures, implementation arrangement, including how relevant stakeholder and affected communities are to be engaged during ESMP implementation (construction and operation phases). It also sets out grievance redressal

mechanism (in line with project's ESMF) and provides cost estimate for ESMP implementation during sub-project implementation.

The objectives of the ESMP includes, but not limited to:

- Ensure compliance with the applicable national laws, regulations, standards, and guidelines;
- Ensureenvironmental and social risks and impacts associated with the construction in all targeted areas are effectively managed;
- Adopt best possible mitigation measures available to prevent and/or minimize potential risks and impacts to workers, affected communities and the environment.
- Ensure that grievances from affected communities and external communications from relevant stakeholders are responded to and managed appropriately.
- Comply with all applicable laws, regulations and standards for the protection of the local environment and social aspects of the project affected community
- Responsiveness to emerging and unforeseen environmental and social risks not identified during EMSP preparation;
- Ensure sufficient resources are allocated for timely availability during implementation of ESMP-related activities;
- Serve as a guideline for Contractors to develop Contractors' ESMP; and
- Maintain ongoing engagement of potential project stakeholders, particularly those who live in the vicinity of the construction site, as well as relevant authorities at commune, district and provincial levels.

# 2. DESCRIPTION OF THE PROJECT ACTIVITIES

## 2.1 Conservation Zone Management and Natural Regeneration and Restoration of Xe Bang Hieng Headwater

Within Activity 2.1.1 of the Conservation of Xe Bang Hieng Protected Forest project, enhance the management of conservation zones, facilitate natural regeneration, rehabilitate compromised headwater conservation zones, and implement ecosystem-based adaptation (EbA) strategies to improve ecological integrity and ecosystem services. The mentioned activities will be carried out in the following villages and districts. As illustrated in Figure 1, these villages are located in the protected Ramsar Site.

- Nong District: Savue village, Nongvilay, Tangalai Neu
- Sepone district: Kenghuapa village, Sopsalou village, Thamae village

The project in Sepone district will focus on conserving protected areas and restoring degraded ecosystems. This will involve planting suitable species to restore ecosystem function, assisted natural regeneration, and forest boundary management. Additionally, water management efforts like retention ponds and rainwater harvesting will address local water shortages. In Nong, the project aims to conserve protected areas and restore degraded ecosystems by planting appropriate species and using methods like assisted natural regeneration and forest boundary management.

As in figure 1, conservation activities will include enhancing conservation zones within four National Protected Areas (Phou Xang, Dong Phou Veng, Xe Ban Nuan[3]) and managing one Ramsar Site (Xe Champhone Ramsar); managing forest boundaries, and facilitating natural regeneration process. Restoration activities will involve enrichment planting to promote natural regrowth in secondary forests and reforestation by replanting ecologically appropriate species to restore ecosystem functioning.

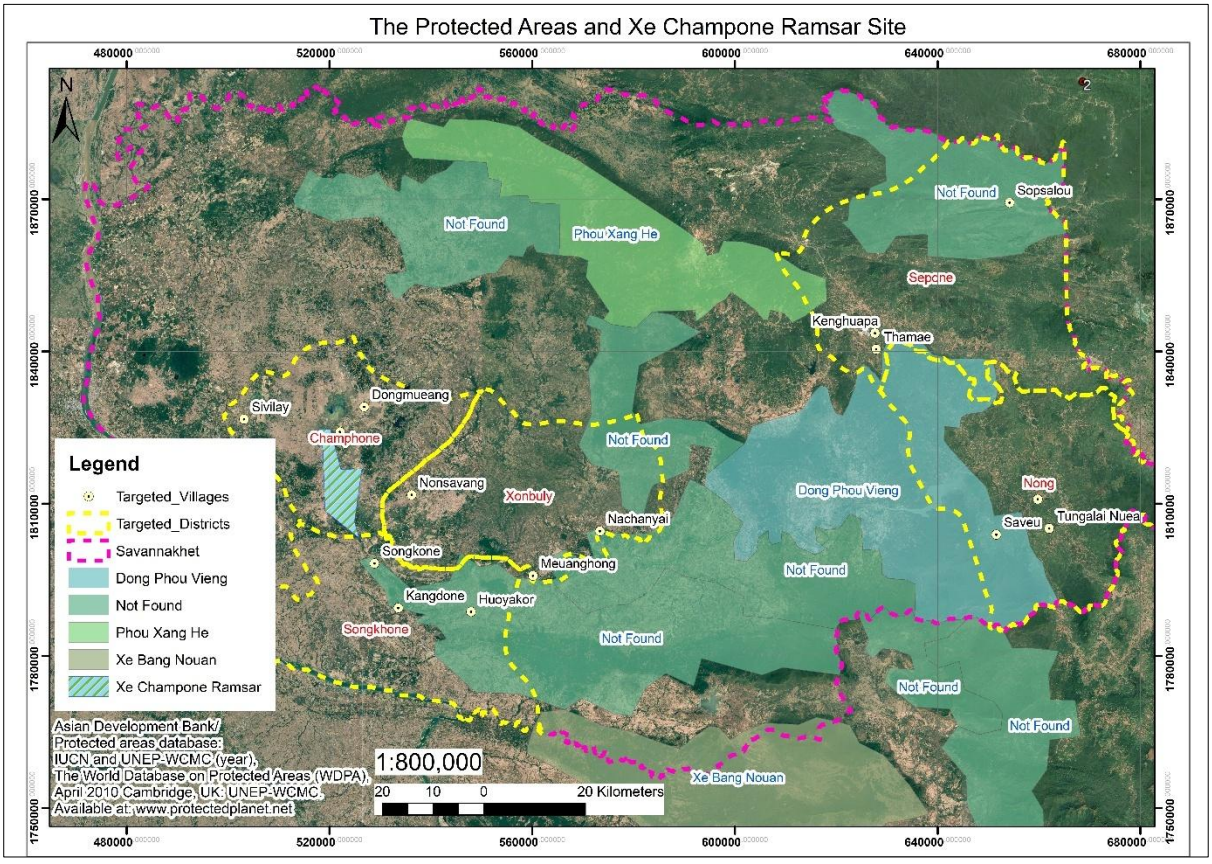



*Figure 1: The Overlap maps of target villages/district, and protected areas and Ramsar site*

[3] https://data.laos.opendevelopmentmekong.net/en/dataset/laos-protected-areas-and-heritage-sites

## 2.2 Protective Infrastructures to Mitigate Flood and Drought Risks

Ten target villages in the Xe Bang Hieng River Basin (Savannakhet Province) have been presented with the proposed infrastructures. The building option has been selected, and in December 2024, an expert team from the IWRM-EbA Project and the Department of Water Resources conducted a field study, collected data and information to design flood and drought control measures. The expert team examined options 1 to 15 in each village, encompassing the project pond boundary, river cross-section, river longitudinal profile, surrounding project area and relevant flood risk management data . The results of this extensive study have been crucial in identifying the most efficient ways to alleviate the consequences of floods and droughts in the region. The study team sought to develop solutions that safeguard vulnerable people while also strengthening the resilience of local ecosystems via the analysis of numerous possibilities. Table 1 illustrates the locations of settlements and available infrastructure options.

**Table 1: Location of villages and infrastructure projects**

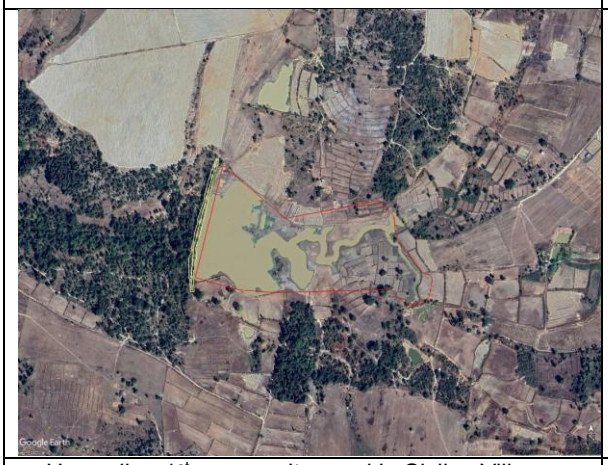
| District/Village | UTM | | Sub project |
|---|---|---|---|
| | X | Y | |
| **Champhone** | | | |
| Phiaka | 522293.28 | 1823927.456 | Pond improvement, |
| | 523109.432 | 1824770.702 | Flood protection levee |
| | 522708.00 | 1824255.81 | Evacuation shelter |
| Dongmeuang | 527059.346 | 1832725.473 | Riverbank stabilization and levee works |
| Sivilay | 501556.744 | 18275226.437 | 2 Pond Improvement |
| **Nong** | | | |
| Tangalai Nuea | 662006.479 | 804985.185 | 1 Pond Improvement |
| **Sepone** | | | |
| Sopalou | 655571.755 | 1868605.682 | Water tank installation |
| Thamae | 628004.181 | 1840479.667 | 1 Pond Improvement |
| **Songkhone** | | | |
| Songkhone | 532239.73 | 1798305.621 | Pond improvement |
| | 532110.523 | 1787819.965 | Evacuation shelter |
| **Xonnabouly** | | | |
| Mueanghong | 559626.812 | 1798549.697 | Evacuation shelter |
| Nachanyai | 572054.181 | 1802826.395 | Evacuation shelter |
| Nonsavang | 535875.166 | 1809277.601 | Pond improvement |

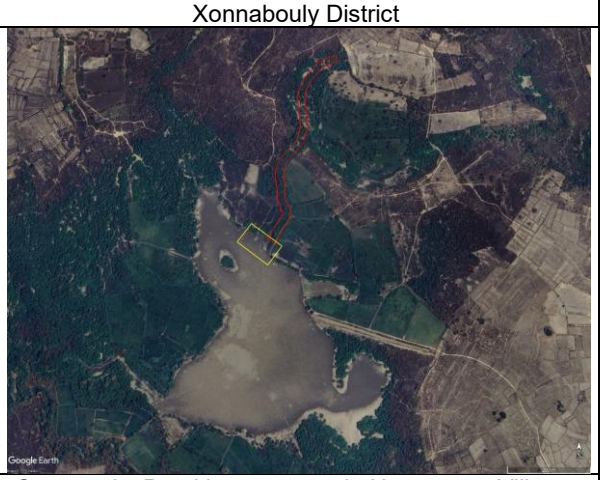
Source: Project Document

**Table 2: A collection of locations where construction site will be prepared in the target villages**

Pond improvement in Phiaka village, Champhone District

*Evacuation shelter (Previous in bottom left and New in upper right in Phiaka Village, Champhone District*

| | |
|---|---|
|  |  |
| *Flood protection levee in Phiaka Village, Champhone District* | New Engineer Design Flood protection levee and Riverbank stabilization in Dongmeuang village, Champhone District |
|  |  |
| Upgrading 1st community pond in Sivilay Village, Champhone District | Upgrading 2nd community pond in Sivilay Village, Champhone District |
|  |   |
| Pond improvement in Tangalai Neua Village, Nong District | Installation of water tanks in Sopsalou Village, Sepone District |

| | |
|---|---|
|  |  |
| Upgrading community pond in Thamae Village, Sepone District | Upgrading community pond in Songkhone Village, Songkhone District |
|  |  |
| Community shelter evacuation in Songkhone Village, Songkhone District | Previous (left side) and new (right side) community shelter evacuation in Meuanghong Village, Xonnabouly District |
|  |  |
| Community shelter evacuation in Nachanyai Village, Xonnabouly District | Community Pond improvementin Nonsavang Village, Xonnabouly District |

The construction of sub-project infrastructure will be carried out on public land occupied by the residents. The amount of land needed for acquisition is minimal because the projects are small on scale. In total, the project will need around 85,716m$^2$ of land to construct all projects. Table 2 below presents the detailed list of land requirements and their ownership status.

**Table2: Land Requirements for the construction of sub-projects**

| District/Village | UTM | | Subprojects | land required (m2) | Ownership | Private land plot sharing a boundary with the construction site (HHs) | Private land plot will have impact by the temporary access road to construction site (HHs) |
|---|---|---|---|---|---|---|---|
| | X | Y | | | | | |
| **Champhone** | | | | | | | |
| Phiaka | 522293.28 | 1823927.456 | Pond improvement (1,600m$^2$), | 8,304 | Public land | - | - |
| | 523109.432 | 1824770.702 | flood protection levee (2,904m$^2$) | | Public and private land | 3 | 1 |
| | 522708.00 | 1824255.81 | Shelter evacuation (3,800m$^2$), | | Public land | | |
| Dongmeuang | 527059.346 | 1832725.473 | Flood protection levee and Riverbank stabilization (16,500m$^2$) | 16,500 | Public land | 08 (N/A) | - |
| Sivilay | 501556.744 | 18275226.437 | 1$^{st}$ pond (3,200m$^2$) 2$^{nd}$ pond (1,350m$^2$) | 4,550 | Public land | 09 (9.469ha) | - |
| **Nong** | | | | | | | |
| Tangalai Nuea | 662006.479 | 804985.185 | 1 Pond improvement (4,840m$^2$) | 4,840 | Public land | - | - |
| **Sepone** | | | | | | | |
| Sopalou | 655571.755 | 1868605.682 | Water tank installation (240m$^2$) | 264 | Public land | - | - |
| Thamae | 628004.181 | 1840479.667 | 1 Pond improvement (6,690m$^2$) | 6,690 | Public land | - | 4 (3ha) |
| **Songkhone** | | | | | | | |
| Songkhone | 532239.73 | 1798305.621 | Pond improvement (3,771m$^2$), | 17,981 | Public land | 04 (1.3ha) | 03 (2.7ha) |
| | 532110.523 | 1787819.965 | shelter evacuation (9,742m$^2$), | | | | |
| **Xonnabouly** | | | | | | | |
| Mueanghong | 559626.812 | 1798549.697 | Shelter evacuation (2,230m$^2$) | 2,230 | Public land | - | - |
| Nachanyai | 572054.181 | 1802826.395 | Shelter evacuation (11,080m$^2$) | 11,080 | Public land | - | - |
| Nonsavang | 535875.166 | 1809277.601 | Pond improvement (18,117m$^2$) | 18,117 | Public land | 07 (33.71ha) | 16 (44.3ha) |
| | | | **Total** | **85,716** | | | |

# 3 SUMMARY OF ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

**Table3: Environmental and Social Impacts and mitigation measures**

| Potential impacts | Impact Significance | | Mitigation Measures |
|---|---|---|---|
| | Without Mitigation | With Mitigation | |
| **Impact Assessment for Conservation of Xe Bang Hieng Basin Region** | | | |
| **Enhancing conservation zone management and forest boundary management:**<br><br>Enhancing conservation zone management and forest boundary management, while crucial for ecological restoration, might restrict local communities' traditional access to forest resources. Specifically, these activities may disrupt the livelihoods of farmers, including those from ethnic groups, by restricting access to land traditionally used for agriculture, access to non-timber forest products (NTFPs), grazing areas, collecting fuelwood and other economic activities. Furthermore, such interventions may interfere with cultural traditions tied to these lands. | Moderate | Negligible | • Conduct stakeholder engagement to initiate any activities with the communities involving protected area demarcation. The engagement will involve consulting affected communities about potential impacts and management measures, ensuring participatory mapping, planning, implementing, and monitoring conservation zone and forest boundary management.<br>• Conduct Free, Prior and Informed Consent (FPIC) to allow local resource users to decide on their participation in an intervention and its continuation.<br>• Develop and support alternative livelihood options for communities whose access to traditional resources is restricted.<br>• Provide training to local communities in sustainable forest management techniques, alternative farming practices, and business development. |
| **Impacts of natural regeneration processes and enrichment planting:**<br><br>While natural regeneration and enriching planting can significantly aid in the recovery of degraded areas, they are not without potential adverse impacts. These include the risk of introducing non-native species that may outcompete indigenous flora, thereby disrupting the existing ecosystem balance. Additionally, the disturbance caused by planting activities can lead to soil erosion and loss of habitat for local wildlife. Inadequate planning and execution may also result in the overutilization of resources, eventually hindering the long-term sustainability of the regeneration efforts. Therefore, careful consideration and monitoring are essential to mitigate these potential negative outcomes.<br><br>Location: protected areas in Sepone and Nong districts. | Moderate | Negligible | • Conduct thorough site assessments to identify and protect existing valuable habitats and species.<br>• Avoid invasive species and select native species that are well-adapted to the local environment and can coexist with existing vegetation.<br>• Implement phased planting schedules to minimise disruption to local wildlife.<br>• Limit the disturbed area to the absolute minimum necessary for project activities<br>• Immediately restore disturbed areas to a natural state after project completion, using native vegetation.<br>• Regular monitoring and management of the planted areas to ensure the success of the regeneration and to prevent the invasion of non-native species.<br>• Engage local communities in the process to ensure their support and involvement, and to address any concerns related to land use and livelihoods |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| **Impact Assessment for Protective Infrastructure:**<br>The negative impacts of the protective infrastructure project are classified by the phases of construction: pre-construction, construction, and operation phases.<br>To allocate the impact from construction activities, Table 1 lists construction projects in each village to be assessed by this report. | | | |
| ***Pre-construction and construction phase*** | | | |
| ***Environmental Health and Safety*** | | | |
| **Air Pollution:**<br>This impact applied to all projects and village as in table 1.<br><br>The construction of infrastructure projects listed in table 37 can impact air quality due to the dust created by traffic and the transportation of equipment and construction materials from the supplier source to the construction site. As the construction is scheduled in the dry season, dust emissions from unpaved roads, and the handling of construction materials, such as sand and gravel, and soil from the quarries can increase the levels of particulate matter in the air, posing health risks to workers and nearby residents. | Low | Negligible | • Traffic and the transportation of equipment and construction materials from the supplier source to the construction site, and engine exhaust emissions from construction machinery and equipment, will lead to minor localised temporary increases in levels of nitrogen oxides (NOx), sulfur oxides (SOx) site, and engine exhaust emissions from construction machinery and equipment, will lead to minor localised temporary increases in levels of nitrogen oxides (NOx), sulfur oxides (SOx) and particulate matter.<br>• Fugitive dust from earthworks, vehicle movement and loading and unloading at construction site borrow pits/ quarries and spoil disposal sites.<br>• These impacts are mainly a concern for the construction workers and people living along roads where pipes will be laid and the transport routes to borrow pits, sand and gravel quarry sites or supplier sources. Regular use of dust suppression systems such as water sprinklers to reduce dust emissions during transportation, handling of construction materials and movement of vehicles.<br>• Reduce traffic speed on all unpaved surfaces to 20 km/hr or less to avoid dust emissions from vehicular movement. |
| **Noise and Vibration:**<br>This impact applied to all projects and village listed in Table 1.<br><br>In addition to air quality issues, infrastructure construction projects often generate significant noise and vibration, which can adversely affect both the environment and the community. The operation of heavy machinery, such as excavators, bulldozers, produces high levels of noise that can disrupt the peace and tranquillity of nearby residential areas. Prolonged exposure to excessive noise can lead to a range of health problems, including stress, hearing loss, and sleep disturbances. Vibration from construction activities can also cause structural damage to buildings and infrastructure, particularly those that are old or poorly constructed. This can result in costly repairs and pose safety risks to the occupants. | Low | Negligible | • Operation hours of construction activities to be restricted during nighttime. Consultation with nearby residents in advance of construction activities particularly if noise generating construction activities are to be carried out outside of 'daytime' hours: 7am-5.30pm.<br>• Minimise the need for and limit the emissions as far as practicable if noise generating construction works are to be carried out outside of the hours: 7am-5.30pm<br>• The contractor should conduct employee and operator training to improve awareness of the need to minimize excessive noise in work practices through implementation of measures<br>• Identify properties, structures and habitat locations that will be sensitive to vibration and noise impacts resulting from construction of the project.<br>• Provide advance warning to the community on timing of noisy activities. Seek suggestions from community members to reduce noise annoyance and notify the communities about how to raise their concerns (if any) through the Grievance Redress Mechanism.<br>• Enforce a speed limit of 20 km/h for construction related traffic through inhabited areas. |
| **Soil Erosion:**<br>This impact applied to villages with the following infrastructure: pond improvements, riverbank stabilization and flood protection levees (see table 1). | Low | Negligible | • Confine all construction activities and disturbance to the absolute minimum area required for the works. Clearly delineate work areas with fencing or markers to prevent accidental disturbance. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| • Topographical Alteration: Activities such as earthwork or digging foundations for the levee/dikes, shaping the riverbank, and creating access roads involve disturbing large volumes of soil. This loose, exposed soil is highly susceptible to detachment and transport.<br>• Excavated soil, sand, and aggregate stockpiled on-site can be easily eroded by wind or rain, especially if not properly contained or covered.<br>• Sediment Movement: The direct interface with the rivers and ponds means that eroded soil can directly enter the water body, leading to immediate and severe water quality degradation (turbidity, sedimentation).<br>• Runoff Induced Erosion: Unprotected excavated areas are particularly vulnerable to erosion caused by surface runoff, leading to the generation of muck which can further degrade soil and water quality.<br>• Disruption of Natural Drainage Patterns: Construction can alter natural drainage patterns, exacerbating the rate of erosion and sedimentation. | | | • Implement the project in small, manageable sections. Complete stabilization and revegetation of one section before moving to the next. This minimizes the total area of exposed soil at any given time<br>• Implement erosion control measures such as silt fences, straw wattles, and check dams to minimize sediment runoff.<br>• Apply straw, wood chips, or other organic mulches on newly graded or disturbed areas to protect soil from rain splash erosion and wind erosion.<br>• Utilize vegetative cover, such as planting grass or shrubs, to stabilize soil and reduce exposure to erosive forces.<br>• Sow fast-growing, non-invasive cover crops on disturbed areas that will remain exposed for an extended period.<br>• As soon as a section of the riverbank, levees or dikes are completed, immediately prepare the soil and plant native, local vegetation (grasses, shrubs, trees) suitable for riverbank conditions. This is the most effective long-term erosion control.<br>• Stockpiles should be located away from drainage paths, protected with temporary covers (tarpaulins, geotextiles), or immediately seeded with fast-growing cover crops if left for extended periods.<br>• Apply hydroseeding techniques to disturbed soil areas promptly to promote quick revegetation.<br>• Construct temporary drainage channels to redirect water flow and prevent pooling in vulnerable areas.<br>• Schedule construction activities during dry periods to reduce the risk of erosion due to rainfall. |
| **Water Quality – Surface and Groundwater:**<br>This impact applied to villages with the following infrastructure: pond improvements, riverbank stabilization and flood protection levees (see table 1).<br>• Excavation, earthmoving, and material transport near the river will inevitably lead to soil erosion and increased suspended solids in rivers and ponds. This can smother aquatic habitats, reduce light penetration, and affect aquatic life, including fish.<br>• Spills of fuel, lubricants, hydraulic fluid from machinery, or leaching of chemicals from construction materials (e.g., concrete, cement) can pollute river water.<br>• Improper disposal of construction waste (debris, packaging, domestic waste from workers) into or near the river can directly contaminate wate. | Low | Negligible | • Construction activities must be held during the dry season.<br>• Where possible install silt fences, sediment traps, and retention ponds downstream of construction areas to capture sediment run-off.<br>• All muck and debris generated to be used for back filling to the extent possible and excess muck to be disposed of at preidentified muck dumping site.<br>• Ensure that the muck dumping site (if required) is provided adequate protection so that it does not flow into the water stream.<br>• Storage area to be kept away from the water bodies to prevent any run-off into water bodies.<br>• Work in sections to minimise the exposed area at any given time.<br>• Reduce, recycle, and reuse waste [e.g. plastic waste, electronic waste, agricultural waste (natural, animal faces for later use as manure, plant waste)] wherever and whenever possible.<br>• Construction sites and camp sites must build latrines for appropriate domestic waste management.<br>• Establish designated fuelling and maintenance areas at least 50 meters from the river, on impermeable surfaces.<br>• Ensure readily available spill containment and clean-up kits on-site and train personnel in their use.<br>• Store all fuels, lubricants, and chemicals in secure, bunded areas |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| | Without Mitigation | With Mitigation | |
| | | | • Hazardous waste, including any spills of chemicals or fuels, should be collected separately and disposed of following environmental regulations.<br>• Strictly prohibit the disposal of any waste into the rivers or ponds<br>• Promote clean living practices, reduce plastic usage, and improve waste management. |
| **Hazardous Waste:**<br>This impact applied to all protective infrastructure in 10 target villages (see table 1).<br><br>During the construction, solid wastes – both non–hazardous and hazardous, are anticipated to be generated, primarily due to camp set up, rehabilitation and construction of flood protection levee, riverbank stabilization, community shelter evacuation and upgrading community pond. In particular, solid waste could be generated from operations that involved site clearing, excavation, trenching, demolition of existing cement and earthworks structures, construction and disassembly of worker camps, maintenance of machineries, and so forth. Regarding dredged and excavated material, the construction activities can lead to surface erosion and sedimentation, particularly in water bodies. However, the estimates for the amount of dredged or excavated material per scheme do not estimate amounts for reuse or disposal. Improper handling of solid waste generated from the above operation may result environmental pollution that may include soil and water contamination, habitat disruption, visual pollution and give rise to concerns of public health | Moderate | Low | • All vehicles/drivers will be provided with plastic bags for waste collection to prevent any unauthorised waste disposal, with particular attention paid to the prevention of littering.<br>• Establish designated fuelling and maintenance areas at least 50 meters from the river, on impermeable surfaces.<br>• Store all fuels, lubricants, and chemicals in secure, bunded areas.<br>• Ensure readily available spill containment and clean-up kits on-site and train personnel in their use.<br>• The Contractor will be required to train the workers in proper waste management.<br>• Recyclables will be separated at source and given/sold to recycler (plastic, metal, card, paper as a minimum).<br>• Safe temporary storage of hazardous waste as required.<br>• Storage facilities for fuels, oil, cement, and chemicals shall be within secured areas on impermeable surfaces, provided with bunds and cleanup installations. |
| **Occupational Health and Safety** | | | |
| **Occupational Hazard and Safety**<br><br>This impact applied to all protective infrastructure in 10 target villages (see table 1).<br><br>These hazards can result in a range of consequences, from minor injuries requiring medical attention to severe and potentially fatal accidents. The sources highlight several specific types of physical hazards, including Falls from Heights, Falling Objects, Falls into Open Holes, and Injuries from Heavy Equipment. Given that the province is recognised as an area | Moderate | Low | • Appoint an Environment, Health and Safety Officer who is a qualified engineer<br>• The construction contractor and workers must be trained in safety practices as per the construction safety management plan before starting construction.<br>• Ensure safety measures for all electrically driven machinery before and during construction.<br>• Follow traffic norms and maintain safe speeds for vehicle movements on unpaved tracks.<br>• Provide PPEs such as helmets, safety belts, welding masks, gloves, and shoes to workers handling welding and electricity.<br>• Ensure fall protection for workers at heights.<br>• Inspect PPE periodically and maintain a record. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| containing ERW, workers and communities can be exposed to ERW. | | | • Install signage and strong barriers to guard against danger to people at work, pedestrians and traffic from falling or slipping into excavations;<br>• Conduct excavation and dredging under the supervision of a Safety officer and provide proper signage at excavated areas.<br>• Provide fire extinguishers onsite, monitor them regularly, and keep an accident report to minimize future incidents.<br>• Display sign boards and safety signages in the regional language and install hard barricading at all active work sites.<br>• A first aid kit must always be on site<br>• Working near river/pond:<br>o Identify construction work and sites that involve working in or near water and prepare site and work specific hazard assessments and include relevant control and mitigation measures in the ESMP.<br>o Restrict work to the low flow season, and in any case not to carry out work during rain events;<br>o Always work in teams consisting of minimum three workers within eyesight of each other;<br>o Ensure that waterproofed communication devices are available;<br>• Enforce safety rules with clear sanctions for repeat offenders.<br>• Conduct internal monthly audits by PMU of the Contractor and regular monitoring by the Contractor.<br>• Collect and transport waste oils and lubricants to recyclers or designated disposal sites promptly.<br>• Ensure no open fires within the project area and replenish first aid kits regularly.<br>• Conduct ERW survey and clearance before construction activities commence<br>• Undertake hazard and risk assessment of planned work |
| **Labour and Working conditions:**<br>This impact applied to all protective infrastructure in 10 target villages (see table 1).<br><br>Up to 25 workers may be employed by contractors for each site of the construction. Contractors may not follow or be in violation of National Labour Laws during construction of protective infrastructure. This may pose potential physical safety risks to workers or lead to the potential for child labour.<br>• Potential risks and vulnerabilities related to occupational health and safety due to physical hazards during Project construction.<br>• Potential failure to comply with national labour standards.<br>• Potential for grievances or objections from affected stakeholders. | Moderate | Negligible | • Monitor the construction and civil works, a labour management procedure that includes the ESMP of the project.<br>• Contractor to develop Code of Conduct for workers and communicate the same to all workers onsite<br>• Make sure that the project team and assigned UNDP staff perform regular, unannounced site visits and audits to observe compliance with the national labour law and UNDP health, safety, and working conditions standards.<br>• Manage and implement any civil works about labour and worker's safety that will be completed as required in accordance with the following:<br>o Labour Law, 2013 (No. 43/NA) of the Lao People's Democratic Republic.<br>o Ministerial Decision on Occupational Safety and Health on Construction Sites (No. 3006 of 2013).<br>o Decree on the Labour Safety and Health 2019 (No. 22/GO), Ministry of Labour and Social Welfare.<br>o United Nations Supplier "Code of Conduct" which provides the minimum standards expected of suppliers to the UN. The Code of Conduct, which includes principles on labour, human rights, environment, and ethical conduct. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| | | | ○ UNDP Programme and Operations Policies and Procedures (POPP) Construction Works Policy |
| **Community Health and Safety** | | | |
| **Community Health and Safety:**<br>This impact applied to all protective infrastructure in 10 target villages (see table 1).<br><br>The construction phase may present a range of safety risks to local communities, including accidents, compromised water quality, and exposure to hazardous waste. The transportation of dangerous materials heightens the possibility of incidents and spills, potentially contaminating both soil and water resources. Construction activities can also produce dust and emissions, diminish air quality and increase the risk of respiratory issues among residents. Additionally, waste generated from worker camps—particularly hazardous waste—poses further risks to both the local community and onsite personnel. The anticipated influx of approximately 15 to 25 workers per site may raise safety concerns, such as the transmission of diseases and potential disregard for local cultural and traditional norms.<br><br>Moreover, there is a potential for the release of pollutants into the environment due to both routine and non-routine circumstances, such as equipment failures or accidental spills. In general, the adverse impact could be:<br><br>• Diversion / containment of surface water.<br>• Potential impact related to the use or handling of hazardous substances and chemicals<br>• Potential generation of non-hazardous waste.<br>• Potential for grievances or objections from affected stakeholders.<br>• Potential air pollution due to emission from construction equipment and vehicles<br>• Machinery activities may be exposed to ERW | Moderate | Low | • Prior to start of construction work, the contractor in cooperation with the PMU will consult with the local authorities and potentially affected residents/private landowner. Inform them about the upcoming construction work, safety precautions and how to raise concerns or file complaints (GRM).<br>• Risks to general public during construction will be reduced by public awareness and education and physical measures by attaching an appropriate warning sign where required.<br>• The contractor shall fence off the construction area and control access to the site.<br>• The contractor shall install traffic signage and fluorescent bollards and warning lights to direct traffic and prevent vehicles driving into the lanes with construction activities.<br>• The contractor in cooperation with the local authorities shall implement traffic management to ensure a smooth traffic and prevent congestion.<br>• Contractors shall install worker camps in order not to allow workers to stay or mingle with the communities<br>• Consult with nearby communities to check if the sub-project site is known as ERW area and engage a specialist for ERW clearance.<br>• The contractors must train workers to adhere to the Workers' Code of Conduct. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| **Land Acquisition for Construction Projects**:<br><br>This impact applied to projects in 05 target villages: Dongmeuang, Sivilay, Thamea, Songkhone, Nongsavang.<br><br>Most of the construction is on public land, with some nearby or adjacent land plots. Temporary worker camps may be built on the private land. Access to the site requires crossing nearby lands, potentially disrupting local activities temporarily. Moreover, individuals or communities may dispute when construction begins. During the filed consultation, the project team identified the following households whose land temporarily affected by the construction activities. | Moderate | Negligible | • Provide information to community on the schedule of construction activities through a billboard<br>• Inform landowner and get agreement on the construction schedule in advance 7 days<br>• Avoid, minimise ground disturbance during the peak cultivation period.<br>• Treat landowners with respect.<br>• Do not load material and waste on the vegetated areas.<br>• Create safety temporary path if access if disrupted.<br>• Disturbance to the ground shall be kept minimal.<br>• Actively involve the community, especially ethnic groups, in planning, implementation, and monitoring.<br>• Ensure no ownership claims on the land through due diligence.<br>• Survey to identify affected landowners for site access.<br>• Negotiate access with landowners.<br>• Avoid accessing or crossing land during harvest or plantation seasons.<br>• Conduct FPIC if landowners or communities are ethnic groups.<br>• Set up a grievance redress committee per UNDP SES guidelines.<br>• Engage local authorities to ensure a transparent land transfer to the project.<br>• Contractors must lease the private land for worker camp constructions (if needed).<br>• |
| **Cultural Heritage:**<br>This impact applied to all projective infrastructure in 10 target villages (see table 1)<br>The planned construction projects pose potential risks to the cultural objects and religious sites of both ethnic minority groups and local communities in the project areas. These impacts include the disruption of sacred sites, such as altar, spiritual forest and burial ground, religious sites (temples) and cultural landmarks. | Low | Negligible | • Implementing chance find procedure<br>• Consult and check with the communities and village heads to identify any potential risks and impacts on cultural sites, such as altar, spiritual and worship sites, in the village.<br>• Raise awareness about the cultural significance of the sites and the measures in place to protect them.<br>• Engage with local communities throughout the project lifecycle, where appropriate implement FPIC.<br>• Seek expert inputs specific cultural objects if found during the construction, and communities' opinion if relocation is needed<br>• Organise ceremony based on local cultural and religious practices before commencing construction activities. |
| **Soil quarry and excavation:**<br><br>The impact applies to sub projects as in village: Phiaka, Dongmueang, Sivilay, Tangalai Nuea, Sopsalou, Thamea, Songkhone, and Nongsavang.<br><br>The projects listed in Table 50 plan (ESIA report) to source soil from areas within or near the village to facilitate construction activities. Specific extraction | Moderate | Negligible | • Apply the UNDP screening procedure to select soil extraction sites<br>• Eclosed the pit/ quarries with fence or signpost to warn potential risk of drowning for human and animals<br>• Endure that the quarries are voluntarily donated by the villagers or the responsible authorities<br>• Ensure that accessing the quarries will not restrict livelihood activities of the villagers, and cause damage to the rice paddy field, crops and other plantation. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| sites are yet to be determined. If these locations are not carefully chosen and robust mitigation measures are not enforced, soil extraction could negatively impact the environment, including wildlife habitats, local vegetation, community livelihoods, and health and safety. | | | |
| **Biodiversity** | | | |
| **Habitat Loss, Fragmentation and Ecological Disturbance**:<br>The impact applies to sub projects as in village: Phiaka, Dongmueang, Sivilay, Tangalai Nuea, Sopsalou, Thamea, Songkhone, and Nongsavang.<br><br>Infrastructure projects, such as flood protection levees, riverbank stabilization, community pond upgrading, and installation of water tanks and soil extraction quarries can have impacts on natural habitats. These activities, such installing pipe through forest, removing/cutting tree and vegetation from the old ponds or wetland, may cause habitat loss, fragmentation, and disturbance to wildlife, affecting the biodiversity and ecological balance of the areas. The presence of workers from other regions can increase the demand for local foods, including wildlife and endangered species, which are considered exotic delicacies or believed to have health benefits. | Moderate | Low | • Clearly mark the boundaries of the construction zone to prevent encroachment into sensitive aquatic or riparian areas outside the project footprint.<br>• For natural pond improvement, design dike strengthening to minimise the footprint and disturbance to the natural pond edge.<br>• Schedule in-stream work, bank disturbance, and pond dike improvements to avoid critical breeding, spawning, nesting, or migration periods for key aquatic and riparian species (e.g., fish spawning season, bird nesting season, crocodile breeding/hatching season). Consult with local fisheries and wildlife authorities for specific timings.<br>• Apply a phased approach for pond improvement by not drying the whole pond<br>• Avoid blocking fish migratory channels<br>• Cutting of trees must be strictly prohibited around the project site for purposes such as cooking, burning or heating<br>• If any tree is uprooted, it should be documented and whenever possible replanted in a different area selected in coordination with the local authorities. Perform any necessary in-water or direct riverbank work during the dry, low-flow season to minimise turbidity and impacts on aquatic life.<br>• Implement rigorous protocols for fuel and chemical handling, storage, and spill response.<br>• Restrict noisy activities to daytime hours.<br>• For highly sensitive areas (e.g monkey forest/nesting sites), establish temporary exclusion zones during construction.<br>• Move construction activities away from sensitive areas as quickly as possible.<br>• Ensure all construction debris, domestic waste, and hazardous waste are properly collected, segregated, and disposed of at approved off-site facilities, never into the river or ponds. |
| Aquatic resources:<br>• Construction of riverbank stabilisation and levees, as well as the modification or improvement of wetlands and existing ponds, can potentially impact aquatic resources such as fish refuges, breeding grounds, aquatic animals, and vegetation.<br>• Noise, vibrations, and the physical presence of machinery and workers can disturb the movement, breeding patterns, and behaviour of fish and other aquatic creatures.<br>• Expanding or reinforcing pond dikes will directly change existing pond edge habitats, which are often | Moderate | Low | • Clearly mark the boundaries of the construction zone to prevent encroachment into sensitive aquatic or riparian areas outside the project footprint.<br>• For natural pond improvement, design dike strengthening to minimise the footprint and disturbance to the natural pond edge.<br>• Schedule construction activities to avoid critical breeding, spawning, migration periods for key aquatic and riparian species (e.g., fish spawning season, crocodile breeding/hatching season). Consult with local fisheries and wildlife authorities for specific timings.<br>• Use a phased approach for pond improvement by avoiding drying the entire pond.<br>• Avoid blocking fish migratory channels<br>• Carry out any required in-water or direct riverbank activities during the dry, low-flow season to reduce turbidity and minimise impacts on aquatic life. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| rich in aquatic plants and invertebrates and serve as vital breeding or feeding grounds for fish, amphibians (frogs, toads), waterbirds, and possibly reptiles such as turtles. | | | • Ensure all construction debris, domestic waste, and hazardous waste are properly collected, segregated, and disposed of at approved off-site facilities, never into the river or ponds.<br>• Restrict noisy activities to daytime hours.<br>• Move construction activities away from sensitive areas as quickly as possible. |
| **Vegetation Cover:**<br>The impact applies to sub projects as in village: Phiaka, Dongmueang, Sivilay, Tangalai Nuea, Sopsalou, Thamea, Songkhone, and Nongsavang.<br><br>The construction of the project and extraction of soil from quarries can induce impacts on vegetation cover. Vegetation loss across all project sites is minimal, typically involving small trees or bushes on public land. Projects such as Nachanyai, Nongsavang and Thamae involve minor clearance of non-valuable vegetation. In most cases, communities plan to reuse cleared vegetation (e.g., firewood), and no large or protected trees are reported to be affected. | Moderate | Low | • Avoid extracting soil from quarries in forested land<br>• Avoid clearing large or old-growth trees—use alternative siting where possible<br>• Replant native vegetation or grasses post-construction, especially around pond banks and levees<br>• Maintain vegetative cover in buffer zones near sensitive areas<br>• Replant trees, non-invasive species, to restore vegetation cover around the construction site. |
| • ***Impact Assessment for Operation Phase*** | | | |
| ***Community Health and Safety:***<br><br>This impact is applied to target villages as Phiaka, Dongmeaung, Sivilay, Tangalai Neua, Sopsalou, Thamea, Songkhone, and Nongsavang, and soil quarries area.<br><br>During the operation and maintenance of infrastructure construction projects, such as ponds, riverbank stabilization, and flood protection levee, may induce negative impacts on community health and safety. Key concerns include:<br>• Contamination: Ponds may become polluted when hazardous waste and chemical fertilizers from nearby rice fields drain into them.<br>• Waterborne Diseases: Stagnant water bodies like ponds can become breeding grounds for mosquitoes and other disease vectors, leading to outbreaks of waterborne diseases such as malaria and dengue fever.<br>• Structural Failures: Deterioration of infrastructure may result in failures such as well collapses or | Moderate | Low | • Ensure that all beneficiaries are adequately trained on the operational procedure of the pond, riverbank stabilization and flood protection levee to minimize risks during maintenance activities.<br>• Regularly monitor the quality of water in ponds, reservoirs, and wells to detect and address any contamination promptly.<br>• Conduct public health awareness campaigns to educate the community about the risks and prevention of waterborne diseases.<br>• Perform regular inspections and maintenance of infrastructure to prevent structural failures such as well collapses or breaches in flood protection levees<br>• Develop a maintenance plan that includes periodic assessments and repairs to ensure infrastructure<br>• Educate parents and guardians about the importance of supervising children near water bodies and also their animals.<br>• Enclose the ponds or specific sections of the ponds, quarries/ pits, riverbanks and flood levees to prevent children and animals from being exposed to the risk of drowning.<br>• Maintain an incident reporting register, including broken fence, to document and address any accidents or health issues promptly.<br>• Encourage the community to report any hazards or incidents to the authorities for timely intervention.<br>• Implement proper waste management practices, especially for wastewater from borehole or ponds to ensure the safe disposal of maintenance waste and prevent pollution of water sources. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| breaches in flood protection levees posing a risk of serious accidents and injuries to the community.<br>• Residential and Child Safety: They are particularly vulnerable to risks such as drowning if ponds, riverbanks and quarries/pits are not adequately fenced or secured.<br>• Animal safety: Improper technical infrastructure can lead to significant risks for animal safety, as inadequate facilities may fail to provide necessary protection and care. | | | • Conduct regular clean-up activities to maintain a healthy environment around the community infrastructure. |
| ***Community Conflict:***<br>***This impact is applied to village with the following subprojects: evaluation centres, ponds and water tank (see table 1)***<br><br>The result of the project is the shared community infrastructures such as evacuation shelters, ponds and water tanks. These infrastructures play a crucial role in providing resources and safety for local populations. However, these facilities can become sources of conflict due to misuse, unequal access and share, or monopolisation by individuals or groups. These conflicts can undermine the intended benefits of the infrastructure and exacerbate pre-existing tensions within the community.<br>• Misuse of Resources: Shared facilities may be used for unintended purposes, leading to wear and tear or reduced functionality for their primary purpose. For example, water tanks intended for communal use may be exploited for private agricultural activities.<br>• Control by Specific Groups: Powerful individuals or communities may exert control over shared infrastructure, excluding others from equitable access. This can lead to resentment and a sense of marginalisation among underserved groups.<br>• Overuse and Resource Depletion: High demand and improper management of resources such as community ponds can lead to depletion or degradation, which can intensify disputes over remaining access.<br>• Lack of Maintenance: In cases where responsibility for upkeep is unclear, shared | Low | Negligible | • Establish committees representing diverse community groups to oversee the use and maintenance of shared infrastructure. These committees should enforce fair usage policies and mediate disputes.<br>• Develop transparent rules governing the use of community facilities. Post these guidelines in visible locations, and ensure they are communicated to all community members.<br>• Schedule inspections and upkeep activities to ensure infrastructure remains functional and safe for all users. Early identification of misuse or damage can help prevent larger issues.<br>• Introduce accessible and impartial dispute resolution processes to address community grievances swiftly and equitably. This can reduce tensions and build trust among users.<br>• Organise education initiatives to inform residents about the importance of shared infrastructure, its proper use, and the consequences of misuse. |

| Potential impacts | Impact Significance | | Mitigation Measures |
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| | Without Mitigation | With Mitigation | |
| infrastructure may fall into disrepair, diminishing its utility and escalating complaints among users. | | | |
| ***Community Health and Safety in the Evacuation Shelter:***<br>This impact is applied to village with the following subprojects: evaluation centers (see table 1).<br><br>Shared evacuation shelters may increase the risk of communicable diseases for both villagers and animals. These centres can compromise privacy for women and children, causing sexual harassment, and some lack reliable clean water, raising the risk of waterborne illnesses. | Moderate | Low | • Communicable Disease Prevention: Implement regular disinfection protocols and provide adequate handwashing stations equipped with soap and sanitizers throughout the evacuation centers. Organize vaccination campaigns and facilitate access to basic healthcare for both villagers and their animals.<br>• Privacy and Protection for Vulnerable Groups: Designate separate, secure areas within shelters for women, children, and other vulnerable populations. Install physical partitions and ensure proper lighting in all communal spaces. Establish confidential reporting mechanisms and presence of trained personnel to monitor and respond to incidents of harassment or abuse.<br>• Water Supply and Sanitation: Ensure reliable provision of clean, potable water through regular supply checks, filtration units, or water purification tablets. Maintain sufficient and sanitary toilet and bathing facilities, with regular maintenance schedules to prevent contamination and outbreak of waterborne diseases.<br>• Awareness and Training: Conduct awareness campaigns on hygiene practices and community health within the centers. Train village committees, village heads and volunteers in safeguarding protocols, emergency response, and gender-sensitive approaches to shelter management.<br>• Follow national guideline on the operation of the evaluation centers. |

**Cumulative Impacts**

Cumulative impacts refer to the sequential, incremental, and/or compounded consequences of an action, project, or activity when aggregated with other current, planned, and/or reasonably anticipated future actions. These effects can frequently intensify environmental deterioration and societal issues, rendering it essential to evaluate them thoroughly during planning and decision-making. By comprehending cumulative repercussions, stakeholders may devise methods to alleviate adverse effects and foster sustainable growth. Cumulative impact assessment entails evaluating the prospective effects and hazards of planned developments on selected valued environmental and social components (VECs) and recommending specific steps to reduce these cumulative impacts and risks to the fullest degree practicable. Cumulative impact assessment and management is warranted anytime there is apprehension that a project or activity under evaluation may contribute to cumulative impacts on one or more valued ecosystem components (VECs).

Savannakhet Province concentrates on constructing protective infrastructure and enhancing the quality of people's lives. The province has selected five districts: Champone, Nong, Sepone, Songkhone, and Xonnabouly. The province has provided the necessary infrastructure to all the target villages in these districts, located along the Xe Bang Hieng River Basin. Along the Xe Champhone and XBH River, the infrastructure is going to be constructed to protect the riverbank and biodiversity. This construction aims to prevent erosion and flooding while preserving the natural ecosystem.

By safeguarding the riverbank, the initiative supports both environmental sustainability and community resilience. However, some critics argue that extensive infrastructure development can disrupt local ecosystems and alter natural water flow, potentially harming the very biodiversity it seeks to protect. Additionally, there are concerns that such projects may prioritize short-term benefits over long-term ecological balance, leading to unforeseen consequences for both the environment and local communities.

Therefore, to maintain the ecological integrity of the area, we must carefully monitor and assess the cumulative impacts of the project. Engaging local stakeholders in the decision-making process may also help address these concerns and foster a more sustainable approach to development. Each construction site has its own cumulative impact on the surrounding ecosystem, which can vary significantly depending on factors such as location, scale, and the specific practices employed.

By evaluating these impacts comprehensively, we can ensure that development efforts align with environmental stewardship and community well-being, ultimately paving the way for a more harmonious coexistence between progress and nature.

However, some argue that the focus on cumulative impacts may lead to unnecessary delays in development projects, hindering economic growth and job creation. Additionally, there is a concern that overly stringent evaluations could stifle innovation and discourage investment in new construction technologies that could otherwise enhance sustainability.

The integration of VECs in development presents a complex landscape where environmental stewardship and community well-being are paramount. While these considerations can enhance the sustainability of projects, they also risk causing unnecessary delays that impede timely execution. Furthermore, the emphasis on such integrations may inadvertently stifle innovation, discouraging investment in new construction technologies that could otherwise drive efficiency and creativity in the industry. Ultimately, striking a balance between responsible development and economic growth is crucial; without it, the potential for job creation and advancement may be significantly hindered, leaving communities caught in a paradox of progress versus preservation.

# 4 CAPACITY DEVELOPMENT AND TRAINING

The Project Boards/Project Steering Committee will have the final responsibility for integrating an ESMP or any stand-alone management plan(s) resulting from the ESIA into the project's execution. The integration of those plans will need to consider particular institutional needs within the implementation framework for application of the management plan, including a review of the required budget allocations for each measure, as well as the authority and capability of institutions at different administrative levels (ex: local, national, and regional), and their capacity to manage and monitor the ESMP any stand-alone management plan(s) implementation.

As such, Specialists with relevant expertise in social and environmental safeguards will be engaged to support the implementation of this ESMP, as well as FPIC, GRM, and any stand-alone management plans. These experts will offer capacity building and training for the Implementing Partner, Project Management Units, as well as Provincial and District Authorities on safeguards responsibilities and approaches.

Training will be conducted on a sustained basis. The following capacity-building and training programmes will be in place:

Capacity building of the Implementing Partner and Project Management Units (facilitated by Safeguards Specialists under guidance of UNDP CO):

- To disseminate information and raise awareness on essential regulatory and other requirements and elements of this ESMP, as well as FPIC, GRM, and any stand-alone management plans.
- To help understand the importance of social and environmental management from the design stage, construction, and post-construction stage.

Capacity building of Provincial and District Authorities (facilitated by Safeguards Specialists under the guidance of IP and Project Management Units):

- To create awareness on specific social and environmental risks and management measures for their control as applicable to the project activities, and to build their capacity to carry out monitoring and supervision activities in the field.

Training and awareness of Responsible Parties and Contracted Service Providers (facilitated by IP and Project Management Units under guidance of UNDP CO):

- All identified Responsible Parties and Contracted Service Providers engaged in any activity with the potential to cause serious social and/or environmental harm will receive task-specific training to ensure implementation of the site-specific management measures.

Training for the Contractor once onboarded:

- Contractor orientation on Environmental and Social Safeguard measures related to topics such as relevant national laws and regulations, chance find procedure, GRM, Compliance with Permits, Contractor self-monitoring and reporting, Gender based Violence and Harassment (GBVH/SEAH), and Worker Code of Conduct.
- Toolbox Talks to be undertaken before the start of work each day
- Personnel Protective Equipment (PPE) Awareness and Training
- Waste Generation, Segregation, Storage and Disposal
- Occupational Health and Safety (OHS) related training
- Other management plans

In addition to the above-listed capacity building, the UNDP will provide advice to project teams as needed to support the implementation of and monitoring of social and environmental management plans/measures.

Finally, a Monitoring, Evaluation & Reporting Specialist will be engaged to support annual monitoring and reporting back to donors and partenrs on implementation of the ESMP. The report will provide information on the progress of ESMP, and other stand-alone plans and measures taken to mitigate the risks with details of stakeholder engagement activities and grievances log during the reporting period.

# 5 STAKEHOLDER ENGAGEMENT AND CONSULTATION

## 5.1 Introduction

Stakeholder consultations are vital for establishing a collaborative approach to project development. This process enables a two-way dialogue between the project proponent and relevant stakeholders. These stakeholders include individuals or groups who may be directly or indirectly affected by the project or who have an interest in its success or potential risks. Their capacity to influence the project's outcome, positively or negatively, highlights the importance of their inclusion. This section of the report provides details on stakeholder consultation carried out by the UNDP Country Office and DWR (MAE) representatives.

## 5.2 Objective and Scope

UNDP recognizes the direct and varied interests and expectations of project stakeholders and seeks to develop an approach for reaching each of the stakeholders in different capacities at which they interface with the project. The aim is to create an environment of understanding that actively engages project affected communities and other stakeholders leading to improved decision making and delivery.

Overall, the objective and scope of stakeholder engagement is undertaken for,

- **Stakeholder Engagement Plan (SEP):** This plan outlines a communication and consultation strategy. It details information disclosure protocols for all stakeholders throughout the project.
- **Stakeholder Identification and Analysis:** A systematic process identifies all project stakeholders, categorizes them by interests and influence, and assesses their information needs.
- **Tailored Engagement Modalities:** Effective communication is central. The PMU will employ diverse modalities, including consultations, targeted information sessions, and grievance redress mechanisms, tailored to each stakeholder group.
- **Meaningful Stakeholder Influence:** Platforms are established to enable stakeholders to provide substantive input that influences project decisions.
- **Clear Roles and Responsibilities:** The project team will have designated personnel responsible for SEP implementation, communication facilitation, and grievance redress management.
- **Robust Monitoring and Reporting:** The SEP incorporates a monitoring and reporting framework to assess effectiveness and identify areas for improvement. Periodic reviews ensure the SEP remains adaptable and responsive.
- **Transparent Grievance Redress Mechanism (GRM):** An accessible GRM addresses stakeholder concerns and ensures their voices are heard. The GRM provides a clear and timely process for registering, documenting, and resolving grievances.

## 5.3 Stakeholder Identification and Mapping

Stakeholders were identified based on their level of interest and influence over the project activities. The key stakeholders informed and consulted about the project at the central and provincial levels include the concerned ministries that will be involved in decision making, planning, implementing and monitoring of the project. This list comprises the identified social groups and persons that are associated with the project in different ways at all stages, including:

- Persons and social groups affected directly or indirectly by the outcomes of project implementation;
- Persons and social groups that participate in project directly or indirectly; and
- Persons and social groups who can influence and decide the outcomes and the manner of the Project implementation or make decisions based on the outputs of the project.

The stakeholder engagement mapping process categorised relevant actors according to their levels of interest and influence on the project. These stakeholders are mapped as below:

- **Direct stakeholders**, such as central and provincial government ministries (e.g., MAE, MAF, MPI) and their technical departments, as well as local administrations (PONRE, DONRE, PAFO, DAFO), were identified as having both **high interest and high influence**, making them key players in project planning, implementation, and oversight.
- **Community-level actors**, including village leaders, development committees, women's groups, and natural resource user groups, also fall under this group due to their essential role in implementation and local ownership.
- **Indirect stakeholders**—such as affected households, vulnerable groups, and community-based organizations—have high interest in project outcomes but limited influence on decision-making processes.

- I**nternal stakeholders** like the Ministry of Finance, Ministry of Information, and national-level coordinating departments possess significant influence over policy and funding but may have relatively lower day-to-day engagement.
- E**xternal stakeholders**—including development partners (e.g., UNDP, ADB, FAO), NGOs (e.g., WWF, WCS), academic institutions (e.g., NUoL, NAFRI), and private sector actors—were identified as having both **low interest and low influence** in direct project execution but offer important financial, technical, and research-based support.

This mapping informs tailored communication and engagement strategies to ensure inclusive participation and effective collaboration throughout the project lifecycle.

A list of stakeholders is available in Annexe 8 of this report.

### *5.3.2 Summary of consultations undertaken*

Between October 2020 and July 2021, 958 participants—including 343 women—from 16 locations at national, provincial, and village levels took part in consultations that supported stakeholder ownership and informed the IWRM-EbA project.

Since 2020, the project has involved stakeholders from the initial planning stage. Consultation meetings were held with provincial, city, and district authorities in Savannakhet province, as well as with community members, including village authorities, men, women, boys, and girls across all 15 proposed target villages. The aim was to share information about the project's goals and components, and to collect their concerns regarding climate change, their participation in implementing project activities, and their needs for external support to reduce risks and adapt to climate change impacts.

On 01 July 2025, a workshop was held in Savannakhet Province to discuss environmental and social impact assessments and management plans, along with visits to specific construction sites aimed at reducing flood and drought risks. The workshop included 36 participants from various government ministries, local districts, and villages. Discussions focused on using sustainable practices and involving stakeholders to improve safety measures for all subprojects. The participants consisted of representatives from the Department of Water Resources Management, MAE, PONRE, the relevant districts, and villages. The dialogue emphasised integrating sustainable practices and stakeholder engagement to strengthen mitigation measures across all subprojects. Participants also exchanged insights on local challenges and opportunities, encouraging collaboration for the effective realisation of the project's objectives.

After the workshop, the project team and consultant carried out a field visit from 2 to 3 July 2025, in five target villages: Songkhone, Nongsavang, Phiaka, Dongmueang, and Sivilay.

### *5.3.4 Stakeholder Concern Analysis*

The IWRM-EbA Project included extensive public consultation, based on principles of inclusivity, transparency, and local and national ownership. It began with a workshop in October 2020 at the UNDP Office to discuss objectives, criteria, and steps. A technical working group from the Department of Water Resources guided project formulation. Consultations with government, NGOs, and communities in 15 villages across Savannakhet and Luang Prabang involved local enumerators conducting interviews and focus groups to assess climate risks and adaptation needs.

The summary from 15 targeted villages in Savannakhet revealed that people emphasised the severe impacts of climate change, encompassing floods, droughts, extreme cold, and pests, which adversely affect agriculture, livestock, and livelihoods. In response to flooding, communities move extensively, utilize borrowed land for replanting, and depend on pesticides for agriculture and volunteer vets for livestock care. Villagers have shown a willingness to engage with the project, pursuing assistance including tax incentives, climate-resilient rice breeds, insecticides, irrigation pumps, enforcement of forest protection, market access, weirs, shelters, disaster preparedness kits, early-warning systems, and road maintenance. The implementation will emphasize inclusive consultations, especially with ethnic groups encountering language challenges, by utilizing loudspeakers for announcements or dispatching letters in regions lacking phone signals. The project aims to establish trust through culturally sensitive interactions, ensuring community ownership of the solutions.

On 1 July 2025, a public consultation across project sites involved surveys, village meetings, and discussions with local authorities, ethnic groups, and households. It concentrated on transparency, early engagement, and local relevance, incorporating traditional knowledge and cultural sites while aligning with development priorities. Stakeholders addressed risk mitigation, infrastructure sustainability, and benefit sharing, ensuring the inclusion of vulnerable groups. The process revealed broad community support for infrastructure improvements such as flood

defences, water tanks, and soil reuse for roads, with villages expressing appreciation for meeting local needs like water security and resilience. Feedback led to site-specific design adjustments and proposed protection measures, with concerns about maintenance, construction disruptions, and environmental safeguards addressed through mitigation and assessments.

During 2—4 July 2025, the field visit aimed to consult on the ESIA and ESMP, specifically addressing the IWRM-EbA project. The project focuses on enhancing flood and drought resilience through strategically planned infrastructure, particularly in high-risk districts like Nong and Sepone. Key interventions include flood protection levees, riverbank stabilization, pond improvement, and water tank installation. These efforts aim to offer immediate protection, reduce erosion, and strengthen long-term community and ecosystem resilience.

Both negative and positive concerns were raised by the relevant stakeholder, as the following summary shows.

Although the overall advantages of the proposed infrastructure initiatives, several risks and challenges remain. Environment-related issues include potential habitat harm, changed hydrology, sedimentation, and vegetation clearance, especially in ecologically sensitive or protected forest regions. The potential for interruption of livelihoods, and unequal distribution of benefits may occur if community needs are insufficiently included or if safeguards are ineffectively executed. Project implementation may encounter delays due to insufficient risk evaluations, regulatory problems, or inadequate interagency collaboration. Community engagement insufficiently financed mitigation measures, or inadequate results may occur if financial reasons take precedence above safety priorities. Construction activities may temporarily disrupt inhabitants, create road safety hazards, and elevate noise or air pollution, particularly in proximity to residences. Long-term sustainability is significantly reliant on local supervision capabilities, regular maintenance, and the preservation of community trust, which may be compromised if visible benefits are postponed or inadequately transmitted.

On the positive side, the project brings strong prospects for enhancing flood and drought resilience while supporting ecosystems and local communities. Infrastructure improvements such as levees, ponds, evacuation shelters and water tanks are expected to provide immediate physical protection, strengthen agricultural water access, and promote biodiversity through habitat restoration. Strong community support has been observed across project sites, with villagers actively contributing to planning, materials, and protection measures—demonstrating a sense of local ownership. The integration of traditional knowledge, cultural sensitivity, and landscape-specific assessments enhances the appropriateness and inclusiveness of interventions. Environmental and Social Safeguards (ESMP and ESIA) are incorporated from the early planning stages, strengthening accountability and minimizing harm. Transparent processes, such as open bidding and official notifications, further reinforce trust and governance. Overall, the project's aim is not only to address climate risks but also to generate co-benefits such as employment, land restoration, improved water management, and more resilient communities.

## 5.2 Information Disclosure

The ESMP will be made available to the public in both English and Lao. The English version will be released in its entirety, while the Lao version will be presented as an executive summary. The materials will be published on the MAE website (as the Project Implementation Unit) and on the websites of UNDP and GEF prior to project assessment and approval, in accordance with the disclosure rules mandated by each donor. This method guarantees that vital information is available to a wider audience while catering to linguistic preferences. Providing the whole English version alongside a concise Lao summary enables stakeholders to engage with the topic efficiently.

# 6 GRIEVANCE REDRESS MECHANISM

A Grievance Redress Mechanism (GRM) that helps record, assess, and resolve grievances and complaints during the implementation of a project in as efficient, effective, and transparent manners as possible is essential to the success of the project. GRM also informs the Government and donors/financiers of design and implementation changes that can be used to improve the systems, as well as helping to meet the 'Citizen Engagement' requirements for UNDP GEF project.

The objective of GRM is to assist in resolving complaints in a timely, effective and efficient manner. The site level GRM can provide the most effective way for stakeholders to raise issues and concerns about the project activities that affect them the most. The GRM provides a transparent and credible process for fair, equitable and lasting solutions. It also builds trust and cooperation as an integral component of broader stakeholder engagement that facilitates corrective actions and helps the affected community to have ownership of the project. The GRM prepared for the proposed project is based on key principles that protect the rights and interest of affected stakeholders, ensure that their concerns are addressed in a prompt and timely manner, and that entitlements are provided in accordance with GOL and UNDP SES policies. The safeguards unit of Project Management Unit (ESU/PMU) will ensure that communities directly affected by the Project have a full understanding of the GRM and ways to access it especially on: (i) the concept of compensation for any involuntary acquisition of land and/or assets; and (ii) ensuring environmental and social mitigation measures in this ESMP's are implemented as planned.

The GRM procedures to be followed must be translated into Lao language and it will be prepared in local language as needed so that they are easily accessible to all stakeholders. Information on the steps to be followed in handling grievances has been incorporated into the consultation process with the local community.

Key principles of the grievance mechanism are to ensure that:

- ✓ The basic rights and interests of affected people, including ethnic groups, are protected.
- ✓ The concerns of affected people, including ethnic groups, arising from the project implementation process are adequately addressed.
- ✓ Entitlements or livelihood support for affected people, including ethnic groups, if required, are provided on time and in accordance with the above-stated government and UNDP SES, and
- ✓ Affected people, including ethnic groups, are aware of their rights to access grievance procedures free of charge for the above purposes.
- ✓ Specific engagement mechanisms may be needed to engage ethnic groups

In alignment with the robust accountability framework established by UNDP, the project will implement two distinct grievance mechanisms: one tailored for community members and another specifically designed for workers. These mechanisms are structured to ensure that any concerns or complaints are addressed transparently, efficiently, and equitably. Comprehensive, step-by-step procedures for each type of grievance mechanism are detailed in Annex 14, providing clear guidance on how grievances should be reported, recorded, and resolved. This approach not only fosters trust and accessibility for all stakeholders but also upholds the highest standards of project governance and inclusivity.

At the very outset, the IWRM-EbA Project Management Unit will establish a Grievance Redressal Mechanism (GRM) to receive, evaluate and facilitate the resolution of affected peoples' concerns, complaints and grievance about the social and environmental performance at the project level. It will also install grievance box which is opened on the 15$^{th}$ and 2$^{nd}$ of every month in the presence of the UNDP designated staff and village head and redressal arrangements will be carried out immediately thereafter. GRM aims to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project.

The PMU will manage GRM in conjunction with DWR, PoNRE, DoNRE and village authorities by utilizing both formal and informal grievance redressal process. The PMU will inform village officials, stakeholders, local communities and contractors about the importance of GRM and establishment of the complaint cell. Communities and affected persons will be advised of the GRM in the early stages of engagement and made aware of the information as to how it can be accessed, who to speak to and process of lodging a formal complaint, timeframes for each stage of the process, confidentiality, responsive and transparency of the process, and alternate avenues of dispute resolution where conflicts of interest exist.

The GRM procedure will be resolved through four key stages: (i) receive and register grievances; (ii) acknowledge, assess and assign; (iii) propose response; and (iv) agreement on response. This will ensure a transparent process in addressing complaints and comprise a sequential process of four levels of resolution. The next level of resolution is triggered if the complaint cannot be resolved at a lower level, although the project recognizes and accepts that complainants may go directly to Level 4 to lodge complaints. The grievances primarily will be resolved at the community level in the first instance and to the best possible extent.

# 7 ROLES AND RESPONSIBILITIES FOR ESMP IMPLEMENTATION

## 7.1 UNDP-CO

UNDP is accountable to the GEF for implementing this project. This includes overseeing project execution to ensure it complies with agreed standards and provisions and UNDP's SES. UNDP also assumes the Project Assurance role of the Project Board. UNDP's role encompasses the following:

- Provide oversight on all matters related to social and environmental safeguards.
- Inform all the stakeholders and right-holders involved in, or potentially impacted, positively or negatively, by the GEF-financed projects, about the UNDP's corporate Accountability Mechanism (See ESMF)
- Ensure that the Compliance Review and the Stakeholder Response Mechanisms are operational during the lifetime of the projects.
- Ensure adherence to the UNDP's SES for project activities implemented using funds channelled through UNDP's accounts and undertake appropriate measures to address any shortcomings.
- Verify and document that all UNDP SES requirements have been addressed.
- Provide technical guidance on the implementation of this ESMP and administrative assistance in recruiting and contracting expert safeguards services (as required) and monitor adherence of each project to UNDP policies and procedures.

## 7.2 PMU of DWR (MAE)

The PMU will be responsible for overseeing the project's daily implementation, including environmental and social management, on behalf of the Implementing Partner and within the limits set by the Project Board. The PMU will be hosted within DWR, MAE. With the Project Manager as the key personnel, the PMU will work closely with the Project Board throughout the project's implementation and the execution of ESMP. Members of the PMU responsible for safeguards management will include a Project Gender Officer and a Project Safeguards Officer.

Specific responsibilities of the PMU in ESMP implementation will include:

- Ensuring all mitigation measures and applicable plans are implemented;
- Facilitating communication and meetings of the Project Board to review environmental and social activities achieved, and discuss activities planned for approval and implementation;
- ensuring periodic reporting on the implementation of ESMP and that they are on schedule — regarding progress, performance and budget execution — as outlined in the M&E framework and project budget;
- Supporting GoL departments responsible for the implementation of ESMP;
- Holding regular meetings and other ad-hoc meetings with the Representative Beneficiaries to discuss plans and progress, and to follow up on any environmental and social concerns the beneficiary groups may have; and
- Coordinating and liaising with other donor and government project managers to ensure that synergies are developed and that there is no overlap of tasks pertaining to environmental and social safeguards.

### *7.1.1 Provincial Office of Natural Resources and Environment (PONRE)*

PONRE will work closely with DONRE in planning and implementing subprojects within their designated locations. As such, the PONRE will also be responsible for the ESMP implementation by:

- Coordinating effectively with all project stakeholders, including MAE's Safeguard Officer (SO), consultants, contractors, local authorities, provincial departments, and project communities.
- Supporting provincial and district-level project officers in monitoring and evaluating progress and performance of consultants and contractors regarding environmental and social mitigation measures and relevant plans.
- Supporting MAE's SO to disseminate project information and conduct consultation activities, as well as ensuring effective grievance redress resolution within their province.
- Supporting MAE's SO to conduct screening and scoping of the subprojects' quarries, and identifying environmental, social, and land acquisition impacts and screening for the presence of IPs in the subproject area.
- Liaising with village authorities in the subproject area to encourage vulnerable groups to apply for jobs that may be offered by project contractors.
- Collaborating with relevant departments involved in implementing environmental or social mitigation measures.

### *7.1.2 Project Coordinator*

The Project Coordinator (PC) will have full responsibility not only for ensuring the delivery and quality of work programmes of components, annual component work plans, and budget, and coordination of all components but also for ensuring that ESMP is implemented.

The PC will also provide overall coordination of day-to-day project planning, implementation, and monitoring of the mitigation measures for each subproject. He/she will provide technical guidance and technical advisory support to project implementing agencies and contractors to ensure the realisation of all outputs and outcomes as outlined in the approved project document and to comply with UNDP's SES.

## 7.3 Roles of Contractors in the Environmental and Social Management Plan

Contractors play a vital role in the successful implementation of the ESMP. They are responsible for translating the plan's requirements into practical actions for each subproject infrastructure activity. This involves following the standards and mitigation measures outlined in the ESMP, which are specified in the procurement document. Contractors are expected to actively identify, evaluate, and manage environmental and social risks related to their activities, including worker safety, community health, and potential impacts on local ecosystems. Their duties also include ensuring that all personnel, including subcontractors and local hires, receive sufficient environmental and social training, and that effective procedures are in place for incident reporting, stakeholder engagement, and compliance monitoring. By meeting these responsibilities, contractors become essential partners in achieving the project's sustainability goals and protecting the interests of both the environment and local communities.

To ensure that necessary actions have been taken and measures to prevent adverse impacts and recurrence are in place, the Project Coordinator, the Safeguard Officer, and/or the contractor must report to the PMU within 48 hours of any serious incidents of non-compliance that could have severe consequences. If working practices are considered dangerous by the subproject, local authorities, or other relevant agencies, immediate remedial action must be undertaken by the contractors. The contractor should maintain records of any incidents and corrective actions implemented. Records of non-compliance which can be practically addressed (and do not cause serious impacts) should be reported to the PMU monthly.

The contractor will be responsible for dealing with any reports/grievances forwarded by the local communities, authorities, police or other agencies as soon as practicable, preferably within one hour but always within 48 hours. The Project Manager/Safeguard Officer will monitor and ensure that the contractor has taken appropriate action. Where appropriate, approval of remedial actions may require an agreement from the local authorities and/or other government agencies. Procedures should be put in place to ensure, as far as is reasonably practical, that necessary actions can be undertaken to avoid recurrence and/or serious damage.

## 7.4 Contractor's Safety, Social and Environmental Officer (SSEO)

The contractor must appoint a competent on-site Safety, Social, and Environment Officer (SSEO), trained in environmental management, to oversee contractors and subcontractor personnel. The SSEO's responsibilities include:

- Supervising subcontractor compliance with the ESMP.
- Submit relevant plans to the PMU for approval before mobilising staff.
- Conducting site inspections and audits to ensure compliance with environmental and social mitigation measures.
- Monitoring and reporting on E&S compliance and preparing audit reports.
- Investigating complaints, recommending corrective actions, and addressing non-compliance.
- Informing the contractor, PMU of any E&S issues, and maintaining detailed records.
- Maintaining employment records, verifying minimum working age, and ensuring signed Workers' Codes of Conduct.
- Providing regular training on occupational safety, Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH) and community relations.
- Ensuring primary suppliers address SEA, SH, child labour, forced labour, and Occupational Health and Safety (OHS) risks.
- Developing and implementing a grievance mechanism for contracted workers, resolving grievances promptly, and reporting to the PMU.
- Ensuring all workers sign the Code of Conduct and implement measures to prevent SEA/SH.

**Incident reporting**
The SSEO of contractors are required to inform PMU of any incidents listed below within the agreed timeframe (e.g. 48 hours):

- Any violations to national laws, regulations, or international agreements.
- Any serious accidents or fatalities,
- Significant impacts that cause losses to personal property, such as traffic accidents, damage to local houses/roads and other incidents.
- Serious surface/groundwater pollution.
- Fire related to workers' behaviours,
- Any claims related to SEA/SH, or any other incidents related to children, and
- Receive a complaint about pollution or damage

# 8 ENVIRONMENTAL AND SOCIAL MONITORING PROGRAMME

Continuous monitoring during both pre-construction, construction and operation phase of the project will be required to ensure the effectiveness of the proposed mitigation measures. Through sound environmental and social management and implementation of a monitoring programme, the proposed protective infrastructure construction works will avoid incurring major adverse impacts. The aim of monitoring is to:

- Verify and document the environmental and social impacts predicted in the ESMP;
- Determine project compliance with national and UNDP statutory standards and requirements;
- Monitor the performance of the project and the effectiveness of mitigation measures; and
- Take remedial action if unexpected problems and unanticipated impacts arise.

Tables 8.1 and 8.2 below present the Environmental and Social Monitoring Plan with monitoring parameters, indicators, site locations, frequency of monitoring, measurement and institutional responsibility.

## 8.1 Environmental Monitoring Programme

To ensure the effectiveness of environmental management, the environmental monitoring programme is prepared to monitor the environmental quality. The contractor and/or sub-contractor is responsible for monitoring using appropriate method, equipment and system. Details of monitoring parameters are illustrated in Table 8 below:

**Table 4: Environmental Monitoring Plan during pre-construction, construction and operation phase**

| Monitoring Parameters | Monitoring Indicators | Site Locations | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| **Conservation of Xe Bang Hieng Basin Region** | | | | | |
| Enhancing conservation zone management and forest boundary management | • Ethic communities' participation in the planning and implementation of zone management and boundary management<br>• FPIC obtained<br><br>Refer to: EGP (Annex 3), FPIC (Annex 15), EGP (Annex 3) | Protect area (Phou Sang, Dong Phou Veng, Xa Ban Nuan) and Xe Champhone Ramsar<br>• Nong District: Savue village, Nongvilay, Tangalai Neu<br>• Sepone district: Kenghuapa village, Sopsalou village, Thamae village | • Site inspection<br>• Visual observation<br>• Stakeholder engagement<br>• FPIC | Reported to Supervising Engineer/monthly | • SO,<br>• E&S specialist<br>• PMU<br>• Supervising Engineer |
| Natural regeneration processes and enrichment planting | • Noninvasive tree species selected for planation<br>• Avoid disturbance to wildlife and damage to the projected forest | Protected areas (Phou Sang, Dong Phou Veng, Xa Ban Nuan) and Xe Champhone Ramsar<br>• Nong District: Savue village, Nongvilay, | • Site inspection<br>• Visual observation<br>• Biodiversity surveys | Once before project implementation / monthly | • SO,<br>• E&S specialist<br>• PMU<br>• Supervising Engineer |

| Monitoring Parameters | Monitoring Indicators | Site Locations | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| | Refer to: BAP (Annex 5) | Tangalai Neu<br>• Sepone district: Kenghuapa village, Sopsalou village, Thamae village | | | |
| **Protective Infrastructure** | | | | | |
| **Pre-Construction and during Construction Phase** | | | | | |
| Air pollution | • Dust protection measure such as water truck with sprinkle water on the work surfaces and other piled materials to minimize dust at least twice times per day in windy and dry weather and/or based on the weather condition<br>• Construction machinery operation and maintenance<br>• Transportation of construction materials<br><br>Refer to: TMP (Annex 10) | • Applied to all projects and village in Table 1 | • Site inspection Visual observation<br>• Monitoring equipment and/or appropriate monitoring methods | Daily | • SO<br>• E&S specialist<br>• PMU<br>• Supervising Engineer |
| Noise and Vibration | • Avoid working during night-time from 6:00 hours to 06:00 hours<br>• Provide ear sets for workers to prevent noise if the noise level exceeds the standard<br>• Slow movement of trucks<br>• Check and maintain construction machinery regularly to avoid noise and high vibration<br>• Restrict use of vibrating rollers and operation of heavy equipment near sensitive structures<br><br>Refer to: TMP (Annex 10) | • Applied to all projects and village in Table 1 | • Site inspection<br>• Visual observation | Daily | • SO<br>• E&S specialist<br>• PMU<br>• Supervising Engineer |
| Soil Erosion | • Avoid steep slope for dredging and digging ponds<br>• Avoid removing vegetation cover | • Applied to all projects and village in Table 1 | • Construction site<br>• Nearby sensitive structures | Daily | • SO<br>• E&S specialist<br>• PMU |

| Monitoring Parameters | Monitoring Indicators | Site Locations | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| | • Area of replant vegetation cover including grass plantation<br><br>Refer to: BAP (Annex 5) | | | | • Supervising Engineer |
| Water Quality | • No construction to be carried out during the rainy season<br>• No discharging liquid waste, wastewater from domestic use, and oil spills into lakes, ponds, rivers, affecting wetlands and community water sources<br><br>Refer to: WMP (Annex 7) | • Applied to all projects and village in Table 1 | • Site inspection<br>• Visual observation | Daily | • SO<br>• E&S specialist<br>• PMU<br>• Supervising Engineer |
| Hazardous Waste | • Well management and segregation of waste<br>• No leakage of liquid waste into river, pond or wetland<br>• No one from the communities and workers are affected by hazardous waste<br><br>Refer to: WMP (Annex 7), Standard contract for contractor (Annex 12) | • Applied to all projects and village in Table 1 | • Site inspection<br>• Visual observation | Daily | • SO<br>• E&S specialist<br>• PMU<br>• Supervising Engineer |
| Habitat Loss and Fragmentation, and Ecological disturbance | • Number of mature trees cut for construction site clearing<br>• Area of forest, wetland, or vegetation removed<br>• Reports or incidents of wildlife hunting by workers<br>• Number of replanting or habitat restoration activities<br>• Bird and bird nests encountered during the project is managed carefully to ensure that no nests are harmed or lost. | • Applied to pond improvement, flood protection levee, and water tank installation (08 villages: Phiaka, Dongmueang, Sivilay, Tangalai Nuea, Sopsalou, Thamea, Songkhone, and Nongsavang | • Site inspection<br>• Visual observation<br>• GIS analysis (if available)<br>• Drone surveys (if available) | Weekly/Monthly | • SO<br>• E&S specialist<br>• PMU<br>• Supervising Engineer Local authority |

| Monitoring Parameters | Monitoring Indicators | Site Locations | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| | Refer to: BAP (Annex 5) | | | | |
| Aquatic Resources | • A clear demarcation zones between sensitive aquatic or riparian and construction site<br>• No ponds were drained for excavation or improvement.<br>• Avoid interacting with or harming endangered aquatic species.<br>• Number of fish refuges reintroduced into the pond or river.<br>• Number of projects with migratory fish friendly design | • Applied to pond improvement, flood protection levee, and water tank installation (08 villages: Phiaka, Dongmueang, Sivilay, Tangalai Nuea, Sopsalou, Thamea, Songkhone, and Nongsavang | • Site inspection<br>• Visual observation | Weekly/Monthly | • SO<br>• E&S specialist<br>• PMU<br>Supervising Engineer |
| Vegetation cover | • Number of protected or large trees affected<br>• Area of vegetation (shrubs, small trees) cleared<br>• Proportion of vegetation reused by community (e.g., firewood)<br>• Area of vegetation replanted<br><br>Refer to: BAP (Annex 5) | • Applied to pond improvement, flood protection levee, and water tank installation (08 villages: Phiaka, Dongmueang, Sivilay, Tangalai Nuea, Sopsalou, Thamea, Songkhone, and Nongsavang | • Site inspection<br>• Visual observation<br>• Community interviews | Weekly/Monthly | • SO<br>• E&S specialist consultants<br>• PMU<br>• Supervising Engineer Local authority |

## 8.2 Social Monitoring Programme

To ensure the effectiveness of social management, the social monitoring programme is prepared to monitor social issues. The contractor and/or sub-contractor are responsible for monitoring using appropriate methods, equipment and system. Details on monitoring parameters are shown on the table below:

**Table 3: Social Monitoring Plan during pre-construction, construction and operation phase**

| Monitoring Parameters | Monitoring Indicators | Location | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| **Pre-Construction Phase and during Construction Phase** | | | | | |
| Occupational Hazard and Safety | • Number of workers with PPEs such as helmets, safety belts, welding masks, gloves, and | • Applied to all projects and village in Table 1 | • Confirm all relevant areas are clear from ERW | • Before construction | • PMU<br>• Contractor |

| Monitoring Parameters | Monitoring Indicators | Location | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| | shoes to workers handling welding and electricity.<br>• Excavation and dredging under the supervision of a Safety officer / contractor and provide proper signage at excavated areas.<br>• Fire extinguishers onsite, monitor them regularly, and keep an accident report to minimize future incidents.<br>• Sign boards and safety signages displayed in Lao<br>• Enforce safety rules with clear sanctions for repeat offenders.<br>• Contractor monthly audits by PMU<br>• Oil and lubricant wastes properly stored and sent to recyclers or designated disposal sites promptly.<br>• No open fires within the project area and replenish first aid kits regularly.<br><br>Refer to: OHS (Annex 1), LMP (Annex 6) | | • Site inspections<br>• Incident reports | | • Supervising Engineer |
| Labour and Working conditions | • Number of workers employed with official contracts<br>• No child labour<br>• No discrimination between men and women workers (e.g. wage, gender respect)<br>• Number of incidents of occupational health and safety due to physical hazards reported<br>• Number of grievances lodged<br><br>Refer to: OHS (Annex 1), LMP (Annex 6), GRM (Annex 14), GAP (Annex 13) | • Applied to all projects and village in Table 1 | • Payroll records review: Verify worker wages and benefits.<br>• Worker interviews: Confidential interviews to gather feedback on labour conditions and treatment.<br>• Observation of worker interactions: Monitor for signs of discrimination or unfair treatment.<br>• Review of contractor labour policies and practices: Ensure compliance with labour | • Regular payroll audits<br>• Periodic worker satisfaction surveys<br>• Prompt investigation of any reported grievances | • Contractors<br>• PMU<br>• Supervising Engineer |

| Monitoring Parameters | Monitoring Indicators | Location | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| | | | laws and ethical standards. | | |
| Community Health and Safety | • Worker camps are equipped with waste management procedures<br>• Number of workers disregard for local cultural and traditional norms.<br>• Properly use or handling of hazardous substances and chemicals<br>• Adequate management of non-hazardous waste.<br>• Number of grievances lodged and addressed<br>• No machinery activities may be exposed to ERW<br>• Number of accidents and fatalities related to construction activities<br>• Number of disease outbreaks and environmental pollution incidents<br>• Number of reported cases of worker health issues<br><br>Refer to: OHS (Annex 1), LMP (Annex 6), GRM (Annex 14), WCC (Annex 2), Standard contract for contractor (Annex 12) | • Applied to all projects and village in Table 1 | • Site inspection reports<br>• Accident/Incident reports<br>• Medical records/reports<br>• Consultation minutes/reports | • Daily for site inspections<br>• Monthly for reports and consultations<br>• Within 48 hours for reporting accidents, disease outbreaks. | • PMU<br>• PONRE<br>• Supervising Engineer Contractor |
| Land Acquisition for Construction projects | • Number of households land plot sharing a boundary with the construction site: Dongmeuang (08 HHs), Sivilay (09 HHs), Songkhone (04 HHs) and Nongsavang (07 HHs)<br>• Number of households land plot have impact by the temporary access road to construction site: Thamea (04 HHs), Songkhone (03 HHs), Phiaka (4 HHs) and | Applied to projects in 5 target provinces<br>• Phiaka (flood protection levees and riverbank stabilization)<br>• Dongmeuang (flood protection levee)<br>• Sivilay (pond improvement) | • Land surveys and asset inventories<br>• Consultations with affected households<br>• Review of compensation and resettlement plans<br>• Monitoring of resettlement implementation | • Before land acquisition<br>• During land<br>• After resettlement | • Contractors<br>• PMU<br>• Supervising Engineer Local Authority |

| Monitoring Parameters | Monitoring Indicators | Location | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| | Nongsavang (16 HHs)<br><br>Refer to: LARF (Annex 4), FPIC (Annex 15), GAP (Annex 13) | • Thamea (pong improvement)<br>• Songkhone (pond improvement)<br>• Nongsavang (pond improvement) | | | |
| Cultural Heritage | • No adverse impacts on cultural and religious objects<br>• Find chance procedure followed<br>• Religious and cultural ceremonies organized at the start of construction activities<br><br>Cultural objects and religious sites of both ethnic minority groups and local communities in the project areas:<br>• 08 Buddhist temples in Phiaka, Dongmeuang, Songkhone, Mueanghong, and Nongsavang<br>• 06 Altar sites Phiaka, Dongmueang, Sivilay, Songkhone, Mueanghong, and Nongsavang<br>• 16 burial ground / cemetery sites in all target villages<br>• 02 worship sites in Dongmueang and Mueanghong<br>• 10 spiritual forest / worship forest in Phiaka, Dongmueang, Tangalai Nuea, Sopsalu, Thamea, Songkhone, Meuanghong, and Nachanyai<br><br>Refer to: CFP (Annex 11), EGP (Annex 15), FPIC (Annex 15) | • Applied to all projects and village in Table 1 | • Site inspection<br>• Observation<br>• Report by local people/local authority | • Daily<br>• Reported to Supervising Engineer within 48 hours | • PMU<br>• Contractors<br>• Supervising Engineer Local Authority |
| Soil quarry and excavation | • Number of extraction sites formally approved by local authorities and safeguards officers | • Applied to pond improvement, and flood protection levee (08 villages: | • Field survey with GPS mapping<br>• Grievance log review and household interviews | • Once before extraction<br>• Reported to Supervising | • PMU<br>• Contractors<br>• Supervising Engineer Local |

| Monitoring Parameters | Monitoring Indicators | Location | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| | • Area (m² or ha) of natural vegetation and habitat cleared due to soil extraction<br>• Number of consultations conducted with local communities before site selection<br>• Number of pits/quarries enclosed after excavation<br>• Number of complaints or reports of impact on livelihoods<br><br>Refer to: GRM (Annex 14), BAP (Annex 5) | Phiaka, Dongmueang, Sivilay, Tangalai Nuea, Sopsalou, Thamea, Songkhone, and Nongsavang | • Site observations and contractor checklists | Engineer within 48 hours | Authority |
| **Operation Phase** | | | | | |
| Community, Health and Safety | • No accidents and fatalities, such as drowning<br>• Communities are aware of risks of having deep ponds and quarries<br>• No disease outbreak resulting from the ponds, riverbank stabilization and flood levees<br>• Number of grievances related to operational safety | Applied to target village with soil quarry<br>• Phiaka (pond improvement and flood protection levee)<br>• Dongmueang (Riverbank stabilization and levee)<br>• Sivilay (2 pond improvement)<br>• Tangalai Nuea (pond improvement)<br>• Sopsalou (Water tank installation)<br>• Thamea (pond improvement)<br>• Songkhone (pond improvement)<br>• Nongsavang (pond improvement) | • Site inspection reports<br>• Accident/Incident reports<br>• Medical records/reports<br>• Consultation minutes/reports | • Daily for site inspections<br>• Monthly for reports and consultations<br>• Within 48 hours for reporting accidents, disease outbreaks. | • PMU<br>• PONRE<br>• Supervising Engineer Local authority |

| Monitoring Parameters | Monitoring Indicators | Location | Measurement | Frequency | Responsibility |
|---|---|---|---|---|---|
| Community Conflict | • No incidents related to access, control, or misuse of shared infrastructure<br>• No incidents of infrastructure being used for unintended/private purposes<br>• Operation and maintenance committee established to manage the operation of the subproject infrastructure | Applied to evacuation shelter, pond and water tank installation<br>• Phiaka<br>• Sivilay<br>• Tangalai Nuea<br>• Sopsalou<br>• Thamea<br>• Songkhone<br>• Mueanghong<br>• Nachanyai<br>• Nongsavang | • Grievance records, community mediation logs<br>• Site inspection | • Daily for site inspections<br>• Monthly for reports and consultations<br>• Within 48 hours for reporting accidents. | • PMU<br>• PONRE<br>• Supervising Engineer Local authority |
| Community Health and Safety in Evacuation Shelter | • Number of villagers access to safe drinking water in shelters<br>• No outbreaks of communicable diseases (e.g., flu, diarrhoea, skin infections)<br>• No outbreak of communicable diseases for animals<br>• Availability of toilets, handwashing, and bathing areas<br>• Presence of gender-sensitive partitions or private spaces<br>• No incidents of sexual harassment and sexual abuse at the shelters<br>Refer: GAP (Annex 13) | Applied to target village with evacuation shelter,<br>• Phiaka<br>• Songkhone<br>• Mueanghong<br>• Nachanyai | • Grievance records, community mediation logs<br>• Site inspection | • Daily for site inspections<br>• Monthly for reports and consultations<br>• Within 48 hours for reporting accidents, disease outbreaks. | • PMU<br>• PONRE<br>• Supervising Engineer Local authority |

# 9 ESTIMATED COSTS FOR ESMP IMPLEMENTATION

## 9.1 Estimated Costs for ESMP Implementation and monitoring

The costs of implementing the ESMP listed below are related to PMU costs in addition to the dedicated safeguards in the PMU personnel budget line item. For a two-year period for subproject construction, from October 2024 to June 2025 (estimated), at least USD69,000 is required to implement the ESMP, excluding costs for land acquisition and compensation (if needed), which will be borne by the contractor.

**Table 4: Estimated Cost for ESMP Implementation**

| No. | Items | Qty | Unit | Cost (USD) | Total (USD) |
|---|---|---|---|---|---|
| **1** | ERW/UXO clearance | 1 | Lum-sump | 10,000 | 10,000 |
| **2** | Implementing Biodiversity Action Plan | 1 | Year | 10,000 | 10,000 |
| **3** | Training and awareness raising community health and safety during the construction and operation | 1 | Lum-sump | 15,000 | 15,000 |
| **4** | Consultation facilitation, including FPIC | 1 | Lum-sump | 10,000 | 10,000 |
| **5** | E&S monitoring activities (mid-term, and completion) | 1 | Lum-sump | 24,000 | 24,000 |
| | **Total** | | | | **59,000** |

# ANNEX

## Annex 1: Occupational Health and Safety Plan

**Purpose**
The Occupational Health and Safety Plan (OHSP) has been developed to ensure the work safety of the workers working at the site and aims to minimise the risks to workers arising from work-related activities. The measures mentioned in this Plan apply to all Project personnel and cover the construction phase of the Project.

**Applicable Regulations**
The following regulations and guidelines shall be adhered to by the Project Team,

- National Health Strategy 2021-2025, Lao PDR
- UNDP Standard 7 on Labour and Working Conditions
- WBG General EHS Guidelines, 2007

**Roles and Responsibilities**

**PMU**

- Conduct regular inspections to ensure compliance with OHS management protocols and identify areas requiring improvement.
- Provide guidance and support to the Contractor team on providing awareness of the OHS management practices, regulations, and requirements.
- Monitor safety measures adopted by the Contractor to verify adherence to the plan.
- Coordinate with relevant stakeholders to address any non-compliance issues promptly and implement corrective actions.
- Keep detailed records of OHS training undertaken on-site including accidents/incident records.
- Inform the Regional Hub within 24 hours in case of any major accidents/fatality onsite

**Contractor EHS/Safety Officer**

- Ensure the implementation of the construction safety measures on-site.
- Provide necessary training to workers on OHS management practices, including code of conduct and grievances, if any.
- Cooperate with the PMU during inspections and audits, implementing corrective actions as required.
- Ensure that the working manpower attends all training arranged by the EHS/Safety Officer.
- Maintain records of training provided, including accident/incident register and first aid register.
- Ensure that toolbox talks are undertaken daily before the start of work to the workers.

**Management Measures**
The construction safety management measures includes the following components,

- Safety Training: Orientation, Training and Toolbox Talks
- Hazard identification and management
- Emergency management procedures, and
- Safety monitoring to be implemented during construction.

Details of each component have been provided below,

**Safety Training: Orientation, Training and Toolbox Talks**
The contractor is responsible for ensuring all workers under their supervision are appropriately trained and competent to implement the Occupational Health and Safety Plan (OSHP).

- **Pre-Construction Training:**
  Before any site work begins, the contractor must deliver a comprehensive safety training programme to all personnel involved in the project. This programme will equip workers with the knowledge and skills necessary to perform their assigned tasks safely and efficiently.
  The training programme will cover the following key elements:
  - **Compliance with Regulations**: Workers will be trained on all applicable national regulations and UNDP Standard 7 on Labour and Working Conditions.
  - **Hazard Identification and Mitigation:** Both general and task-specific workplace hazards will be identified, along with corresponding mitigation strategies.
  - **Worker Rights and Responsibilities:** The programme will outline the rights, obligations, and duties of all personnel regarding occupational health and safety.
  - **Consequences of Non-Compliance:** Workers will be informed about the potential consequences of failing to follow the OHSP.
  - **Task-Specific Training:** Training will be tailored to the specific tasks, duties, and responsibilities of each worker.

- **Qualified Instructors:** All training programmes will be delivered by qualified personnel with expertise in safety and construction practices.

- **Ongoing Training and Awareness:**
  - The contractor's safety officer will be responsible for maintaining worker awareness and understanding of workplace hazards, mitigation strategies, and safe work practices throughout the project.
  - This will involve regular toolbox talks and ongoing safety updates to address any emerging concerns or changes on the ground.
  - Training records will be documented, tracked, and kept on file for audit purposes.

- **OSHP Access and Orientation:**
  - All personnel working on the project will be informed about the OSHP during their initial site orientation.
  - They will be granted access to the OSHP document to ensure they understand the safety requirements and how they apply to their specific roles.

**Hazard Identification and Management**

A complete comprehensive site-specific hazard identification and risk assessment (HIRA) is to be undertaken by the Contractor before beginning work at the site. The assessment will identify all potential hazards and provide adequate mitigation measures to be implemented on-site. Besides the HIRA, the following hazards are to be considered by the Contractor,

**Work over or near water/river/stream/canal**

- Where construction work takes place over water, steps should be taken to prevent people from falling into the water and rescue equipment should always be available.
- Prior to any work on or near water, it's essential to conduct a risk assessment, identify any potential hazards and assess the severity and range of risks by designing a safe system of work (SSoW). Anyone working on or near water must also be aware of the risks and be well-trained in working safely around water.
- It is important to adopt risk reduction measures where practicable to ensure that, wherever possible, physical protection is provided to prevent anyone from falling into the water. Use of adequate barriers, working platforms, etc., on walkways and platforms where a person could fall into the water, should be adopted, and to reduce the risk of slipping, appropriate safety footwear may be required.
- Buoyancy aids, flotation devices and grab and throw lines should be readily available in the event of someone falling into the water.
- All people working near water are at risk from contaminated water. Anyone working in areas where rats or other rodents are likely to be present are at risk from Leptospirosis (Weil's disease). These workers must be provided with appropriate protective gloves and clothing and must also ensure they wash any exposed skin thoroughly after encountering water from rat-contaminated areas.
- Working in confined/restricted spaces will pose significant risks at incidents involving water. Difficult access and egress, entrapment, depth and flow will need to be considered at a range of incidents i.e., vehicles in water, locks, culverts and in certain floodwater situations.

- **Work at Height**

Work at height means work in any place where, if there were no precautions in place, a person could fall a distance liable to cause personal injury. Height work at or more than 1.8 m is considered to be work at height.

**Control Measures**

- Avoid work at height where it's reasonably practicable to do so;
- Where work at height cannot be easily avoided, prevent falls using either an existing place of work that is already safe or the right type of equipment;
- Minimise the distance and consequences of a fall, by using the right type of equipment where the risk cannot be eliminated.

**Do's**

- A person to work at height must be trained;
- Medical testing for people required to work at height should be conducted and the tests should include conditions such as vertigo or illness that may affect the person or the work;
- As much work as possible from the ground;
- Ensure workers can get safely to and from where they work at height;
- Ensure safety equipment is suitable, stable and strong enough for the job, maintained and checked regularly;
- Take precautions when working on or near fragile surfaces;
- Protect falling objects;
- Consider emergency evacuation and rescue procedures.

**Don'ts**

- Overload ladders/ elevated platforms – consider the equipment or materials workers are carrying before working at height. Check the pictogram or label on the ladder for information;
- Overreach on ladders or stepladders;
- Rest a ladder/ elevated platforms against weak upper surfaces;
- Use ladders or stepladders for strenuous or heavy tasks, only use them for light work of short duration (a maximum of 30 minutes at a time); and
- Let anyone who is not competent (who doesn't have the skills, knowledge, and experience to do the job) work at height.

**Hand and Power Tools**
All portable electric equipment must be handled in a safe manner that will not damage or reduce service life.

**General Instructions**
- Flexible cords connected to equipment should not be used for raising or lowering equipment and should not be used if damage to the outer insulation is present.
- Visual inspections are required, and unauthorised alterations of the grounding protection are not allowed to ensure the safety of employees. Before each shift, a visual inspection should be performed for external defects and possible internal damage.
- Attachment plugs and receptacles should not be connected or altered in a manner that would prevent proper continuity of the equipment grounding conductor. In addition, these devices should not be altered to allow the grounding pole of a plug to be inserted into slots intended for connection to the current carrying conductors.
- Portable electric equipment and flexible cords used in highly conductive work locations or in job locations where employees are likely to contact water or conductive liquids shall be approved by the manufacturer for those locations. The hazardous locations that employees should be aware of include wet locations and locations where combustible or flammable atmospheres are present.
- For wet locations, employees' hands will not be wet when plugging and unplugging energized equipment. Energized plug and receptacle connections should be handled only with protective equipment if the condition could provide a conductive path to the employee's hand (if, for example, a cord connector is wet from being immersed in water). In addition, ground-fault circuit interrupter (GFCI) protection is required for some equipment/locations and is also recommended for use in all wet or highly conductive locations.
- For combustible/flammable atmospheres, all electric equipment and wiring systems in classified locations must meet the regulatory standard.

**Personnel Protective Equipment**
Personal Protective Equipment (PPE) means any device or appliance designed to be worn or held by an individual for protection against one or more health and safety hazards.
- The fundamental principle is that personal protective equipment (PPE) should only be used as a last resort.
- The safety and health of employees must be first safeguarded by measures to eliminate workplace risks at source, through technical or organizational means (e.g. by substituting hazardous chemicals), or by providing protection on a collective basis (e.g. providing scaffolding instead of harnesses).
- Collective protective measures covering a number of employees in a workplace must have priority over protective measures applying to individual employees.
- If these measures are not sufficient, only then should PPE be used to protect against the unavoidable hazards. Employers need to supply PPE to workers where risks cannot be eliminated or adequately controlled. Employers cannot pass on to employees any financial costs associated with duties relating to safety, health, and welfare at work. An employer may not ask for money to be paid to them by an employee for the provision of PPE whether returnable (e.g. a deposit) or otherwise.

**Construction Works**
Basic Safety Rules
- Comply with the applicable local and national health and safety regulations;
- Undertake risk assessment of all the activities undertaken on the site;
- Maintain good housekeeping at all situations;
- Adequate personal protective equipment to be provided and used based on the PPEs identified during the risk assessment activity;
- Ensure only trained people handle and use with firefighting equipment and electrical circuits;
- Proper ventilation, lighting facilities, drinking water and sanitary facilities to be provided to the labour;
- Provide First aid box onsite;
- Adequate provision of fire prevention systems;
- No child labour;
- No smoking;
- Workers will be covered under the occupation accident policy;
- Monitoring of implementation;
- Ensure that everyday toolbox talks are conducted to familiarize the workers regarding hazards and

safety concerns onsite;
- On the job training on the safe working practices.

**Hygiene and Housekeeping Measures**

- Regular cleaning of workplaces, equipment and devices should be carried out to ensure an adequate level of workplace hygiene. A designated person should be assigned the responsibility to oversee such operations.
    - All containers should be properly labelled and marked, and the labels must remain clean and visible.
    - All containers must be kept in good condition and tightly closed when not in use.
    - When practical, chemicals, fluids and supplies should be kept in a pre-identified area away from any water bodies and always covered.
    - Spill kits and drip pans must be kept near any liquid transfer areas, protected from rainfall.
    - Absorbent spill clean-up materials must be available in maintenance areas and shall be disposed of properly after use.
    - Collect waste fluids in properly labelled containers and dispose of them properly.
- Rubbish or waste should be kept in suitable containers or litterbins which are located at convenient locations in the workplace. The containers should be emptied daily, preferably near the end of each working day.
- All refuse containers and dumpsters should remain covered and not leaking.
- The conditions of housekeeping can be easily assessed by visual observations. Records of maintenance work must be kept for evaluation of the performance, including information on the responsible person(s), contact and date/time of the action taken.
- Visual inspection of workplaces to note down the conditions and spot out malpractice would be required.

**Emergency Preparedness**

A separate Emergency Preparedness and Response Plan (EPRP) has been prepared as part of ESMP. This plan outlines the framework, structure, and roles and responsibilities for effectively responding to and managing major events or emergencies at the worksite. (Please refer to the dedicated EPRP document for detailed information)

**Safety monitoring**

**1. Safety Inspections, Testing, and Calibration:**

- Conduct regular inspections of all safety features and hazard control measures, including:
    - Engineering controls (e.g., ventilation systems, machine guards)
    - Personal Protective Equipment (PPE) (e.g., respirators, hard hats, safety glasses)
    - Work procedures
    - Workplaces
    - Installations, equipment, and tools used
- Verify that issued PPE remains in good condition, provides adequate protection, and is worn as required.
- Regularly test and calibrate all instruments used for monitoring and recording workplace parameters (e.g., air quality monitors, noise level meters).
- Maintain records of all inspections, tests, and calibrations for future reference and to demonstrate ongoing compliance.

**2. Surveillance of the Working Environment:**

- Utilize a combination of portable and stationary monitoring instruments to document compliance with EHS guidelines.
- Conduct monitoring and analyses based on internationally recognized methods and standards (e.g., National Institute for Occupational Safety and Health - NIOSH standards).
- Establish a monitoring plan for each project considering specific hazards identified during a hazard review.
- Define monitoring methodology, locations, frequencies, and parameters based on the project's unique risk profile.
- Typically, monitoring should be performed:
    - During commissioning of facilities or equipment
    - At the end of the defect and liability period
    - Repeatedly according to the established monitoring plan

**3. Surveillance of Workers' Health:**

- Implement appropriate and relevant health surveillance programmes for workers exposed to high-risk situations.
- This may include situations involving:
    - Biological agents classified as Groups 3 and 4 (high individual and community risk)
    - Exposure to hazardous compounds exceeding permissible exposure limits (PELs)
- Provide pre-exposure health checks and regular follow-up examinations as needed.

- Consider extending health surveillance even after employment termination for high-risk exposures.

**4. Training Monitoring:**

- Effectively monitor and document all training activities for employees, visitors, and contractors.
- Maintain records including:
    - Training curriculum content
    - Training duration
    - Participants involved
- Document emergency preparedness drills (e.g., fire drills) thoroughly for future reference.
- Contractually require service providers and contractors to submit adequate training documentation before starting work on the project site.

**5. Accidents and Diseases Monitoring:**

- Establish clear and accessible procedures for workers to report:
    - Occupational accidents and diseases
    - Dangerous occurrences and incidents (near misses, equipment malfunctions)
- Empower and encourage workers to report all potential safety concerns, including:
    - Occupational injuries (both minor and serious)
    - Suspected cases of work-related illnesses
    - Any situation perceived as a potential danger

**6. Incident Investigation:**

- Investigate all reported occupational accidents, diseases, dangerous occurrences, incidents, and near misses.
- Investigations should be conducted by a person knowledgeable and competent in occupational safety.
- Focus on determining the following:
    - What happened during the incident
    - Root cause(s) of the incident
    - Necessary corrective actions to prevent future occurrences

Records to be maintained Onsite

- Accident/Incident Records
- First Aid Record
- Training Records
- PPE Issuance Register

# Annex 2: Workers' Code of Conduct

**Objectives**
The Worker Code of Conduct (WCC) sets out the expectations, policies, and procedures for all workers—employees and subcontractors—engaged in the construction of this Project. The WCC applies at the Project site and whenever workers interact with local authorities, communities, and stakeholders. Adhering to the Code is mandatory for employment and participation in the Project.

**Summary**
Workers must recognise that their conduct, both at and outside the worksite, reflects upon the Project and its partners. Misconduct or culturally insensitive behaviour can negatively affect colleagues, visitors, and especially local communities, including ethnic and indigenous groups. For example, behaviour that disregards local customs, dress codes, or is otherwise disrespectful may cause serious offence and disrupt social harmony.The workers must follow the following code of conduct.

*Code 1: Respect for community members and local customs*

- All initial visits to local villages must be coordinated in advance with the contractor and the village head (Nai Ban).
- Always seek guidance from village authorities regarding appropriate behaviour and local cultural practices. Lao customs may differ across ethnic groups; workers must be sensitive and observant.
- If the chief, elders, or male representatives are absent, avoid direct interaction with women and girls unless invited or accompanied by a local authority, as such contact may be misinterpreted.
- Avoid direct eye contact with members of the opposite sex, as this can be culturally inappropriate in some Lao and ethnic minority communities.
- Do not criticise or confront anyone in public. If an issue arises, seek a respectful and private discussion.
- Physical contact, such as a firm handshake, hugging, or standing too close, should be avoided unless clearly appropriate to local customs.
- It is customary to offer small tokens of respect, such as fruit or betel nut, to elders during community visits, especially in rural or ethnic villages.
- Speak in a calm and polite manner—avoid raising your voice or using harsh language, particularly in group settings.
- Dress modestly and appropriately when entering villages
- Alcohol must not be brought into or consumed in local villages by Project workers.
- Always request permission before taking photos or viewing any communal or sacred areas, and respect prohibitions on access where they exist.
- Refrain from using offensive language, gestures, or behaviour at all times.

*Code 2: Protection of cultural and historical heritage*

- Disturbing or damaging any architectural, religious, historical, or cultural sites or artefacts is strictly forbidden under Lao law and community norms.
- If workers discover human remains or cultural artefacts, they must not touch or move them and should immediately notify their supervisor and the relevant authorities or focal point.
- All construction or related activities in the vicinity of a find must cease until proper assessment and consultation with local authorities take place.

*Code 3: Avoidance of nuisance and disturbance*
Workers must not cause nuisance or disturbances to local communities or within worker accommodation. The following behaviours are prohibited:

- Use of threatening, aggressive, or abusive language.
- Uncontrolled, violent, or disorderly conduct, including indecent or offensive behaviour.
- Acts that cause annoyance, disruption, or conflict within communities or among workers.
- Intentional damage to public or private property.

*Code 4: Zero tolerance of sexual harassment, abuse or exploitation*
Any form of sexual exploitation, abuse, or harassment—including but not limited to paying for sex, sex trafficking, prostitution, or visiting brothels—is strictly prohibited under both Lao law and Project rules.

- Immediate dismissal and reporting to authorities will result from acts such as:
- Sexual assault or threats of assault (including bullying).
- Sexual harassment (including catcalling, whistling) and any form of sexual violence.
- Any other illegal or criminal conduct.

*Code 5: Fitness for work and substance use*

- All workers are strictly prohibited from consuming, possessing, or being under the influence of illicit drugs. Violations will result in disciplinary measures up to termination.

- Alcohol consumption is strictly forbidden during working hours and on the Project site, including worker accommodation and access roads. Workers unfit for work due to alcohol will be disciplined.
- Only medically prescribed drugs may be used, and workers may be asked for medical certification of fitness where appropriate.
- Smoking is allowed only in designated areas during breaks. Careless disposal of cigarette butts or betel nut stains is considered littering and strictly prohibited.
- Workers must not visit beer gardens or similar establishments near the Project or in local communities at any time during their employment.

*Code 6: Worker misconduct and enforcement*
Disciplinary action, up to and including termination of employment, may be enforced for repeated unsatisfactory conduct or serious misconduct.

- Illegal or criminal activities—including sexual assault, harassment, threats, violence, theft, use of illicit substances—will result in immediate dismissal and notification of Lao authorities.

*Code 7: Compliance and monitoring*

- Worker behaviour will be routinely monitored against these WCC expectations. Monitoring is a shared responsibility, undertaken by the contractor, village chiefs, and designated Project focal points.

# Annex 3: Indigenous Peoples/Ethnic Group Plan

## 1. Introduction and background

The proposed project will increase the climate resilience of communities in two particularly vulnerable areas in Lao PDR. First, vulnerability to the projected increase in both droughts and floods will be addressed in the Xe Bang Hieng river basin in Savannakhet Province. This is a major rice-producing area and is particularly important for the country's food security. It is also one of the areas in the country which is most vulnerable to droughts and experienced severe flooding in 2017, 2018 and 2019. Second, the city of Luang Prabang is one of the cities in Lao PDR which is most vulnerable to flooding, as well as being an important cultural heritage site. While urban flood risk management is being addressed in four other vulnerable cities in Lao PDR through a GCF project, Luang Prabang was not included in that project. Further details of these two project sites are provided below. These following sections primarily refer to interventions in Savannakhet Province, as these interventions are "on-the-ground" interventions, whereas the interventions proposed for Luang Prabang city are focused on developing capacity and awareness raising campaigns among communities.

The integrated management objective will be achieved by implementing a suite of complementary adaptation interventions, namely the: i) development of national and provincial capacities to implement Integrated Catchment Management (ICM) and integrated urban Ecosystem-based Adaptation (EbA) in response to the increasing frequency and intensity of floods and droughts; ii) implementation of EbA interventions — primarily conservation and restoration of partly and severely degraded forests — within this ICM framework, with supporting protective infrastructure and sustainable livelihood enhancement; and iii) promotion of knowledge management and Monitoring and Evaluation (M&E) to ensure that the lessons learned and best practices for ICM, flood management and EbA are collected and disseminated to inform the upscaling of these interventions across Lao PDR.

## 2. Objectives

The IWRM-EbA Project acknowledges the significant presence of diverse ethnic groups—including Indigenous Peoples as recognized by the UNDP SES—in its target regions, particularly within Savannakhet and Luang Prabang provinces. Recognizing the potential for both direct and indirect impacts arising from project activities, the project has developed a comprehensive Ethnic Group Plan (EGP). This plan is specifically designed to safeguard the interests of these communities by ensuring their full and meaningful participation throughout the project lifecycle. The EGP also emphasizes the importance of sharing benefits equitably among all community members and implementing robust measures to prevent, mitigate, or manage any adverse effects that may occur. By doing so, the project aims to promote inclusive development, respect for cultural heritage, and the protection of traditional knowledge systems, thus fostering mutual trust and long-term sustainability in collaboration with local populations.

### 2. Legal and Policy Framework

The EGP is aligned with:

- The Constitution of Lao PDR (Article 8), which guarantees equality among all ethnic groups.
- UNDP's Social and Environmental Standards (SES), particularly the Standard on Indigenous Peoples.
- Relevant international frameworks, including the UN Declaration on the Rights of Indigenous Peoples (UNDRIP).

The specifics of the aforementioned regulations can be found in the ESIA.

### 3. Ethnic Composition in Project Areas

To adapt to recent changes and foster unity among various ethnic communities in Lao PDR, the LFNC identified 49 ethnic categories and over 160 sub-categories. The official terminology used in the Constitution to describe the diverse population of Lao PDR is "Bunda Chon Phao" or "all ethnic communities," while the names of the groups are generally used to classify the EG. According to LFNC, the Lao ethnic communities are grouped into four ethno-linguistic communities as listed below:

- The "Lao-Tai" (also referred to as "Tai-Kadai"), which includes the dominant "Lao ethnic communities" and the "lowland Tai" speaking communities. The "Lao-Tai" consists of 8 ethnic sub-communities included (1) Lao (2) Leu (3) Xaek (4) Tai (5) Nuane (6) Thai neua (7) Phoutai and (8) Yang.
- The second linguistic group is "Austro-Asiatic, also called Mon-Khmer" group, which consists of 32 ethnic sub-groups as table below.
- The "Hmong-Iomien" group which consists of 2 ethnic subgroups: Hmong and Lomien (Lomien is also called Yao).

- The “Chinese-Tibetan” (also referred to as “Sino-Tibetan”), which includes the Chinese and Tibeto-Burman Ethnic Community and consists of 7 ethnic subgroups such as (1) Akha or Ko (2) Sila (3) Hor (4) Phounoy (5) Lahou (6) Hayi and (7) Lolo.

The 10 target villages in Savannakhet Province feature a diverse ethnic makeup, mainly Lao and Laoloum. Makong and Brou communities are concentrated in specific villages, while Taoiy, Ty, Phouthai, and other minorities are present in smaller numbers or single locations. Sivilay is notably diverse, and Nonsavang is primarily Laoloum with a Laotherng minority. This diversity affects service delivery, language access, cultural sensitivity, and planning, highlighting the need for inclusive, culturally informed project approaches.

**Ethnic groups populations in target villages**

| Villages | Total household and No. of people of Ethnicity per village | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Brou | Makong | Taoiy | Loaloum | Laotherng | Ty | Phouthai | Lao |
| **Champhone district** | | | | | | | | |
| Phiaka village | - | - | - | - | - | - | - | 117 (620) |
| Dongmeuang village | - | - | - | - | - | - | - | 122 (910) |
| Sivilay village | - | 54 (463) | - | 164 (1220) | - | - | - | - |
| **Nong district** | | | | | | | | |
| Tangalai Nuea village | - | - | 75 (448) | - | - | - | - | - |
| **Sepone district** | | | | | | | | |
| Sopalou village | - | - | - | - | - | 74 (306) | - | - |
| Thamae village | - | 112 (634) | - | - | - | - | - | - |
| **Songkhone district** | | | | | | | | |
| Songkhone village | - | - | - | 182 (1135) | - | - | 3 (19) | 1 (7) |
| **Xonnabouly district** | | | | | | | | |
| Mueanghong village | - | - | - | - | - | - | - | 378 (1115) |
| Nachanyai village | 236 (1130) | - | - | - | - | - | - | - |
| Nonsavang village | - | - | - | 540 (3314) | 20 (140) | - | - | - |

Source: Village Heads, July 2025

**4. Adverse impacts on ethnic people and communities**

4.1 Adverse impacts of enhancing conservation zone management and forest boundary management

- Enhanced conservation zone and forest boundary management can negatively impact local communities.
- These activities may restrict traditional land access, affecting the livelihoods of farmers, including those from various ethnic groups.
- Interventions could disrupt cultural traditions linked to these lands.
- Ethnically diverse groups, such as Brou, Makong, Taoiy, Laoloum, Laotherng, Ty, Phouthai, and Lao linguistic communities, are particularly affected.

***Mitigation Measures***

- Engage stakeholders to initiate activities involving protected area demarcation with local communities.
- Consult affected communities about potential impacts and management measures.
- Ensure community participation in planning, implementing, and monitoring conservation and boundary management.
- Conduct Free, Prior and Informed Consent (FPIC) to allow local resource users to decide on their involvement and continued participation in interventions.

4.2 Impacts of land acquisition

- Most construction will take place on public land, though some adjacent or nearby private plots may be affected.
- Temporary worker camps might be established on private land.
- Site access could require crossing nearby lands, causing temporary disruption to local activities.
- Potential for disputes from individuals or communities when construction begins.
- Field consultations identified specific households whose land will be temporarily impacted by construction activities.

Sub-project with potential adverse impacts on the land of ethnic groups

| Districts/Village | Sub project | Area required (m2) | Ownership | Private land plot sharing a boundary with the construction site (HHs) | Private land plot will have impact by the temporary access road to construction site (HHs) |
|---|---|---|---|---|---|
| **Champhone district** | | | | | |
| Dongmeiang village | Flood protection levee and Riverbank stabilization (16,500m$^2$) | 16,500 | Public land | 08 (N/A) | - |
| Sivilay village | 1$^{st}$ pond (3,200m$^2$)<br>2$^{nd}$ pond (1,350m$^2$) | 4,550 | Public land | 09 (9.469ha) | - |
| **Sepone district** | | | | | |
| Thamae village | 1 Pond improvement (6,690m$^2$) | 6,690 | Public land | - | 4 (3ha) |
| **Songkhone district** | | | | | |
| Songkhone village | Pond improvement (3,771m$^2$),) | 17,981 | Public land | 04 (1.3ha) | 03 (2.7ha) |
| | shelter evacuation (9,742m$^2$ | | | | |
| **Xonnabouly district** | | | | | |
| Nonsavang village | Pond improvement (18,117m$^2$) | 18,117 | Public land | 07 (33.71m$^2$) | 16 (44.3m$^2$) |

**Mitigation Measures**

- Actively involve the community, including ethnic groups, in planning, implementation, and monitoring.
- Ensure due diligence to confirm there are no ownership claims on the land.
- Conduct surveys to identify affected landowners for site access.
- Negotiate access arrangements directly with landowners.
- Avoid accessing or crossing land during harvest or planting seasons.
- If avoidance is not possible, the contractor shall compensate the land owners to gain access to the construction
- Carry out Free, Prior and Informed Consent (FPIC) if communities or landowners are ethnic groups.
- Establish a grievance redress committee in accordance with UNDP SES guidelines.

4.3 Impacts on cultural heritage

- Potential risks to cultural and religious sites: The proposed construction activities could disturb or damage culturally significant places, including those deeply valued by ethnic minority groups and local residents. Such sites may serve as cornerstones of community identity and spiritual life.
- Disruption of sacred sites: Activities may interfere with locations considered sacred, such as altars, spiritual forests, and burial grounds. These sites often hold ancestral importance, and any impact could cause distress or loss to communities that rely on them for cultural continuity.
- Threats to religious sites and landmarks: Religious structures like Buddhist temples may be at risk, along with other cultural landmarks. These spaces are often centers for ceremonies, community gatherings, and traditional practices, making their protection vital for social cohesion.

**Sub project with potential adverse impacts on cultural heritage**

| Villages | Cultural Site | | | | |
|---|---|---|---|---|---|
| | **Buddhist Temple** | **Altar** | **Burial ground / cemetery** | **Worship tree** | **Spiritual forest / worship forest** |

| | | | | | |
|---|---|---|---|---|---|
| **Champhone district** | | | | | |
| Phiaka village | 01 | 01 | 01 | - | 02 |
| Dongmeuang village | 01 | 01 | 01 | 01 | 01 (Monkey forest) |
| Sivilay village | 01 | 01 | 03 | - | - |
| **Nong district** | | | | | |
| Tangalai Nuea village | - | - | 01 | - | 01 (Monkey forest) |
| **Sepone district** | | | | | |
| Sopalou village | - | - | 01 | - | 01 |
| Thamae village | - | - | 01 | - | 01 |
| **Songkhone district** | | | | | |
| Songkhone village | 01 (Sybounheung Temple - Old temple) | 01 | 02 | - | 01 |
| **Xonnabouly district** | | | | | |
| Mueanghong village | 02 | 01 | 01 | 01 | 01 |
| Nachanyai village | - | - | 04 | - | 02 |
| Nonsavang village | 02 (Phachanlai Temple and Phoxayyalam Temple) | 01 | 01 | - | - |

***Mitigation Measures***

To mitigate adverse impacts, the following measures will be applied:

- Implement a robust chance find procedure to address unexpected discoveries of cultural sites or artifacts during project activities.
- Consult with community members and village heads to identify potential risks and impacts on cultural, spiritual, and worship sites within the village.
- Raise awareness about the significance of cultural sites and communicate the protective measures established for their preservation.
- Maintain ongoing engagement with local communities throughout the project's lifecycle, applying Free, Prior, and Informed Consent (FPIC) principles where appropriate.
- Seek expert guidance on the handling of specific cultural objects discovered, and consult the community if relocation becomes necessary.
- Organize ceremonies aligned with local cultural and religious traditions before the commencement of construction activities.

**5. Community Consultation and Engagement**

Stakeholder engagement and consultation with ethnic minority groups have been a continuous and integral part of the project, commencing from the earliest design stages and extending throughout implementation and impact assessment. These consultations have been conducted through a variety of channels, including public meetings, focus group discussions, and individual interviews to ensure that voices from all segments of the community—including elders, women, youth, and religious leaders—are heard and considered.

Methods employed included the use of local languages and dialects, engagement of respected community facilitators, and the distribution of accessible informational materials to promote broad participation. Regularly scheduled meetings provided opportunities for stakeholders to express concerns, share traditional knowledge, and offer feedback, which was then systematically incorporated into project planning and mitigation strategies.

In addition, special attention was given to building trust and fostering transparent communication by upholding the principles of Free, Prior, and Informed Consent (FPIC). The project team maintained ongoing dialogue with ethnic group representatives, adapting the consultation process as needed to address emerging issues or concerns.

Outcomes of this engagement process include the identification of culturally significant sites, the development of tailored mitigation measures to protect cultural heritage, and the joint creation of benefit-sharing initiatives. Comprehensive documentation of all consultation activities, feedback received, and actions taken is available within the Stakeholder Engagement Plan, ensuring accountability and enabling continued collaboration throughout the project's lifecycle.

**6. Key Measures and Actions**

6.1 Action 1: Conduct Free, Prior and Informed Consent (FPIC):

- Actively empower local resource users, including ethnic groups and traditional landholders, to make informed decisions about their involvement in project interventions. This approach respects their autonomy and ensures that participation is genuinely voluntary and based on a clear understanding of potential benefits, risks, and responsibilities. Engagement sessions will be conducted in accessible formats and local languages to support meaningful dialogue and consent.
- Obtain formal permission from communities or individual landowners—especially those belonging to ethnic groups—prior to accessing construction sites or implementing project activities on their lands. This process involves transparent consultations, detailed explanation of project objectives, and the establishment of mutually agreed-upon terms regarding access, use, and restoration of affected areas.
- Coordinate the organization of ceremonies, rooted in local cultural and religious traditions, before construction commences. These ceremonies are crucial for honoring the spiritual significance of the land, seeking community blessings, and ensuring that construction activities proceed in harmony with local beliefs and customs. The ceremonial process will be designed collaboratively with community elders and spiritual leaders, fostering mutual respect and goodwill.

6.2 Action 2: Organising cultural and religious activities to align the communities' common interests and beliefs

- Prior to the start of any construction activities, the project will facilitate the organization of ceremonies designed in close collaboration with community elders, spiritual leaders, and other key stakeholders. These ceremonies, deeply rooted in local cultural and religious traditions, serve not only to honour the spiritual significance of the land but also to seek blessings from the wider community. By integrating such rituals, the project demonstrates a genuine respect for cultural values and fosters an environment of mutual trust and goodwill.
- Comprehensive consultations with community members, including village heads, women, youth, and custodians of cultural heritage, will be held to identify any potential risks or adverse impacts on sites of cultural, spiritual, or religious importance. Through participatory mapping and the sharing of traditional knowledge, these sensitive locations will be documented and assessed to ensure they are protected throughout the project lifecycle.
- To reinforce this commitment, targeted awareness-raising sessions will be conducted to inform all project stakeholders—contractors, workers, and community members—about the significance of these cultural sites. Clear communication regarding the specific protective measures in place will be prioritized, and protocols will be established to prevent accidental disturbance or damage. These efforts not only safeguard irreplaceable heritage but also strengthen the sense of ownership and partnership among all participants in the project.

6.3 Action 3: Support to vulnerable ethic groups and individuals whose land or livelihood activities are severely affected by the project

To ensure comprehensive support for vulnerable ethnic groups and individuals whose land or livelihood activities are severely affected by the project, the following measures will be implemented:

- Ethnic groups will be actively engaged throughout all phases of the project—planning, implementation, and monitoring—to ensure their perspectives and knowledge shape decision-making and outcomes. This engagement will include regular consultations, the formation of participatory committees, and the use of culturally appropriate communication methods to guarantee inclusivity and transparency.
- Wherever feasible, project planning will aim to avoid disruptions to community land use, especially during critical periods such as planting and harvesting seasons that are vital for the livelihoods of ethnic groups. Clear schedules and advance notifications will be provided to affected communities to minimize impact, and project activities will be adjusted accordingly to respect agricultural cycles and traditional practices.
- In cases where avoidance is not possible and land access is required for construction or project activities, the contractor will enter into fair and transparent negotiations with landowners. These negotiations will be guided by principles of equity and respect, ensuring that affected individuals receive appropriate compensation and restoration support. Compensation packages will be developed in consultation with the communities and will reflect both the tangible and intangible values tied to the land.
- Livelihood support activities may include employment opportunities in the construction projects for women, youth, and other vulnerable subgroups within the ethnic communities.
- Continuous monitoring and feedback mechanisms will be established to assess the effectiveness of these measures and enable timely adjustments. Dedicated project staff will be assigned to liaise with community

representatives and ensure that concerns are addressed promptly, reinforcing mutual trust and collaboration throughout the project lifecycle.

6.4 Action 4: Implementing grievance redress

- To ensure all community members—especially those from ethnic groups—can voice their concerns and seek redress effectively, a localized and culturally sensitive grievance redress mechanism will be established. This mechanism will be designed in close consultation with ethnic group representatives, ensuring it respects traditional practices and modes of communication.
- Dedicated outreach sessions will be held in the local languages, and trained facilitators from within the communities will be available to assist individuals in expressing their concerns, whether verbally or in writing. For those not proficient in Lao, translation and interpretation services will be provided to remove language barriers and foster an inclusive environment.
- Accessible grievance submission options, such as suggestion boxes at prominent community locations, anonymous hotlines, and regular in-person forums, will be made available. The process for filing complaints will be clearly communicated, emphasizing confidentiality and non-retaliation.
- All grievances will be thoroughly documented, reviewed promptly, and tracked to resolution. Feedback about the status and outcome of each grievance will be communicated directly to the complainant in their preferred language. Regular reports summarizing the types and outcomes of grievances will be shared with the community to ensure transparency and build trust.
- Support will be extended to ethnic group members throughout the process, including guidance on their rights, available remedies, and follow-up actions. This proactive approach not only ensures equitable access to redress but also strengthens relationships between the project team and the affected communities, fostering a sense of mutual respect and partnership.

A detailed grievance redress procedure is provided in the ESMP as well as the stakeholder engagement plan.

## 7. Institutional Responsibilities

The successful implementation of the EGP relies on a well-coordinated institutional framework involving multiple stakeholders at various levels. At the provincial and district levels, the Provincial Office of Natural Resources and Environment (PONRE) and the District Office of Natural Resources and Environment (DONRE) will take primary responsibility for executing the EGP in targeted communities. Their roles will include overseeing the integration of EGP principles into project activities, ensuring compliance with established safeguards, and maintaining open lines of communication with ethnic group representatives and other community stakeholders.

At the national level, the UNDP and the PMU will provide overarching guidance and oversight. The PMU will coordinate with relevant line ministries to incorporate EGP commitments into project planning, budgeting, and reporting processes. This coordination will extend to developing training programmes, monitoring project impacts, and facilitating regular reviews to identify areas for improvement.

Collaboration with representatives from ethnic communities is integral to the effectiveness of the EGP. Ethnic group representatives will be actively engaged in the design, monitoring, and evaluation of project interventions, ensuring that their voices are heard and their cultural values respected throughout the project lifecycle.

These institutional actors will work together to support grievance redress mechanisms. This includes training facilitators, providing translation and interpretation services, and ensuring accessible channels for feedback and complaints. By fostering a collaborative and transparent environment, these coordinated responsibilities will help reinforce trust, promote accountability, and ultimately ensure that the rights and interests of ethnic groups are safeguarded throughout the entire project.

## 8. Monitoring

A robust monitoring and evaluation (M&E) framework is essential to ensure the effective implementation of the EGP and to uphold the rights and interests of ethnic communities throughout the project lifecycle. The M&E process will be designed to track both compliance with established safeguards and the broader impacts of project activities on ethnic group members.

Monitoring efforts will encompass both quantitative and qualitative indicators, including participation rates in project activities, frequency and resolution of grievances, satisfaction levels among ethnic community members, and

progress in achieving the EGP's stated objectives. Regular field visits will be conducted by representatives from the Provincial and District Offices of Natural Resources and Environment (PONRE and DONRE), in collaboration with the Project Management Unit (PMU) and UNDP, to assess the integration of EGP principles and to identify gaps or emerging issues.

Ethnic group representatives will play a central role in participatory monitoring, offering feedback on the relevance, appropriateness, and effectiveness of interventions. Feedback mechanisms—such as community surveys, focus group discussions, and structured interviews—will be used to ensure that the perspectives of ethnic communities are systematically captured and incorporated into project adjustments.

Evaluation of EGP implementation will occur at defined intervals, focusing on outcomes such as:

- Equitable access to project benefits and grievance redress mechanisms;
- Respect for cultural values and traditional knowledge;
- Capacity enhancement of both ethnic group members and implementing agencies;
- Improvements in trust and collaboration between the project team and communities.

Findings from monitoring and evaluation activities will be compiled into regular progress reports and shared transparently with stakeholders, including ethnic group representatives and the broader community. Lessons learned and best practices will inform ongoing project implementation and future interventions, promoting continuous improvement and fostering accountability to the communities the project serves.

**9. Budget**

To implement the EGP, it is estimated that the total budget is USD 39,000 for a two-year period. These include:

1) Awareness raising activities: USD 5,000
2) Free, prior and informed consent: USD 15,000
3) Religious and cultural ceremonies: USD 10,000
4) Support to the ethnic families affected by the project|: USD 5,000
5) Support for grievance redress procedure: USD 4,000

# Annex 4: Land Acquisition and Resettlement Framework

**Project Background**

The proposed project will increase the climate resilience of communities in two particularly vulnerable areas in Lao PDR. First, vulnerability to the projected increase in both droughts and floods will be addressed in the Xe Bang Hieng river basin in Savannakhet Province. This is a major rice-producing area and is particularly important for the country's food security. It is also one of the areas in the country which is most vulnerable to droughts and experienced severe flooding in 2017, 2018 and 2019. Second, the city of Luang Prabang is one of the cities in Lao PDR which is most vulnerable to flooding, as well as being an important cultural heritage site. While urban flood risk management is being addressed in four other vulnerable cities in Lao PDR through a GCF project, Luang Prabang was not included in that project. Further details of these two project sites are provided below. These following sections primarily refer to interventions in Savannakhet Province, as these interventions are "on-the-ground" interventions, whereas the interventions proposed for Luang Prabang city are focused on developing capacity and awareness raising campaigns among communities.

The integrated management objective will be achieved by implementing a suite of complementary adaptation interventions, namely the: i) development of national and provincial capacities to implement Integrated Catchment Management (ICM) and integrated urban Ecosystem-based Adaptation (EbA) in response to the increasing frequency and intensity of floods and droughts; ii) implementation of EbA interventions—primarily conservation and restoration of partly and severely degraded forests—within this ICM framework, with supporting protective infrastructure and sustainable livelihood enhancement; and iii) promotion of knowledge management and Monitoring and Evaluation (M&E) to ensure that the lessons learned and best practices for ICM, flood management and EbA are collected and disseminated to inform the upscaling of these interventions across Lao PDR.

Within Output 2.1, a significant emphasis is placed on the construction of protective infrastructure designed to safeguard communities from the increasing risks of flooding and climate-related hazards. These activities include the development and reinforcement of flood protection systems such as levees and embankments, the improvement and expansion of community ponds for enhanced water retention and management, the construction of evacuation shelters to provide safe havens during extreme weather events, and the installation of water tanks to ensure secure and reliable access to clean water during and after climate shocks.

While these interventions are vital for improving climate resilience, they also have the potential to impact the livelihoods of local communities. The construction and placement of such infrastructure may necessitate the acquisition of land currently used for agriculture or other productive purposes. For example, the construction of levees may affect paddy fields and communal land, directly affecting rice farmers and others whose livelihoods depend on access to these resources.

During the construction phase, the movement and operation of heavy machinery and vehicles by contractors can further disrupt agricultural activities. Paddy rice cultivation, which is highly sensitive to changes in land use and water management, could be particularly affected if access routes are blocked, irrigation channels are altered, or if temporary construction sites encroach upon productive fields. These disruptions may lead to reduced yields, loss of income, and increased vulnerability for project-affected households.

**Objectives**

The primary objectives of the LARF are:

- To ensure that the acquisition of land and other assets is carried out transparently and with full consultation of the affected persons.
- To mitigate potential negative impacts on the livelihoods of those affected by land acquisition and resettlement.
- To provide clear procedures for the valuation of land and assets, and ensure fair compensation.
- To establish mechanisms for addressing grievances and resolving disputes.
- To ensure that resettlement sites and housing meet acceptable standards and that relocated persons have access to livelihood restoration programmes.

**Subprojects and the project-affected people**

The ESIA states that most construction will be on public land, with limited temporary effects on nearby private plots, such as from worker camps or access routes. Construction may briefly disrupt local livelihoods and trigger disputes. The table below lists subprojects that could impact land and community livelihoods.

**Sub project with potential adverse impacts on Land acquisition for construction sites**

| Districts/Village | Sub project | Area required (m2) | Ownership | Private land plot sharing a boundary with the construction site (HHs) | Private land plot will have impact by the temporary access road to construction site (HHs) |
|---|---|---|---|---|---|
| **Champhone district** | | | | | |
| Dongmeiang village | Flood protection levee and Riverbank stabilization (16,500m$^2$) | 16,500 | Public land | 08 (N/A) | - |
| Sivilay village | 1$^{st}$ pond (3,200m$^2$)<br>2$^{nd}$ pond (1,350m$^2$) | 4,550 | Public land | 09 (9.469ha) | - |
| **Sepone district** | | | | | |
| Thamae village | 1 Pond improvement (6,690m$^2$) | 6,690 | Public land | - | 4 (3ha) |
| **Songkhone district** | | | | | |
| Songkhone village | Pond improvement (3,771m$^2$),) | 17,981 | Public land | 04 (1.3ha) | 03 (2.7ha) |
| | shelter evacuation (9,742m$^2$ | | | | |
| **Xonnabouly district** | | | | | |
| Nonsavang village | Pond improvement (18,117m$^2$) | 18,117 | Public land | 07 (33.71m$^2$) | 16 (44.3m$^2$) |

Consultations in the field, including meetings with affected communities and village leaders, have identified the households impacted by the construction activities as detailed in the table below.

- Dongmeuang village

| SN | Head of Household name | Land use type | Areas (m2 or ha) | Left | Rights | At site |
|---|---|---|---|---|---|---|
| 1. | Mr Sisunan | House land | | ✓ | | |
| 2. | Mrs Vanhdee | House land | Housing | ✓ | | |
| 3. | Mr Khampang | House land | housing | ✓ | | |
| 4. | Mrs Kheownaipo | House land | | ✓ | | |
| 5. | Mrs Kewudom | House land | housing | ✓ | | |
| 6. | Mr Kaison | House land | housing | ✓ | | |
| 7. | Mr Vilaxay | House land | | ✓ | | |
| 8. | Mrs Thing Thong | | | | | |
| 9. | Mr Phongsavanh | | | | | |

- Sivilay village

| SN | Head of Household name | Land use type | Areas (m2 or ha) | Left | Rights | At site |
|---|---|---|---|---|---|---|
| 1. | Mr. Ler Vongphachan | Garden | 854 **m2** | ✓ | | |
| 2. | Ms. Pahxaykhorn | Bare land | 1,5 **ha** | ✓ | | |
| 3. | Ms. Nou | Ricefield | 2 **ha** | | ✓ | |
| 4. | Mr. Phet | House land | 415 **m2** | | ✓ | |
| 5. | Mr. Lai | Ricefield | 1,5 **ha** | | ✓ | |
| 6. | Ms. Pey | Ricefield | 1 **ha** | | ✓ | |
| 7. | Ms. Kaisorn | Ricefield | 1 **ha** | ✓ | | |
| 8. | Mr. Bountherng (Yong).<br>Ms. Noy + Mr. Som | Ricefield | 1,2 **ha** | ✓ | | |

- Thamae village

**The private land plot will have impacted by the temporary access road to the construction site**

| SN | Head of Household name | Land use type | Areas ($m^2$ or ha) | Left | Rights | At site |
|---|---|---|---|---|---|---|
| 1. | Mr Kongma | House land | 600 $m^2$ | | ✓ | |
| 2. | Mr Kadoaung | House land | 600 $m^2$ | | ✓ | |
| 3. | Mr Khan | House land | 600 $m^2$ | ✓ | | |
| 4. | Mr Khamboun | Garden | 1200 $m^2$ | | ✓ | |

- Nonsavang village

**Private land plot sharing a boundary with the construction site**

| SN | Head of Household name | Land use type | Areas (m2 or ha) | Left | Rights | At site |
|---|---|---|---|---|---|---|
| 1. | Ms. Phoutphonexay | Naseang | 5,00 | | ✓ | |
| 2. | Ms. Khum | Naseang | 3,00 | | ✓ | |
| 3. | Mr. Kornjun | Naseang | 7,53 | | ✓ | |
| 4. | Mr. Phon | Naseang | 5,4 | ✓ | | |
| 5. | Ms. Sa | Naseang | 3,7 | ✓ | | |
| 6. | Mr. Nah | Naseang | 6,03 | ✓ | | |
| 7. | Mr. Khumlar | Naseang | 3,05 | | ✓ | |

**Private land plot will have impacted by the temporary access road to construction site**

| SN | Head of Household name | Land use type | Areas ($m^2$ or ha) | Left | Rights | At site |
|---|---|---|---|---|---|---|
| 1. | Mr. Morn | | 10,5 | | ✓ | |
| 2. | Ms. Phouy | | 4,00 | ✓ | | |
| 3. | Phi liang | | 2,7 | ✓ | | |
| 4. | Ms. Yin | | 1,5 | | ✓ | |
| 5. | Ms. Seam | | 3,6 | | ✓ | |
| 6. | Mr. Vang | | 5,2 | | ✓ | |
| 7. | Mr. Thaiy | | 3,7 | | ✓ | |
| 8. | Ms. Vela | | 3,00 | | ✓ | |
| 9. | Mr. Thon | | 1,00 | ✓ | | |
| 10. | Mr. Khong | | 2,00 | | ✓ | |
| 11. | Ms. Shai | | 1,00 | | ✓ | |
| 12. | Ms. Moh | | 1,5 | | ✓ | |
| 13. | Mr. Khumbor | | 0,6 | | ✓ | |
| 14. | Mr. Phoukhong | | 1,00 | ✓ | | |
| 15. | Mr. Mouan | | 1,00 | | ✓ | |
| 16. | Mr. Vanh | | 2,00 | | ✓ | |

**Regulatory framework**

Lao PDR regulatory framework

In Lao PDR, compensation principles and the policy framework for land acquisition and resettlement are regulated by various laws, decrees, and regulations. These include: (a) The Constitution (1991), (b) the Land Law (2003), (c) the Road Law (1999), (d) the Prime Minister's Decree on Compensation and Resettlement of People Affected by Development Projects (No.192/PM, dated 7 July 2005), and (e) the Regulations for Implementing the Prime Minister's Decree on Compensation and Resettlement of People Affected by Development Projects (No.2432/STEA, dated 11 November 2005) (CR Decree).

The Technical Guidelines of the CR Decree have recently been finalized, and training is being provided to key agencies and provinces. The approval of a new decree on Environmental Impact Assessment (EIA) in early 2010 will establish a robust legal basis for development projects to conduct social assessments and implement necessary mitigation measures. Additionally, a Public Involvement Guideline, anticipated to be approved by the Minister, WREA by the end of July 2010, provides a legal basis for individuals affected by development projects and relevant stakeholders to participate in project development and monitoring.

**UNDP SES Land Acquisition Standards**

UNDP aims to prevent physical and economic displacement. When unavoidable, it must be justified and include legal protection and compensation. Displacement risks impoverishment and impacts livelihoods, housing, food security, social cohesion, and well-being. In so doing, UNDP seeks:

- To recognize and respect the prohibition on forced evictions
- To anticipate and avoid, or, when avoidance is not possible, minimize adverse social and economic impacts from land or resource acquisition or restrictions on land or resource use
- To enhance and restore the livelihoods of all displaced persons, and to improve the standards of living and overall socioeconomic status of displaced poor and other displaced groups and to support efforts to progressively realize the rights to adequate housing and adequate standards of living for displaced populations
- To ensure that resettlement activities are planned and implemented collaboratively with the meaningful and informed participation of those affected

UNDP projects seek to avoid physical and economic displacement and minimize and mitigate displacement impacts and inherent risks when displacement cannot be avoided. To this end, projects that may involve displacement include the following measures and others identified as necessary:

- As part of the assessment, consider all project alternatives to avoid displacement. Minimize displacement and show that land acquisition or restrictions are limited to project needs.
- Where displacement is unavoidable, use experienced professionals to establish baseline information, design displacement activities, and assess risks. Identify affected persons, lands, and assets through surveys and inventories, acknowledging customary and communal land tenure rights.
- For significant displacement, conduct an Environmental and Social Impact Assessment (ESIA) focusing on marginalized and disadvantaged groups, and consider risks from hazards in resettlement site selection. For minimal displacement, negotiate fair compensation without an ESIA.
- Disseminate written justification and disclosure of an action plan well in advance. Ensure access to effective remedies and legal counsel.
- Consult affected populations, strive for negotiated settlements, and evaluate livelihood levels post-displacement to meet objectives.

**Framework for land acquisition and compensation**

General principles

Both the procedures and principles described in the GoL's decree and its implementing regulations on the Compensation and Resettlement of People Affected by Development Projects and the UNDP Social and environmental standard will be applied. In this regard the following principles and objectives would be applied:

The land acquisition and resettlement framework are guided by the following principles:

- Minimization of Displacement: Efforts will be made to minimize land acquisition and displacement through alternative project designs and the selection of sites that cause the least disruption to communities.
- Consultation and Participation: Affected persons will be consulted and involved in planning and implementation processes. Their views and concerns will be considered in decision-making.
- Compensation and Assistance: Fair compensation will be provided for lost assets at replacement cost, and support will be offered to help affected persons restore their livelihoods.
- Transparency and Accountability: Processes will be transparent, with clear communication and documentation available to all stakeholders.
- Grievance Redress Mechanism: A robust mechanism will be established to address grievances and ensure timely resolution of disputes.

**Compensation and entitlements**

Eligibility: All Project Affected Persons (PAPs) identified in the project-impacted areas before or on the cut-off date (TBD) are entitled to compensation for their affected assets and rehabilitation measures designed to preserve or enhance their living standards, income capacity, and production levels. The cut-off date is the final day of the Detailed Measurement Survey (DMS) for each investment. Individuals who encroach after the cut-off date will not be eligible for compensation or assistance.

*Entitlements*: The Project will provide specific entitlements to each category of PAPs, based on impact types and their entitlements, following the entitlement matrix.

**Table 5: Entitlement matrix**

| Type of Losses | Entitled Persons | Entitlements | Implementation Issues |
|---|---|---|---|
| Productive Land (paddy, and Plantation) | Legal owner or occupant identified during census and tagging | For marginal loss of land, cash compensation at replacement cost which is equivalent to the current market value of land within the village, of similar type, category and productive capacity, free from transaction costs (taxes, administration fees),<br><br>If the impact on the total productive land is 10 % or more, as a priority, replacement land of similar type, category and productive capacity of land within or nearby the village, with land title. if Land Titling Project is ongoing in the area. If not, land use certificate to be issued. OR at the request of PAP, cash compensation at replacement cost plus assistance to purchase and register land | Legal owners are those who received land use certificates or land titles from the Land Titling Project. Voluntary donation of productive land, will not be allowed by the Project. |
| Residential Land | Legal owner or occupant identified during census and tagging | With remaining land sufficient to rebuild houses/structures: (i) Cash compensation at replacement cost which is equivalent to the current market value of land of similar type and category, and free from transaction costs (taxes, administration fees) and (ii) District government to improve remaining residential land at no cost to PAPs (e.g. filling and leveling) so PAPs can move back on remaining plot.<br><br>Without remaining land sufficient to rebuild houses/structures: (i) Replacement land equal in area, same type and category, without charge for taxes, registration and land transfer, with land title if Land Titling Project is ongoing in the area; if not, land survey certificate, OR (ii) cash compensation at replacement cost which is equivalent to the current market value of land of similar type and category, free from transaction costs (taxes, administration fees) plus assistance to purchase and register land. | • Legal owners are those who have land use certificates or land titles from the Land Titling Project. • Voluntary donation of minor strips of residential land will only be allowed by the Project provided that the following criteria are strictly complied with: (i) the PAP's total residential land area is not less than 300 m2 ; (ii) if the PAP's total residential land area is more than 300 m2 , the strip of land that can be donated cannot be more than 5% of the total land area; and (iii) there are no houses, structures or fixed assets on the affected portion of land. • Voluntary donation according to these criteria will follow the process in accordance with the project operation manual. |
| Temporary Use of Land | Legal owner or occupant | For agricultural and residential land to be used by the contractor as by-pass routes or for contractor's working space, (i) rent to be agreed between the landowner and the contractor but should not be less than the unrealized income and revenue that could be generated by the property during the period of temporary use of the land; (ii) cash compensation at replacement cost for affected fixed assets (e.g., structures, trees, crops); and (iii) restoration of the temporarily used land within 1 month after closure of the by-pass route or removal of equipment and materials from contractor's working space subject to the conditions agreed between the landowner and the contractor. | The construction supervision consultant will ensure that the (i) location and alignment of the by-pass route to be proposed by the will have the least adverse social impacts; (ii) that the landowner is adequately informed of his/her rights and entitlements as per the investment project resettlement policy; and (iii) agreement reached between the landowner and the contractor are carried out. |
| Crops and Trees | Owner of crops and trees whether or not land is owned | If standing annual crops are ripening and cannot be harvested, cash compensation at replacement cost equivalent to the highest production of crop over the last three years multiplied by the current market value of crops.<br><br>For perennial crops and trees, cash compensation at replacement cost equivalent to current market value based on type, age, and productive capacity. | |

| | | | |
|---|---|---|---|
| | | For timber trees, cash compensation at replacement cost equivalent to current market value based on type, age and diameter at breast height (DBH) of trees | |
| Permanent loss of physical cultural resources/public structures/village or collective ownerships | Villagers or village households | Compensation at replacement cost for present/existing structures based on its present value. | |
| Severe impacts on vulnerable PAPs (Relocating PAPs and those losing 10% or more of their productive assets) | Severely affected vulnerable PAPs such as the poorest, or households headed by women, the elderly, or disabled, and ethnic groups | An additional allowance of 1 month supply of rice per person in the household.<br><br>Eligible to participate in income restoration programme<br><br>The contractors will make all reasonable efforts to recruit severely affected and vulnerable PAPs as labourers for road construction and road maintenance works | The poorest will be those below the national poverty line as defined in the poverty partnership agreement with the Project. |

***Special considerations***

*Vulnerability, gender, and ethnicity*: The project acknowledges that some social groups may struggle to restore their living conditions and livelihoods. It addresses these issues by adopting participatory planning and decision-making processes. Women in rural villages are vital to household economies and community livelihood development. They will be empowered to actively participate in community activities, projects, and other collective efforts supporting project implementation and monitoring.

The Project will focus on women and female households as beneficiaries. Women's participation in all project activities is crucial for sustainability. Measures will address the needs of landless, poor, and vulnerable households, including those headed by women, disabled, elderly, or unsupported children.

*Voluntary land donation*: In cases where minimal land acquisition or relocation is necessary, it may occur voluntarily or with compensation provided by the grant recipient, typically the village, but not from the Project fund. According to traditional practices, villagers may choose to contribute land or assets voluntarily and/or relocate temporarily or permanently from their land without compensation. This may be justified because the project could either increase the value of the remaining property or provide another direct benefit to the affected individuals.

Voluntary contributions will not be approved if they significantly harm the incomes or living standards of owners or users. Donations will only be applied to minor losses of residential and agricultural land, as detailed below:

- Voluntary contribution involves informed consent, and Project staff will ensure that contributions are made with prior understanding of available alternatives, compensation, and entitlements, without coercion or pressure.

**Implementation process**

Before starting work, Project staff will ensure compensation includes replacement of land with equally productive assets; materials and help to rebuild demolished structures; market value for damaged crops; and other acceptable in-kind compensation.

For both voluntary land contributions and compensated acquisitions, Project staff will consult all affected land occupants and asset owners to reach agreements. The proposal will describe those affected, the impacts (land, trees, crops, structures), and the compensation agreements. Staff will arrange village meetings to inform villagers of their rights and options. The meeting minutes will detail the discussions and agreements made.

- For any voluntary contribution: the contributor's name and details about the contribution.
- For land or asset acquisition with compensation: provide names of affected individuals, impacts, and details regarding the type and amount of compensation.

The project staff will share the minutes with affected persons, confirming their compensation requests, agreements, and any complaints in private discussions. Copies will be kept for monitoring and supervision.

The Project staff will assist the villagers in preparing the required reports, which will be reviewed by the Project Management Unit (PMU). No activities requiring a Land Acquisition Report or Resettlement Report will be approved

unless the report has also been approved by the local authority and the UNDP project team. Activities that would require demolition of houses or acquisition of productive land, whether permanently or temporarily, will be carefully reviewed by Project staff. The review process will ensure that no satisfactory alternative is available, that affected persons have been informed about their rights to compensation and confirms that they have agreed with the arrangements.

**Grievance Redress Mechanism**

A comprehensive grievance redress mechanism (GRM) is established to address any complaints or concerns raised by affected persons. The GRM includes:

- Multiple channels for submitting grievances, including in-person, online, and through community representatives.
- A clear process for logging, investigating, and resolving grievances within a specified timeframe.
- Regular updates to complainants on the status and outcome of their grievances.

A detailed process of the grievance redress mechanism is available in a separate document.

**Monitoring and Information Disclosure**

The Project Management Unit (PMU) will regularly supervise and monitor land acquisition, recording findings and recommendations for review by the UNDP team. Monitoring will occur at least annually, with results included in annual reports. Project staff, in consultation with local governments and PAPs, will establish practical monitoring indicators according to technical guidelines.

External monitoring of land acquisition will be conducted by an independent agency or consultant. They should be hired with terms that specify monitoring frequency, methods, and reporting requirements. The PMU will keep the monitoring reports and share them with the UNDP project team.

# Annex 5: Biodiversity Action Plan

## 1. Project description

The project aims to achieve its objectives through: i) building national and provincial capacities for Integrated Catchment Management (ICM) and urban Ecosystem-based Adaptation (EbA) to address floods and droughts; ii) implementing EbA interventions like forest conservation and restoration, supported by protective infrastructure and sustainable livelihood enhancement; iii) promoting knowledge management and Monitoring and Evaluation (M&E) to collect and share best practices for ICM, flood management, and EbA across Lao PDR.

Activity 2.1.1 focuses on conserving protected forests in Xe Bang Hieng through better zone management and natural regeneration. It also includes restoring degraded headwater conservation zones and implementing EbA interventions to enhance ecosystem services. An ESIA will identify potential environmental impacts like changes in biodiversity, soil erosion, water quality, and social impacts on local communities, including possible displacement or restrictions on resource use.

Similarly, Activity 2.1.2 involves constructing protective infrastructure to address flood and drought risks. The construction of cascading weirs, drainage channels, reservoir networks, and rainwater harvesting systems can impact the hydrology, landscape, and local ecosystems.

## 2. Objectives of Biodiversity Management Plan

This Biodiversity Action Plan (BAP) provides clear, practical instructions to contractors, the Project Management Unit (PMU), and local authorities to protect biodiversity during the implementation of construction and conservation activities under Component 2 (Activities 2.1.1 and 2.1.2).

## 3. Scope

This BAP applies to:

- Forest conservation zones in 6 villages (Sepone & Nong districts)
    - Nong District: Savue village, Nongvilay, Tangalai Neu
    - Sepone district: Kenghuapa village, Sopsalou village, Thamae village
- Protective infrastructure construction (ponds, levees, water tanks, shelters) in 10 villages
- Soil quarry operations and material sourcing
- Activities near National Protected Areas (NPAs) and the Xe Champhone Ramsar site
- Infrastructure subproject with potential impact on biodiversity listed in the table below.

| District/Village | Sub project |
|---|---|
| **Champhone** | |
| Phiaka village | Pond improvement |
| | Flood protection Levee |
| Dongmeuang | Riverbank Stabilization and levee |
| Sivilay | 2 pond improvements |
| **Nong** | |
| Tangalai Nuea | Pond improvement |
| **Sepone** | |
| Sopalou | Community water supply and storage |
| Thamae | Pond improvement |
| **Songkhone** | |
| Songkhone | Pond improvement |
| **Xonnabouly** | |
| Nongsavang | Pond improvement |

### 4. Mitigation measures by Project Phase

| Phases | Mitigation measures |
|---|---|

| | |
|---|---|
| Pre-construction | • Biodiversity Screening: PMU, PONRE, and contractor to conduct joint walk-through at each site to identify sensitive species and mark “No-Go” zones.<br>• Awareness Orientation: Brief all contractors on biodiversity laws and distribute 'Biodiversity Do & Don’t' posters. |
| Construction | • Minimize vegetation clearance and avoid disturbing monkey forests or nesting zones.<br>• Stop work and report wildlife sightings; relocate nests with PONRE support.<br>• Prohibit hunting/fishing by workers.<br>• Avoid construction during rainy season in sensitive wetland areas.<br>• Use sediment traps in erosion-prone zones.<br>• Restrict quarrying to approved borrow pits. |
| Post-construction and rehabilitation | • Replant cleared sites with native species only.<br>• Restore disturbed access paths with grasses and shrubs.<br>• Include wildlife-friendly infrastructure design (e.g., crossings). |

### 5. Biodiversity action and management

Following the impact assessment and proposed mitigation measures, the table below outlines essential biodiversity actions aimed at reducing the impact.

| No | Ecological receptors | Activities | Site | Project phase | Frequently | Responsibility |
|---|---|---|---|---|---|---|
| **A.** | **Conservation of protected forests in the Xe Bang Hieng region** | | | | | |
| 1 | National Protected Areas (NPAs) | Zoning, no-go enforcement, biodiversity monitoring | Xe Bang Hieng NPA near Sepone/Nong | Throughout project cycle | Continuous monitoring | UNDP team PONRE |
| 2 | District Protection Forests | Restrict heavy equipment; minimize disturbance | Nhot Houay Bak, Nongthongbak, Houay Khen | Throughout project cycle | Continuous monitoring | UNDP team PONRE |
| 3 | Xe Champhone Ramsar site | Avoid encroachment; prioritize wetland-compatible solutions | Sopsalou, Thamae | Throughout project cycle | Continuous monitoring | Contractor, PMU, PONRE |
| B | **Construction of protective infrastructure** | | | | | |
| 3 | Native tree species (e.g., Fokienia hodginsii) | Preserve existing trees; use native species for replanting | Phiaka, Sivilay, Thamae | Pre-construction & Construction | Monthly | UNDP team PONRE Contractor |
| 4 | Riparian vegetation | Avoid clearance; replant with erosion-control grasses | Dongmeuang, Sopsalou, Nongsavang | Pre-construction & Construction | Monthly | UNDP team PONRE Contractor |
| 5 | Wetland grasses & aquatic plants | Avoid draining wetlands; replant disturbed areas | Sopsalou, Songkhone | Construction & Operation | Semesterly | UNDP team PONRE Contractor |
| 6 | Birds (e.g., river terns, lapwings) | Avoid disturbance during nesting; relocate nests | Dongmeuang, Songkhone | Construction | Monthly | UNDP team PONRE Contractor |
| 7 | Monkeys in forest habitat | Avoid tree felling in monkey forests; prevent worker contact | Monkey forest area (Nongsavang and Dongmueang) | Construction | Continuous | UNDP team PONRE Contractor |
| 8 | Fish (migratory and spawning) | Avoid in-stream works during spawning season; install fish passages | Tangalai Neu, Songkhone | Construction | Continuous | UNDP team PONRE Contractor |
| 9 | Wildlife corridors | Design crossings (culverts, underpasses) | Dongmeuang, Nongsavang | Construction | One-time | UNDP team PONRE Contractor |

Source: Author

### 6. Monitoring and evaluation

The monitoring and evaluation of the biodiversity action plan are crucial processes undertaken by the Project Management Unit (PMU) and the project team. These activities ensure that the objectives of the conservation efforts are met, and adjustments are made as necessary to enhance the effectiveness of the strategies implemented.

- The PMU schedules regular site visits to the protected forests in the Xe Bang Hieng region. During these visits, de. tailed observations and data collection are conducted to assess the current state of biodiversity and any changes that may have occurred.
- The collected data are analyzed to identify trends, threats, and conservation successes. This analysis helps in making informed decisions about necessary interventions and adjustments to the action plan.
- Engaging local communities, researchers, and other stakeholders is integral to the monitoring process. Their input provides valuable insights and helps in ensuring that the conservation efforts are inclusive and consider local knowledge and concerns.
- The PMU conducts periodic reviews of the action plan to evaluate its effectiveness. These reviews involve:
    - Comparing current biodiversity data against benchmarks
    - Assessing the impact of implemented strategies
    - Identifying areas where the plan may need adjustments
- Comprehensive reports are generated at regular intervals to document the findings of the monitoring and evaluation processes. These reports include:
    - Detailed analysis of species data
    - Progress against benchmarks
    - Recommendations for future actions

# Annex 6: Labour Management Procedures

**Purpose**
The Labour Management Plan prioritizes fair treatment, non-discrimination, and equal opportunity for all workers. It establishes and fosters a constructive worker-management relationship while complying with national employment and labour laws. It is committed to providing a safe working environment for all categories of workers involved in the project.

**Applicable Regulations**
- UNDP Standard 7 on Labour and Working Conditions
- World Bank Group Environmental, Health, and Safety General Guidelines (2008)

**Roles and Responsibilities**

**Project Management Unit**
- The PMU oversees the implementation of the Labour Management Plan by the Contractor.
- Conduct regular inspections to ensure compliance with labour management protocols and identify areas requiring improvement.
- Provide guidance and support to the Contractor team on providing awareness on the labour management practices, regulations, requirements and operation of the GRM.
- Coordinate with relevant stakeholders to address any non-compliance issues promptly and implement corrective actions.
- Contractor (Admin Manager)
- Ensure that the Labour Management Plan is being implemented online.
- Ensure that the project is in compliance with the national regulations and best practices.
- Ensure that no workers are discriminated upon based on gender, age, skill, class, creed, ethnicity etc.
- Ensure that the workers are aware of their terms and conditions and benefits.
- Provide training awareness on workers terms and conditions including GBV and SEAH related aspects.
- Maintain all records of workers including age, address, attendance including overtime hours records, wage register including overtime wages, health/accident insurances etc.
- Verify all workers engaged as per Child and Forced Labour regulations.
- Provide all records to PMU as requested during inspection.

**Standard Operating Procedure**
The following aspects should be undertaken by the Contractor,

Terms and Conditions of Workers
- Contractor to ensure that proper communication is undertaken to inform the Community Chief or Council on the requirements of employment to engage local population in the project.
- Contractor to ensure that all workers engaged have proper appointment letters with terms and conditions of employment mentioned.
- Contractor to ensure that working hours, weekly offs and overtime work and wage are adequately captured in the terms and conditions of employment.
- Contractor to ensure that all workers are provided equal payment as per the national regulations for the type of work performed irrespective of gender.
- Contractor to ensure that workers are provided equal opportunities of employment irrespective of any discriminatory practices.
- Contractor to ensure that the date of payment of wages is clearly defined within the appointment letter.
- Contractor to ensure that during the Induction Trainings of workers onsite, the terms and conditions are duly communicated to all workers engaged onsite.

**Verification of all Workers**
- Contractor to ensure that all workers engaged are duly verified based on their date of birth and address with national identity cards.
- Contractor to ensure that all records of workers are maintained by them including their address of residence.
- Contractor to ensure that the national identity cards of the workers are provided back to workers post verification process.

**Working Conditions on Site**
- Contractor to ensure that all workers are informed of the site conditions and risks during the Induction Training.

- Contractor to develop Code of Conduct for the workers.
- Contractor to ensure that all workers are given adequate information on the Code of Conduct and ensure its implementation onsite.
- Contractor to ensure that adequate sanitary, safe drinking water, designated areas for rest and dining are provided to all workers.
- Contractor to ensure that all workers duly informed about the safety signages displayed onsite and its interpretation.
- Contractor to ensure that all workers engaged onsite are provided Toolbox Talks on a daily basis prior to work onsite.
- Contractor to ensure that all workers are provided adequate information on the Grievance Redressal mechanism implemented onsite including the contact details of the Grievance Officer designated onsite.
- Contractor to ensure that all national regulations and best practices including the respective Management Plans are implemented onsite and records are maintained onsite.
- Contractor to ensure that trainings on routine work are duly provided to all workers and training records are maintained onsite.
- Contractor to ensure that all workers are provide adequate PPEs onsite and the same is captured in the PPE Issuance Register.
- Contractor to ensure that all workers maintain good housekeeping conditions onsite.
- Contractor to ensure that all workers follow instructions on Waste Management onsite including accommodation provided on rental basis to any semi-skilled and skilled workers engaged from outside the project area.
- Contractor to ensure that all communication with the local community is duly captured in the Minutes of Meetings.
- Contractor to ensure that all workers are insured for medical/accidental purposes.
- Contractor to provide all information sought by PMU as and when necessary, in auditable formats.

**Monitoring**

- PMU to ensure that the Contractor is implementing the Management Plan onsite.
- PMU to ensure and verify that the Contractor is adequately capturing all information of workers including all records.
- PMU to monitor the performance of workers once a month to ensure that no untoward incidents occur related to workers.
- PMU to ensure that the Contractor captures all grievances of workers adequately in the Grievance Log and assess its closure to the satisfaction of the grievant party.
- PMU to provide feedback to the Contractor on any non-compliances noted during the monthly inspection. All communication between PMU and Contractor to be adequately documented.

**Documentation**

- Record of workers engaged onsite
- Training records
- Grievance Log
- PPE Issuance Register

# Annex 7: Spillover Prevention and Waste Management Plan

**Purpose**

The Construction Spillover and Waste Management Plan ensures minimal environmental impact and protects public health during the construction period of the project. The Plan is aligned with international best practices, it prioritizes waste reduction at the source and outlines clear guidelines for segregation, collection, and disposal. By minimizing waste generation and implementing proper management procedures, this plan safeguards the surrounding natural environment from pollution and degradation, while also protecting the health and safety of nearby communities.

**Applicable Regulations**

The following regulations and guidelines shall be adhered to by the Project Team,

- The Enhancement and Conservation of National Environment Quality
- Water Resources
- UNDP Standard 8 on Pollution Prevention and Resource Efficiency

**Roles and Responsibilities**

**PMU**

- Conduct regular inspections to ensure compliance with waste management protocols and identify areas requiring improvement.
- Provide guidance and support to the Contractor team on providing awareness of the waste management practices, regulations, and requirements.
- Monitor waste handling, segregation, recycling, and disposal activities by the Contractor to verify adherence to the plan.
- Coordinate with relevant stakeholders to address any non-compliance issues promptly and implement corrective actions.
- Keep detailed records of waste management activities, including waste generation, segregation, recycling, and disposal, for reporting and regulatory compliance.
- Contractor EHS/Safety Officer
- Ensure proper segregation and storage of waste materials in designated areas as outlined in the waste management plan.
- Provide necessary training to workers on waste management practices, including waste segregation, recycling, and disposal methods.
- Cooperate with the PMU during inspections and audits, implementing corrective actions as required.
- Ensure that the working manpower attends all training arranged by the EHS/Safety Officer.
- Maintain records of waste generation and disposal records including training provided.

**Management Measures**

Waste Generation Impacts

The following waste generation streams have been identified for the construction phase of the project,

- Construction and demolition waste
- Excavated waste
- Packaging waste
- Domestic waste
- Battery waste

The identified activities and potential impacts relevant to waste generation including waste classification are summarized in the table below

**Table 6: Potential Impact of Waste Generation**

| Activity | Waste Type | Potential Impact |
|---|---|---|

| | | |
|---|---|---|
| Excavation and Earthworks | • Generation of excavated material<br>• Excess spoil | • Increased waste from improper practices or failure to implement waste hierarchy.<br>• Excess volumes of excavated material requiring storage, treatment, or disposal<br>• Incorrect treatment of potentially contaminated soils leading to regulatory non-compliance or environmental impact |
| Demolition and construction waste | • Generation of inert waste<br>• Generation of liquid hazardous waste<br>• Resource consumption (fuel and power)<br>• Iron and steel, Non-ferrous scrap associated with construction activities | • Increased waste from improper practices or failure to implement waste hierarchy.<br>• Inappropriate disposal of hazardous wastes leading to regulatory non-compliance or environmental harm<br>• Inappropriate disposal of wastewater leading to environmental and community health and safety concerns<br>• Reduced resource availability |
| Workshop (if any) Operations | • Packaging materials including scrap metals, timber, and cardboard<br>• Batteries<br>• Oil and Lubricants<br>• Oil-soaked clothes and rags | Increased waste from improper practices or failure to implement waste hierarchy |
| General office/ administration, amenities including food and human waste | • Generation of Office Waste<br>• Generation of Food and Domestic Waste<br>• Generation of Grey and Septic Waste | • Increased waste from improper practices or failure to implement waste hierarchy.<br>• Inappropriate disposal of domestic waste from construction personnel<br>• Inappropriate disposal of grey and septic wastes leading to regulatory non-compliance or environmental risks |
| Storage of Waste on-site | • Emissions to air, land, and water<br>• Classification and segregation of waste | • Pollution of soils, groundwater and surface water<br>• Dust emissions or odor pollution<br>• Reduction in re-use of waste<br>• Contamination of soil |
| Waste transport and disposal | • Unlicensed waste contractor's transporting waste | • Regulatory non-compliance<br>• Potential illegal dumping of waste |

**Management and Mitigation Measures**
All waste that would be generated onsite would be mitigated through measures as depicted in the waste management hierarchy framework illustrated below,

**Material Storage, Handling, and Use**

Material handling and storage areas are to be mitigated through the following measures,

- The Contractor must implement his own waste recycling system, i.e. separate bins for food waste,plastics, paper, wood, glass cardboard, metals, etc.
- Re-using materials on site wherever possible during the construction phase with respect to excavated spoil;
- Instituting good housekeeping and operating practices, including inventory control to reduce the amountof waste resulting from materials that are out-of-date, off-specification, contaminated, damaged, or excess to construction needs;
- Substituting raw materials or inputs with less hazardous or toxic materials wherever economically andtechnically feasible;
- Designate an area within the project site for material storage with proper storage mechanisms.
- The location of all temporary waste storage areas must aim to minimise the potential for impact

on thesurrounding environment, including prevention of contaminated runoff, seepage, and vermin control.

**Construction Debris**

- The disposal of construction debris including muck, concrete aggregates etc are to be disposed off atidentified and approved muck disposal sites in consultation with the PMU.
- Trash and debris are not to be buried within filled or backfill areas.
- All arrangements for transportation during construction including provision, maintenance, clearingdebris, where necessary, are to be considered incidental to the work and should be planned and implemented by the Contractor.
- Once the work is completed, all construction generated debris are to be cleared from the site by theContractor.

**Solid Waste**

- All the Solid waste generated including Biodegradable waste, plastic waste, cans, non-biodegradable waste, etc. will be collected at a pre-designated area such as a compostable organic portion of the solid waste would be disposed of through composting in a dug pit or can be sold directly to the agriculture farmers and piggeries. The recyclable portions such as plastic bottles, cans, etc. shall be segregated and are to be kept at the designated site and later can be sold to the recycling vendors.
- The Contractor is to identify and demarcate disposal areas, indicating the specific materials that can be deposited in each waste container.
- The storage area should be covered to prevent direct contact with surface runoff and be fenced off to prevent wind-blown litter.
- The Contractors are to ensure that all facilities have good housekeeping conditions and that the construction sites are kept free of litter. Measures are to be implemented to reduce the potential for litter and negligent behaviour in waste disposal.
- Recyclable materials such as wooden plates, steel, packaging material, paper, empty cement bags and containers, glass, wood, and junk are to be collected and segregated on-site.
- The collected recyclable material is to be reused or sold to a waste collector for recycling.
- Open burning of solid waste is to be strictly prohibited.
- Workers are to be trained on waste segregation practices, with demarcated bins provided for recyclables and perishables placed in common areas.

**Wastewater Management**

The Contractor is responsible for complying with local legislation related to wastewater discharges. The following processes should be implemented for effective wastewater management,

- Construction and installation of sand trap and access road strengthening to mitigate erosion risks,control sediment runoff, and improve site safety.
- Domestic sewage from the site office and toilets should be treated using on-site soakpits. The discharge of treated wastewater must comply with local wastewater discharge standards.
- Under no condition, wastewater is to be discharged into water bodies without prior treatment.
- Domestic sewage collected from the site office and toilets should be cleaned weekly.

**Training and Awareness**

- The contractor is to conduct comprehensive training programmes for all workers involved in waste handling toraise awareness about the hazards associated with different types of waste.
- Emphasize the importance of proper segregation and handling procedures to minimize risks.
- Display informational materials, such as posters and pamphlets, to raise awareness about wastemanagement practices and encourage active participation.

**Monitoring and Reporting**

A monthly review is to be undertaken to evaluate the effectiveness of the Waste Management Plan by the PMU.Identification of areas for improvement and implementation of necessary changes to enhance waste management practices is to be part of the monitoring process.

Water quality testing is to be undertaken by the Contractor once during and once after the construction phase. Parameters to be monitored and is to be analyzed to evaluate water quality standards include pH, dissolved oxygen (DO), turbidity, temperature, and major pollutants (e.g., suspended solids, heavy metals)

Regular visual inspections of water intake points, treatment facilities, and discharge outlets are to be conducted toidentify any visible anomalies, leaks, or spills, discharged at unauthorized sites or directly into the river by theContractor.

All waste generated will be tracked on the Waste Tracking Log as per the format provided below

**Table 7: Waste Tracking Log**

| S. No | Type of Waste | Source | Quantity Generated | Total Disposed | Disposal method | Total Stored currently |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

The Contractor will keep accurate records that track the amount of waste generated and the disposal methodused, and materials recovered and their subsequent use. The volume of waste produced on site will be monitored through visual inspection of the content of waste containers and recording of waste quantity producedby type of waste. Activities likely to produce additional or non-routine waste will be pre-notified to the Contractor's EHS/Safety Officer.

# Annex 8: Stakeholder Engagement Plan

The SEP defines a structured, purposeful and culturally appropriate approach to consultation and disclosure of information, in accordance with UNDP Principle 5 on Accountability. UNDP recognises the diverse and varied interests and expectations of project stakeholders and seeks to develop an approach for reaching each of the stakeholders in the different capacities at which they interface with the Project. The aim is to create an atmosphere of understanding that actively involves project-affected people and other stakeholders leading to improved decision making.

Overall, this SEP will serve the following purposes:

- Define a plan for stakeholder engagement, including information disclosure and consultation, throughout the project lifespan;
- Stakeholder identification and analysis;
- Planning engagement modalities through effective communication, consultations and disclosure;
- Provide enabling platforms for influencing decisions;
- Define roles and responsibilities for the implementation of the SEP;
- Define reporting and monitoring measures to ensure the effectiveness of the SEP and periodical reviews of the SEP based on findings;
- Elaborate on the Project Grievance Redress Mechanism (GRM).

## Stakeholder Mapping and Analysis

The stakeholders in the project were identified based on their level of interest and influence over the project activities. The stakeholders were primarily divided into direct and indirect and further regrouped as internal and external. In the table below, the types of stakeholders as per their level of interest and influence have been provided.

**Table 8: Types of Stakeholders as per their interest and influence**

| Type of Stakeholders | Descriptions | Groups + Individuals |
|---|---|---|
| Government ministries (at central and provincial levels) | Direct internal stakeholders comprise the project proponent and the staff of the proponent that are directly controlled by the proponent | • Ministry of Agriculture and Environment (MAE)<br>• Ministry of Finance (MOF)<br>• Ministry of Agriculture and Forestry (MAF)<br>• Ministry of Planning and Investment (MPI)<br>• Ministry of Public Works and Transportation<br>• Ministry of Information, Culture and Tourism (MICT)<br>• Ministry of Labour and Social Welfare |
| National organizations | Direct internal stakeholders comprise the project proponent and the staff of the proponent that are directly controlled by the proponent | • Department of Water Resources (DWR) in MAE<br>• Department of Meteorology and Hydrology (DMH) in MAE<br>• Department of Environmental Quality Promotion (DEQP) in MAE<br>• Department of Climate Change (DCC) in MAE<br>• Department of Environmental and Social Impact Assessment (DoESIA) in MAE<br>• Department of Forestry (DOF) in MAF<br>• Department of Planning and Finance in MAF<br>• Department of Agriculture Land Management (DALAM) in DAF<br>• Department of Planning (DOP) in MPI<br>• Department of International Coordination (DIC) in MPI<br>• Department of Technical Extension and Agro-processing), (MAF)<br>• Department of Social Welfare, (MLSW) |

| | | |
|---|---|---|
| | | • Lao Women's Union (LWU)<br>• Mekong River Commission (MRC) |
| Regional and local administrations | Direct internal stakeholders comprise the project proponent and the staff of the proponent that are directly controlled by the proponent | • Savannakhet Department of Planning and Investment<br>• Provincial Office of Natural Resources and Environment (PONRE)<br>• District Offices of Natural Resources and Environment (DONREs)<br>• Provincial Agriculture and Forest Office (PAFO)<br>• District Agriculture and Forest Offices (DAFOs)<br>• Provincial Labour and Social Welfare Department<br>• Provincial Department of Planning and Investment |
| Community-level stakeholders | Direct internal stakeholders comprise the project proponent and the staff of the proponent that are directly controlled by the proponent | • Village Development Committees<br>• Village leaders<br>• Natural resource user groups<br>• Women's groups<br>• Other vulnerable or marginalised groups<br>• CBOs |
| Development Partners | Indirect external stakeholders comprise the project affected people/families, contractors, supply chain and financial intermediary who are indirectly affected by the project activities but are not directly controlled by the project proponent. | • UNEP<br>• IFAD<br>• FAO<br>• World Bank<br>• JICA<br>• BMZ<br>• ADB<br>• KOICA |
| Non-Governmental Organizations (NGOs) and/or Civil Society Organizations (CSOs) | Indirect external stakeholders comprise the project affected people/families, contractors, supply chain and financial intermediary who are indirectly affected by the project activities but are not directly controlled by the project proponent. | • Wildlife Conservation Society (WCS)<br>• International Union for Conservation of Nature (IUCN)<br>• Lao Wildlife Conservation Association (LWCA)<br>• World Wide Fund for Nature (WWF) |
| Research institutions | Indirect external stakeholders comprise the project affected people/families, contractors, supply chain and financial intermediary who are indirectly affected by the project activities but are not directly controlled by the project proponent. | • National University of Lao PDR (NUoL)<br>• National Agriculture and Forestry Research Institute (NAFRI)<br>• National Economic Research Institute<br>• Center for Statistics and Information in MAF<br>• Lao Statistics Bureau (MPI) |
| Private sector | Indirect external stakeholders comprise the project affected people/families, contractors, supply chain and financial intermediary who are indirectly affected by the project activities but are not directly controlled by the project proponent. | • Land concession owners related to agriculture and tree plantations<br>• Construction companies, especially those involved in agriculture |

## Stakeholder Analysis

Stakeholder analysis takes a more comprehensive view of the stakeholder's group interests, how they would be affected and to what extent and influence they could have on the project. These aspects cumulatively provide the basis for constructing the stakeholder engagement strategy. The key stakeholders identified in the previous section have been categorised into four major groups: Government Agencies, Positively Influenced Stakeholders, Critical to Engage and Donors. The categorisation list of key stakeholders has been provided in the following Table.

**Table 9: Categorization List of Key Stakeholders**

| Categorisation | Key Stakeholders | Descriptions |
|---|---|---|
| Government ministries (at central and provincial levels) | • Ministry of Agriculture and Environment (MAE) | • Beneficiaries of capacity-building; development of relevant plans |

| | | |
|---|---|---|
| | • Ministry of Finance (MOF)<br>• Ministry of Agriculture and Forestry (MAF)<br>• Ministry of Planning and Investment (MPI)<br>• Ministry of Public Works and Transportation<br>• Ministry of Information, Culture and Tourism (MICT)<br>• Ministry of Labour and Social Welfare | • Delivery of technical components of programmes according to sectoral expertise<br>• Coordination with local authorities<br>• Mobilisation of human and financial resources |
| National organisations | • Department of Water Resources (DWR) in MAE<br>• Department of Meteorology and Hydrology (DMH) in MAE<br>• Department of Environmental Quality Promotion (DEQP) in MAE<br>• Department of Climate Change (DCC) in MAE<br>• Department of Environmental and Social Impact Assessment (DoESIA) in MAE<br>• Department of Forestry (DOF) in MAF<br>• Department of Planning and Finance in MAF<br>• Department of Agriculture Land Management (DALAM) in DAF<br>• Department of Planning (DOP) in MPI<br>• Department of International Coordination (DIC) in MPI<br>• Department of Technical Extension and Agro-processing), (MAF)<br>• Department of Social Welfare, (MLSW)<br>• Lao Women's Union (LWU)<br>• Mekong River Commission (MRC) | • Provision of technical advice<br>• Provision of specialist services |
| Regional and local administrations | • Savannakhet Department of Planning and Investment<br>• Provincial Office of Natural Resources and Environment (PONRE)<br>• District Offices of Natural Resources and Environment (DONREs)<br>• Provincial Agriculture and Forest Office (PAFO)<br>• District Agriculture and Forest Offices (DAFOs)<br>• Provincial Labour and Social Welfare Department<br>• Provincial Department of Planning and Investment | • Beneficiaries of capacity building<br>• Local coordination of activities<br>• Issuance of any relevant authorisations and permits |
| Community-level stakeholders | • Village Development Committees<br>• Village leaders<br>• Natural resource user groups<br>• Women's groups<br>• Other vulnerable or marginalised groups<br>• CBOs | • Community mobilisation<br>• Selection of appropriate interventions<br>• Delivery of programme components<br>• Beneficiaries of capacity building and on-the-ground interventions |
| Development Partners | • UNEP<br>• IFAD<br>• FAO<br>• World Bank<br>• JICA<br>• BMZ<br>• ADB<br>• KOICA | • Provision of technical advice<br>• Sharing of lessons learned from baseline and related projects |

| | | |
|---|---|---|
| Non-Governmental Organizations (NGOs) and/or Civil Society Organizations (CSOs) | • Wildlife Conservation Society (WCS)<br>• International Union for Conservation of Nature (IUCN)<br>• Lao Wildlife Conservation Association (LWCA)<br>• World Wide Fund for Nature (WWF) | • Provision of technical advice<br>• Delivery of training and assets<br>• Social mobilization<br>• Monitoring of ecological conditions |
| Research institutions | • National University of Lao PDR (NUoL)<br>• National Agriculture and Forestry Research Institute (NAFRI)<br>• National Economic Research Institute<br>• Center for Statistics and Information in MAF<br>• Lao Statistics Bureau (MPI) | • Provision of scientific support<br>• The undertaking of research activities |
| Private sector | • Land concession owners related to agriculture and tree plantations<br>• Construction companies, especially those involved in agriculture | • Consultation for market information<br>• Engagement with the development of design standards and analytics considerate of the impacts of climate change |

In order to map the interest/influence of the stakeholders on the project activities, a matrix showcasing the stakeholders and their interest/influence has been developed. This step is to assess the interest/influence into high, medium and low levels. In the table below, the interest/influence matrix has been provided.

**Table 10: Interest/Influence matrix of Stakeholders**

| Categorisation | Key Stakeholders | Influence Power to facilitate or impede the Project | Interest in the Project |
|---|---|---|---|
| Government ministries (at central and provincial levels) | • Ministry of Agriculture and Environment (MAE)<br>• Ministry of Finance (MOF)<br>• Ministry of Agriculture and Forestry (MAF)<br>• Ministry of Planning and Investment (MPI)<br>• Ministry of Public Works and Transportation<br>• Ministry of Information, Culture and Tourism (MICT)<br>• Ministry of Labour and Social Welfare | • High | • Medium |
| National organisations | • Department of Water Resources (DWR) in MAE<br>• Department of Meteorology and Hydrology (DMH) in MAE<br>• Department of Environmental Quality Promotion (DEQP) in MAE<br>• Department of Climate Change (DCC) in MAE<br>• Department of Environmental and Social Impact Assessment (DoESIA) in MAE<br>• Department of Forestry (DOF) in MAF<br>• Department of Planning and Finance in MAF<br>• Department of Agriculture Land Management (DALAM) in DAF<br>• Department of Planning (DOP) in MPI | • | • |

| | | | |
|---|---|---|---|
| | • Department of International Coordination (DIC) in MPI<br>• Department of Technical Extension and Agro-processing), (MAF)<br>• Department of Social Welfare, (MLSW)<br>• Lao Women's Union (LWU)<br>• Mekong River Commission (MRC) | | |
| Regional and local administrations | • Savannakhet Department of Planning and Investment<br>• Provincial Office of Natural Resources and Environment (PONRE)<br>• District Offices of Natural Resources and Environment (DONREs)<br>• Provincial Agriculture and Forest Office (PAFO)<br>• District Agriculture and Forest Offices (DAFOs)<br>• Provincial Labour and Social Welfare Department<br>• Provincial Department of Planning and Investment | • | • |
| Community-level stakeholders | • Village Development Committees<br>• Village leaders<br>• Natural resource user groups<br>• Women's groups<br>• Other vulnerable or marginalised groups<br>• CBOs | • | • |
| Development Partners | • UNEP<br>• IFAD<br>• FAO<br>• World Bank<br>• JICA<br>• BMZ<br>• ADB<br>• KOICA | • | • |
| Non-Governmental Organizations (NGOs) and/or Civil Society Organizations (CSOs) | • Wildlife Conservation Society (WCS)<br>• International Union for Conservation of Nature (IUCN)<br>• Lao Wildlife Conservation Association (LWCA)<br>• World Wide Fund for Nature (WWF) | • | • |
| Research institutions | • National University of Lao PDR (NUoL)<br>• National Agriculture and Forestry Research Institute (NAFRI)<br>• National Economic Research Institute<br>• Center for Statistics and Information in MAF<br>• Lao Statistics Bureau (MPI) | • | • |
| Private sector | • Land concession owners related to agriculture and tree plantations | • | • |

| | |
|---|---|
| | • Construction companies, especially those involved in agriculture |

### Communicative Methods

Stakeholder engagement becomes a successful exercise when proper and participatory communicative methods are used. This ensures that the stakeholders are kept engaged and well informed of the project development at every stage. A combination of communicative methods is usually used to engage with the stakeholders. To determine which option is best suited to the various stakeholders, a benefit analysis of each option has been carried out. The communicative methods are:

- General Information consisting of the project's various activities, the operation stage and impacts that might arise shall be made available:
  - on information board of Contractor's site office
  - on UNDP's website

Detailed information including documents like ESIA and ESMP including environmental decisions shall be in hard copies and disseminated to:

- PMU's site office
- Electronic version of these documents will be made available at UNDP's website.

In addition to this, a host of tools and techniques can be adopted to engage with the stakeholders in a transparent and accountable manner. Below a list of the tools and techniques which can be adopted are mentioned:

- **Public Meeting**: This tool can be used to disclose information on a large scale involving the stakeholders of a particular village. A schedule of the meeting can be circulated well in advance and discussions can involve feedback session from the stakeholders. The meeting can be conducted in the premise of the village school/ community hall Mission compound for proximity and familiarity purposes. Once the meeting concludes, minutes of the same should be kept as a record with the site office and a copy given to the village head. Schedules of future meetings should be discussed and finalised so that the stakeholders can gauge the seriousness of the project proponent in continuing the engagement process.
- **Focus Group Discussion (FGDs):** FGDs are important when gauging with a particular group of stakeholder on issues related to the project activities. It can be used to understand the needs, perceptions and concerns of the group. The discussion will give space for the members to voice their concerns and suggestions. The moderator of the discussion should be impartial in his/ her view and should encourage everyone present to participate in the discussion. Records of the FGDs should be maintained and updated regularly.
- **Participatory Workshops**: Participatory workshops are meetings which enable local people to analyse, share and enhance their knowledge to plan, manage and evaluate development projects and programmes. Visual aids – such as mapping, videos, illustrations, timelines, card sorting and ranking, Venn diagrams, seasonal calendar diagramming and body maps are often used in participatory workshops to engage participants and capture knowledge. They are often an effective means of getting participants to reflect on issues and their own personal experiences. These workshops also pay particular attention to group dynamics and breaking down distinctions between 'uppers' – those with power, standing, influence etc. within a community – and 'lowers' – those with less power, influence and standing within a community. To initiate such a workshop, an expert familiar with participatory tools and conducting such workshops shall be engaged.

### Stakeholder Engagement Programme

A list of the consultation activities that the project proponent is to undertake as part of the Engagement Plan pertaining to the project have been provided below:

**Table 11: Stakeholder Engagement Plan**

| Project Phase | Consultation Topic | Suggested Communicative Method | Target Stakeholders | Timeline | Responsibility |
|---|---|---|---|---|---|
| Project Design | Information dissemination on the Project and potential impacts and mitigation measures that would be adopted | Face to face Meetings, FGDs | Local Community, Project Affected Population and Beneficiaries, Local Governing Institutions | Prior to Pre-Construction (one time) | PMU |
| Project Pre-Construction | Permits and Clearances | Face to Face Meetings, Written Application | Government Authorities | Prior to Construction (one time) | PMU |

| Project Phase | Consultation Topic | Suggested Communicative Method | Target Stakeholders | Timeline | Responsibility |
|---|---|---|---|---|---|
| | Terms of Reference to Contractors and Vendors | Bid Application | Potential Contractors and Vendors | Prior to Construction n (one time) | PMU |
| | Onboarding of Contractor - Contractor orientation/training on SES measures and reporting requirements including ESMP | Face to face Meetings | Contractor Selected | Prior to Construction (one time) | PMU |
| | Translate the project design, ESMP, the project timeline and GRM into local language and make this available at the Local Government Institution office | Written Document | Local Community, Project Affected Population and Beneficiaries, Local Governing Institutions | Prior to Pre-Construction (one time) | PMU |
| | Recruitment Opportunities | Written Notices – Display Information | Local Community | Prior to Pre-Construction (one time) | PMU and Contractor |
| | Post project signboard at work site with contact numbers of EHS officer and GRM focal in Local Language and English | Written Signages – Display Information | Local Community | Prior to Pre-Construction (one time) | PMU and Contractor |
| Construction | Compliance Monitoring and reporting of ESMP | Site Visit, Face to face meetings, Records | Contractor | Construction (once every month) | PMU – SES Specialist |
| | Quality Control and Assurance | Site Visit, Face to face meetings, Records | Contractor | Construction (once every month) | PMU, PONRE |
| | Information to Local Community on progress and before start of any work including registering any grievances, if any | Face to face Meetings | Local Community, Project Affected Population and Beneficiaries, Local Governing Institutions | Construction (once every two months) | PMU, PONRE |
| Post Construction | Information to Local Community on completion of work and operation phase of the project including registering any grievances, if any | Face to face Meetings | Local Community, Project Affected Population and Beneficiaries, Local Governing Institutions | Post Construction (one time) | PMU, PONRE |
| | Compliance Monitoring and reporting of ESMP on demobilisation of Contractor | Site Visit, Face to face meetings, Records | Contractor | Post Construction (once every month) | PMU, PONRE |
| Operation | Information to Local Community on operation phase including registering any grievances, if any | Face to face Meetings | Local Community, Project Affected Population and Beneficiaries, Local Governing Institutions | Once every six months | PMU, PONRE |
| Throughout Project Phases | Progress Report on Implementation and Work Progress | Report | Donor (Financial Intermediary) | As agreed by the Lending Agency | PMU |
| | Progress Report on Implementation and Work Progress | Report, Face to face Meetings, Virtual Meetings | Regional Hub - UNDP | As agreed during consultation | PMU |

## Monitoring and Evaluation

**Monitoring:** Monitoring of project activities is necessary to cater to the stakeholder's concerns by ensuring transparency in guaranteeing the project proponent's commitment in implementing the mitigation measures that addresses the environmental and social impacts arising from the project.

Through this information flow, the stakeholders feel the sense of responsibility for the environment and welfare in relation to the project and feel empowered to act on issues that might affect their lives.

Internal monitoring of project related activities as well as associated activities involving the local communities should be contemplated upon on a regular yearly basis (by identified staff from the PMU/) to bring in openness in

the Project's commitment. In addition, external monitoring can strengthen stakeholder engagement processes by increasing transparency and promoting trust between the project and its key stakeholders.

PMU should undertake a commitment in undertaking internal audits every six months during construction phase. All related information shall be readily maintained at the Contractor's office and produced at the time of the audits. Audit reports shall be accordingly created by PMU after every audit and submitted to Regional Hub and National Advisory Group. All records of these reports shall be maintained at the site office as well as with UNDP.

**Reporting**: Performance of the project will be reviewed six monthly against the Stakeholder Engagement Plan. The report will include, but not be limited to, the following:

- Informative materials disseminated, its types, frequency, and location
- Place and time of formal engagement events and level of participation
- Other interactions with the community; and Numbers and types of grievances (both from the community and workers) and the nature and timing of their resolution.

# Annex 9: Emergency Response and Preparedness Plan

**Purpose**

The Emergency Preparedness and Response Plan (EPRP) outlines a comprehensive framework for managing potential emergencies during the construction phase of the project. Its primary objective is to safeguard the well-being of all personnel involved by outlining clear protocols, designated responsibilities, and effective procedures to respond to various emergency scenarios. This plan seeks to minimise risks, ensure a coordinated response during crises, and maintain a safe working environment by adhering to regulatory standards and best practices.

**Applicable Regulations**

- World Bank Group Environmental, Health, and Safety General Guidelines (2008)
- UNDP Standard 7 on Labour and Working Conditions
- National Health Act

**Roles and Responsibilities**

**Project Management Unit (PMU):**

- Oversee Contractor implementation of the EPRP in line with regulations and best practices.
- Ensure the Contractor allocates necessary resources, including personnel, training, equipment, and finances, to support effective emergency response measures and procedures.
- Ensure that the Contractor organizes specialized emergency response training for all project personnel, emphasizing roles, procedures, and emergency equipment utilization.
- Ensure clear and effective communication channels among team members, stakeholders, and relevant authorities during emergencies.
- Regularly evaluate EPRP compliance on-site.
- Contractor's EHS Officer or Safety Officer:
- Implement the EPRP on-site.
- Ensure emergency response protocols are in place through regular drills and inspections to identify and address potential hazards.
- Provide specialized emergency response training to workers emphasizing their roles during emergencies.
- Facilitate prompt reporting of emergency incidents, conduct thorough investigations, and recommend corrective actions.
- Maintain effective communication with the PMU, workers, and stakeholders regarding emergency preparedness and safety concerns.
- Ensure accurate documentation and maintenance of records related to emergency drills, incidents, training, and compliance checks.

**List of Emergencies**

The following list of the emergencies that can occur on-site,

| Category | Description |
|---|---|
| **Internal Emergencies** | |
| Workplace Accident/Incident | Incidents related to collapsed structures/ excavations |
| | Incidents related to drowning |
| | Incidents related to working at height<br>Incidents related to vehicles/moving equipment |
| | Incidents related to exposure to electrical hazards viz.,Electrical shock, electrocution |
| | Incidents related to Snake, insect bites |
| Fire and Explosions | Incidents related to Electrical Fires viz., Fire at electrical substation |
| | General fire incidents at workplace |
| | Incidents related to fire and explosion at hazardous installations viz., gas cylinder storage area |
| Spillage and Contamination | Spillage of oil, diesel or other chemical substance on unpaved surface. |
| **External Emergencies** | |
| Natural Calamities | Flooding at Site |
| | Other events such as landslides, earthquakes |
| Major Fires/Explosions | Incidents related to major fires, explosions, and spills which require urgent |

| | |
|---|---|
| | involvement of external authorities. |
| Others | Terrorism |

**Measures**

**Workplace Accidents/ Incidents**

- The individual who is responsible or who discovers the incident would report the incident to the EHS/Safety Officer
- Evacuate the workmen to a safe distance / Assembly Point;
- Barricade the area to prevent unauthorized entry;
- Put security guard till the investigation is done by the EHS Officer
- Take out the causality (if any) to open area and give first aid and call for further medical assistance;
- In case of fatal incident inform the PMU immediately and then the police station
- Comply with legal and statutory requirement.

**Overturning of Vehicle/Equipment**

- The individual who is responsible or who discovers the incident would report the incident to the concerned Authority
- Arrange all required facilities like lifting equipments, transport vehicles etc. to clear the road.
- Inform the PMU and seek necessary assistance in terms of co-ordination with Government authorities,
- Barricade the area;
- If casualty, provide immediate first aid and shift victim to hospital;
- Put security guard till the area is cleared.
- Electrical Shock
- Cut off power supply and raise alarm;
- Use fire extinguisher (ABC type) for extinguishing the fire;
- While tackling this incident, make sure you are wearing safety shoes, if not; stand on wooden planks platform or rubber / synthetic mat;
- If night, then arrange emergency electric supply from outside sources; and
- If possible, disconnect connection with other equipment / machines.
- Incidents related to Snake/Insect Bites
- Remove the victim from the risk of a second bite;
- Take off any jewelry or tight clothing near the bite quickly before the swelling starts;
- Calm the patient and keep encouraging him;
- Lift a bitten arm or leg so it is level with your heart;
- Keep the extremity at heart level or lower. In most cases, severe complications do not occur until several hours post-bite. If the victim must be transported or walked out, make wise use of those first few hours. If medical help is more than 30 minutes away, tie an elastic wrap two inches above the bite. The wrap would be loose enough to slip a finger underneath it;
- Limit liquid intake because the body pumps the fluids to the bite site, increasing painful swelling. Avoid alcohol which increases metabolism and impairs judgment;
- Remember that most bites even from poisonous snakes are not fatal. Panic can increase the danger to the victim by increasing heartbeat;
- Don't excite the victim or even allow the victim to walk if it can be avoided. Doing so will increase blood circulation, speeding the spread of the venom beyond the area of the bite;
- Don't cut an 'X' or suck out the venom with mouth. This is ineffective and increases trauma in the area of the wound;
- Do not bleed the wound;
- Do not put any ice on the bite area; and
- Snake bite can often cause severe pain at the bite site. This can be treated with painkillers like paracetamol. Do not take an Aspirin tablet.

**Fire and Explosion**

- Communication from the spot;
- Apply fire extinguishers and extinguish the fire;
- In case of fire is more then
  - Switch off electrical power;
  - Start evacuation with nearby people an open area; and

- Ensure all the precautionary measures to take that there would not be any fire. - Remain calm and assess the situation;
- The concerned engineer would instruct the workers to reach the nearest assembly point and ask them remain calm;
- Alert the firefighting team or brigade;
- Determine the type of fire and try to extinguish it immediately by the appropriate method;
- There are four categories of Fires, namely:
  - Class A - Ordinary combustibles;
  - Class B - Flammable liquids, Gases, Greases;
  - Class C – Electrical; and Class D – Chemical metals.
  - Use Dry Chemical Extinguishers common for above A, B, C type of Fires (available at site).
- Explosion of gas cylinder at storage area
- The individual who is responsible or who discovers the incident would report the incident to WMC; - Immediately barricade the area;
- Use Fire extinguishers (ABC type or DCP) to suppress the fire;
- If casualty is there, provide proper first aid and shift the victim to hospital;
- Inform the local authorities about the incident;
- Seek for external help from fire brigade, if required;
- Depute security guard till the area is cleared;
- Try to put out fire only if it is small and tame; and
- Alert fire department. When necessary, leave the fire fighting to professionals.

**Medical Emergency**

- In case of medical emergency, inform the nearest hospital regarding the case as soon as the medical emergency is identified;
- Do not move the person until absolutely necessary;
- Provide the following information:
- Nature of medical emergency,
  - Location of the emergency (address, building, room number), and
  - Your name and phone number from which you are calling
  - After prescription from the doctor, take the affected person to the nearest hospital for doctor prescription; and
  - When the person is under doctor's supervision, undertake the required steps to comply with the local regulatory requirements.

**Natural Calamities**

- Flooding at Site - Inform the local authority and emergency services etc.;
- If casualty is there, provide first aid and shift the victim to hospital, if required;
- Seek for external help from local authority, fire brigade etc. if required;
- Inform to mechanical department and pump operator (Make all the dewatering pumps working);
- Inform the electrical department to switch off H.T. line, if water level increases rapidly;
- Arrange for passenger vehicles and start evacuation. If vehicles cannot be operated, start evacuation by walking or running;
- If possible, crane and other equipment's may be shifted / marched in a safe place; and
- Always get updated about the weather forecast from weather authority before planning any activity.
- Other Events (such as Landslides, Earthquakes etc.) - Inform the local authority, emergency services etc.;
- If casualty is there, provide first aid and shift the victim to hospital, if required;
- Seek for external help from local police, fire brigade etc. if required; - Inform the electrical department to switch off H.T. line, if water level increases rapidly;
- Arrange for vehicles and start evacuation. If vehicles cannot be operated, start evacuation by walking or running;
- If possible, crane and other equipment's may be shifted / marched in a safe place; and
- Always get updated about the weather forecast from weather authority before planning any activity.

**Monitoring**

- Inspection: The purpose of an inspection is to identify conditions and hazards in the workplace that can lead to an incident and identify positive conditions, behaviors, and observations. Audits: The purpose of an audit is to evaluate the implementation of systems and processes within this manual against a defined standard.
  - Informal Inspection and
  - Formal Inspection
- Informal Inspection Informal inspections include the daily visual inspection of workplace conditions. These inspections are conducted by all employees as a part of their regular work tasks.
- Formal Inspection/ Monitoring Formal inspections are documented visual tours of the workplace, used to identify hazards and hazardous conditions. Formal project inspections will be conducted

weekly by the Project Manager and EHS Officer. All noted deficiencies are to be signed off and communicated to the person in charge.

**Audits**

Audits are much more detailed than inspections and focus on the overall implementation of the OSHP Plan. This includes such items as communication, administration, documentation, HSE-related education, training, practices, and procedures. When supported within a framework of frequency statistical analysis and HSE inspections, this system is very efficient and effective in terms of HSE performance measurement.

Audit findings will indicate areas that are good and areas that may need some improvement. Action plans are developed with responsibilities delegated and timelines designated for items of improvement. Follow-up is conducted to ensure that the improvement item action plans have been conducted.

# Annex 10: Traffic Management Plan Outline

Contractor is required to address traffic management and road safety at the outset of the construction work through the preparation of a Traffic Management Plan (TMP).

A TMP is essential during the construction phase to minimise disturbance to the local community living near the Project area. The Plan is essential for safety and to smooth traffic flows on roads impacted by the proposed Project, or used by vehicles working on the project. TMP to be based on project activities and involve the circulation of heavy-duty machinery, vehicles, and equipment of the site and works. Also, to establish if community members have complained about traffic congestion affecting the area.

The plan outlines responsibilities and management procedures associated with traffic management during the construction phase of a project. More particularly, the Plan describes the process to be implemented to:

Ensure that the Project complies with applicable environmental and social (E&S) requirements

Ensure that all personnel involved in the construction of the Project fully understand the project owners expectations on traffic management.

Appropriate traffic management should ensure both the safety of workers involved in construction operations and the safety of community members living near the project area and potentially impacted by the increase in traffic and the circulation of heavy-duty vehicles.

Both onsite and offsite traffic/transport arrangements are within the scope of the TMP. Failure to comply with the requirements of this Plan may lead to disciplinary action. This includes delivery of all machinery, materials to site, and daily movements of construction personnel, transport movement onsite and other related transportation activities.

Contractor will coordinate the implementation of the TMP through its Occupational Safety and Health (OSH) personnel. The procedures will be communicated to all employees and also applied to all contractors, subcontractors involved in the construction activities.

**Issues at stake**

The Traffic Management Plan will outline the context and scope of its use and implementation, and includes a regulatory framework. This will take into account the laws, regulations and policies of Lao PDR and additional contextual information of this kind at the sub district level.

The TMP will present the relevant findings provided in the ESIA, related to anticipated impacts and the perceptions of impacted populations on traffic and road safety.

**Mitigation management**

Detailed mitigation measures will be provided for each negative impact outlined in the ESIA. The management of mitigation measures will cover the following:

Establish onsite and offsite best transport safety practices, such as minimising vehicle movements, management of turning vehicles, visibility, journey control and scheduling, regulated access to the project site, traffic route, workers and drivers training.

Keeping pedestrians and vehicles apart.

Providing clear signs and instructions for all road users.

Provide safe walking and crossing areas for pedestrians.

Adopt safe driving measures (zero tolerance policy for alcohol and drugs, fatigue management measures, use of vehicles according to instructions).

Involve communities in the TMP design, to assess the best time slot for traffic restriction, operation of heavy-duty vehicles, and areas requiring improved safety measures.

Report accidents, incidents, near-misses and failures in implementing the TMP.

The TMP will highlight the roles of the stakeholders to whom the measures apply, listing which measures or action plans they are responsible for carrying out.

**Monitoring**

Establish a monitoring system in order to collect data on the implementation of the TMP and to monitor incidents, traffic flows, noise levels, pollution and emissions.

**Reporting**

The control of documents and records related to traffic management to be conducted in accordance with the document control procedure of the Construction contractor. The TMP describes records to be maintained (e.g., route and assignment record, inspection records, or incident / accident reports).

All documents and records will be kept for at least five years or as per regulatory requirements, and available for inspection and audit by the project owner.

# Annex 11: Chance Find Procedure

**Purpose**

The chance find procedure is a project-specific procedure that outlines the actions required to be implemented if previously unknown heritage resources, particularly archaeological resources, are encountered during the construction or operation of the project. The procedure, as defined in UNDP Standard 4 on Cultural Heritage and national regulations, is a process that prevents chance finds from being disturbed until an assessment by a competent authority is made and actions consistent with the requirements are implemented.

**Scope**

This procedure is applicable to all activities conducted by the Project Management Unit/Site Engineer including the Contractor, that have the potential to uncover a heritage item/site. The procedure details the actions to be taken when a previously unidentified and potential heritage item/site is found during the construction activities. The procedure outlines the roles and responsibilities and the response times required from both project staff, and any relevant heritage authority.

**Induction/Training**

All personnel, especially those working on earth movements and excavations, shall be provided with induction/training on the identification of potential heritage items/sites and the relevant actions that require them to take with regards to this procedure during the induction and regular toolbox talks.

**Standard Operating Procedure**

In case of discovery of physical cultural resources by a person, such as (but not limited to) archaeological sites, historical sites, remains and objects, or a cemetery and/or individual graves during the excavation or construction, the following steps shall be undertaken by the Contractor and PMU:

All works shall be stopped in the vicinity of the find, until a solution is found for the preservation of these artefacts/chance finds, or advice from the relevant authorities is obtained.

Immediately notify the supervisor onsite in case of a chance find. The supervisor shall, thereafter, notify the PMU who, in turn, is required to inform the concerned authorities of the discovery.

The PMU shall record the details of the chance find and undertake photo documentation.

The discovered site or area shall be delineated and secured to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities take over.

The preliminary evaluation of the findings by the concerned authorities shall be undertaken. The officials from the concerned department shall visit the site and undertake an assessment of the site or find to determine its importance. Based on this assessment, the appropriate strategy shall be implemented. The significance and importance of the findings shall be assessed according to the criteria relevant to cultural heritage such as aesthetic, historic, scientific or research, social and economic values of the find.

If the site is of minor significance (such as isolated or unclear features, and isolated finds) based on the assessment, the findings shall be recorded immediately to minimize disruption to the work schedule of the Contractor.

In case of significant find, the department shall investigate the find further within two weeks from the date of notification and provide a summary report of the finding.

The decision on how to handle the finding shall be taken by the concerned department. The PMU shall support the department in removal, transporting or preserving the find to the extent possibly required by the department.

The construction works could resume only after permission is granted from the concerned department.

In case no response is received within the 2 weeks period mentioned above, the PMU shall follow up with the concerned department and inform them of the requirement to proceed with the suspended construction works.

Management of Replicable and Non-replicable Heritage

**Replicable Heritage**

Where tangible cultural heritage that is replicable and not critical is encountered, the following mitigation measures shall be applied:

- Avoidance.
- Minimization of adverse impacts and implementation of restoration measures, in situ.
- Restoration of the functionality of the cultural heritage, in a different location.
- Permanent removal of historical and archaeological artefacts and structures.
- Compensation of loss where minimization of adverse impacts and restoration is not feasible.
- Non-replicable Heritage

Most cultural heritage is best protected by in situ preservation since removal is likely to result in irreparable damage or even destruction of the cultural heritage. The non-replicable cultural heritage must not be removed unless all of the following conditions are met:

There are no technical or financial alternatives to the removal.

The overall benefits of the project conclusively outweigh the anticipated cultural heritage loss from removal; and any removal of the cultural heritage must be conducted using the best available technique advised by the relevant authority and supervised by an archaeologist.

**Human Remains Management Options**

The handling of human remains, believed to be archaeological in nature, requires communication according to the same procedure described above. The following measures shall be adopted:

Avoidance: The project is redesigned to completely avoid the found remains based on the assessment undertaken by the concerned authorities.

Exhumation: The exhumation of the remains shall be considered in an appropriate manner by the concerned authorities. This will involve the predetermination of a site suitable for the reburial of the remains. Certain ceremonies or procedures may need to be followed before the construction activities recommence in the area of the discovery.

Emergency contact details of the concerned department and contact person shall be maintained by the PMU and Contractor in case of chance find.

**Record Keeping**

It is pertinent that all finds must be registered. The photolog, copies of communication with decision making authorities, conclusions and recommendations/guidance, implementation reports shall be recorded and maintained by the PMU.

## Annex 12: Standard General Environmental Contract Clauses

Generic contract clauses are provided in this annex to assist with environmental and social management works expected to have minor impacts. These mitigation measures are the core of a generic, standardised ESMF and the associated minor impacts typical of small works which can be routinely addressed with best industry practice. These clauses are general and may be modified to conform to applicable national laws, contract procedures and actual scope and nature of the works anticipated. These clauses are intended to be included as requirements in the works contract and shall remain in force throughout the contract period. These clauses represent the minimum standard of execution for environmental protection and include:

- Permits and Approvals
- Site Security
- Discovery of Antiquities
- Worker Occupational Health and Safety
- Noise Control
- Use and Management of Hazardous Materials, fuels, solvents and petroleum products
- Use and Management of Pesticides
- Use of Preservatives and Paint Substances
- Use of Explosives
- Site Stabilisation and Erosion Control
- Traffic Management
- Management of Standing Water
- Management of Solid Wastes -trash and construction debris
- Management of Liquid Wastes

**Standard Clauses**

**1. Permits and Approvals**

The contractor shall be responsible for ensuring that he or she has all relevant legal approvals and permits required to commence works.

**2. Site Security**

The contractor shall be responsible for maintaining security over the construction site including the protection of stored materials and equipment. In the event of severe weather, the contractor shall secure the construction site and associated equipment in such a manner as to protect the site and adjacent areas from consequential damages. This includes the management of onsite, construction materials, construction and sanitary wastes, additional strengthening of erosion control and soil stabilization systems and other conditions resulting from contractor activities which may increase the potential for damages.

**3. Discovery of Antiquities**

If, during the execution of the activities contained in this contract, any material is discovered onsite which may be considered of historical or cultural interest, such as evidence of prior settlements, native or historical activities, evidence of any existence on a site which may be of cultural significance, all work shall stop and the supervising contracting officer shall be notified immediately. The area in which the material was discovered shall be secured, cordoned off, marked, and the evidence preserved for examination by the local archaeological or cultural authority. No item believed to be an artefact must be removed or disturbed by any of the workers. Work may resume, without penalty of prejudice to the contractor upon permission from the contracting officer with any restrictions offered to protect the site.

**4. Worker Occupational Health and Safety**

The contractor shall ensure that all workers operate within a safe environment. Sanitation facilities shall be provided for all site workers. All sanitary wastes generated as a result of project activities shall be managed in a manner approved by the contracting officer and the local authority responsible for public health. The contractor shall ensure that there are basic medical facilities on site and that there are staff trained in basic first aid. Workers must be provided with the necessary protective gear as per their specific tasks such as hard hats, overalls, gloves, goggles, boots, etc. The contractor shall provide the contracting officer with an occupational health and safety plan for approval prior to the commencement of site activities.

The contractor must ensure that all workers operate within a safe environment. All relevant Labour and Occupational Health and Safety regulations must be adhered to ensure worker safety. Sanitary facilities must be

provided for all workers on site. Appropriate posting of information within the site must be done to inform workers of key rules and regulations to follow.

**5. Noise Control**

The contractor shall control noise emissions generated as a result of contracting activities to the extent possible. In the case of site locations where noise disturbance will be a concern, the contractor shall ensure that the equipment is in good working order with manufacturer supplied noise suppression (mufflers etc.) systems functioning and in good repair. Where noise management is a concern, the contractor shall make reasonable efforts to schedule activities during normal working hours (between 8 am and 5 pm). Where noise is likely to pose a risk to the surrounding community either by normal works or working outside of normal working hours or on weekends, the contractor shall inform the contracting officer and shall develop a public notification and noise management plan for approval by the contracting officer.

**6. Use and Management of Hazardous Materials, fuels, solvents and petroleum products**

The use of any hazardous materials including pesticides, oils, fuels and petroleum products shall conform to the proper use recommendations of the product. Waste hazardous materials and their containers shall be disposed of in a manner approved by the contracting officer in accordance with national laws. A site management plan will be developed by the contractor if the operation involves the use of these materials to include estimated quantities to

**7. Use and Management of Pesticides**

Any use of pesticides shall be approved by the contracting officer and shall conform to the manufacturers' recommendations for use and application. Any person using pesticides shall demonstrate that they have read and understood these requirements and are capable of complying with the usage recommendations to the satisfaction of the contracting officer. All pesticides to be used shall conform to the list of acceptable pesticides that are not banned by the relevant local authority. If termite treatment is to be utilised, ensure appropriate chemical management measures are implemented to prevent contamination of surrounding areas, and use only licensed and registered pest control professionals with training and knowledge of proper application methods and techniques.

**8. Use of Preservatives and Paint Substances**

All paints and preservatives shall only be used with the approval of the contracting officer. Information shall be provided to the contracting officer who describes the essential components of the materials to be used so that an informed determination can be made as to the potential for environmental effects and suitability can be made.Storage, use, and disposal of excess paints and preservatives shall be managed in conformance with the manufacturers' recommendations and as approved by the contracting officer. The contractor shall provide the contracting officer with a list of materials and estimated quantities to be used, storage, spill control and waste disposal plans to be observed during the execution of the contract. This plan is subject to the approval of the contracting officer.

**9. Use of Explosives**

Use of explosives shall be at the approval of the relevant local authority and shall be supervised and undertaken by a qualified explosives technician. Blasting will be limited to between the hours of 9:00 am and 4:00 pm unless specifically approved by the local authority and the contracting officer. Any use of explosives shall be permitted only after an explosives management and blasting plan has been approved by the relevant local authority and the contracting officer. This plan shall include:

- Description of the explosive agent, charge description, intended use.
- Site safety plan including:
- Storage of initiators, booster charges and principal blasting agents
- Handling precautions to be observed
- Transport to and from site
- Security of stored materials
- Disposal of excess or damaged explosive materials.
- Analysis of risk to surrounding area and mitigation measures to be employed including:
- Over-pressure event
- Noise
- Flying debris
- Seismic transmission
- Accidental detonation

- Name and qualifications for all persons responsible for handling explosive agents

**10. Site Stabilization and Erosion Control**

The Contractor shall implement measures at the site of operations to manage soil erosion through minimisation of excavated area and time of exposure of excavated areas, preservation of existing ground cover to the extent possible, provision of approved ground cover and the use of traps and filtration systems. Where excavations are made, contractor shall implement appropriate stabilising techniques to prevent cave-in or landslide. Measures shall be approved by the contracting officer.

The contractor must ensure that appropriate erosion control measures such as silt fences are installed. Proper site drainage must be implemented. Any drain clogged by construction material or sediment must be unclogged as soon as possible to prevent overflow and flooding. The use of retaining structures and planting with deep rooted grasses to retain soil during and after works must be considered. The use of bio -engineering methods must be considered as a measure to reduce erosion and land slippage. All slopes and excavated areas must be monitored for movement. The contractor will establish appropriate erosion and sediment control measures such as hay bales, sedimentation basins, and / or silt fences and traps to prevent sediment from moving off site and causing excessive turbidity in nearby streams, rivers, wetlands, and coastal waters.

An erosion management plan will be required where the potential exists for significant sediment accumulation e in wetlands, lakes, rivers and marine systems. This plan shall include a description of the potential threat, mitigation measures to be applied, and consideration for the effects of severe weather and an emergency response plan.

If works are along coastal marine areas or near major steams and river, water quality monitoring must be done before construction, and at regular intervals to determine turbidity levels and other quality p

Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.

**11. Air Quality**

When appropriate, the contractor shall provide an air quality management plan for contracting officer approval. This plan will include provisions for the management and control of dust and unnecessary emissions resulting from construction activities. The plan shall include control measures to be implemented including the management of dust generated from transportation and site construction activities as well as excess emissions from vehicles and equipment. Under no circumstances shall site or roadway dusts be managed using oil spray techniques.

**12. Traffic Management**

In the event that construction activities should result in the disruption of area transportation services, including temporary loss of roadways, blockages due to deliveries and site related activities, the contractor shall provide the contracting officer with a traffic management plan including a description of the anticipated service disruptions, community information plan, and traffic control strategy to be implemented so as to minimise the impact to the surrounding community. This plan shall consider time of day for planned disruptions, and shall include consideration for alternative access routes, access to essential services such as medical, disaster evacuation, and other critical services. The plan shall be approved by the contracting officer. Elements of the traffic management plan to be developed and implemented by contractor shall include:

Alternative routes will be identified in the instance of extended road works or road blockages;

Public notification of all disturbance to their normal routes;

Signage, barriers and traffic diversions must be clearly visible and the public warned of all potential hazards;

provision for safe passages and crossings for all pedestrians where construction traffic interferes with their normal route;

Active traffic management by trained and visible staff at the site or along roadways as required to ensure safe and convenient passage for the vehicular and pedestrian public;

Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement.

**13. Management of Standing Water**

Under no circumstances shall the contractor permit the collection of standing water as a consequence of contractor activities without the approval of the contracting officer and consultation with the relevant local environmental health authority. Recommendations from that local authority on how to manage and treat the standing water must be implemented. The condition of the standing water must be monitored by the contractor to ensure that it does not present itself as a breeding ground for any pests such as mosquitoes.

**14. Management of Solid Wastes and Construction Debris**

The contractor shall provide a solid waste management plan that conforms to the national solid waste management policies and regulations for approval by the contracting officer. The site

waste management plan shall include a description of waste handling procedures including collection, storage and disposal through the national waste management system. There will be no open burning of waste material and the contractor shall endeavour to recycle wastes as appropriate through the national waste management

system. Under no circumstances shall the contractor allow construction wastes to accumulate so as to cause a nuisance or health risk due to the propagation of pests and disease vectors.

**15. Management of Liquid Wastes**

The contractor shall provide the contracting officer with a liquid waste management plan as part of a site waste management plan that conforms to the waste management policies and regulations of the relevant Saint Vincent and the Grenadines authority. Under no circumstances shall the contractor allow construction related liquid wastes to accumulate on or off the site, or to flow over or from the site in an uncontrolled manner or to cause a nuisance or health risk due to its content. The site waste management plan shall include a description of how these wastes will be stored, collected and disposed of in accordance with current law. Additionally, the contractor shall provide for the regular removal and disposal of all site wastes and provide the contracting officer with a schedule for such removal. Specific elements of the contractor's liquid waste management plan shall include: contractor to abide by all pertinent waste management and public health laws; waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities; construction and demolition wastes will be stored in appropriate bins; liquid and chemical wastes will be stored in appropriate containers separated from the general refuse; all waste will be collected and disposed of properly in approved landfills by licensed collectors; the records of waste disposal will be maintained as proof for proper management as designed; whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos); construction related liquid wastes must not be allowed to accumulate on or off the site, or to flow over or from the site in an uncontrolled manner or to cause a nuisance or health risk due to its contents.

## Annex 13: Gender Action Plan

Women and men use natural resources in different ways, and have unique skills, knowledge and experiences as the primary users and stewards of many natural resources. GEF's Guidelines on gender equality suggests the development of Gender Action Plan may be structured around the following components: i) findings from gender analysis; ii) Strategy and Activities; iii) Monitoring and Evaluation; and iv) Resources.

Since the first component is already covered in the first chapter of this document thus the GAP for the Project covers the following components: i) basic principles for gender mainstreaming; ii) strategies and activities; iii) consultations and disclosure of Gender Action Plan; ii) institutional arrangement for monitoring and evaluation of GAP implementation, including budget.

***Basic Principles of Gender Mainstreaming***

The systematic establishment of a quality and gender-sensitive participation process requires close collaboration of all concerned agencies, and this implies to raise awareness at the outset (dialogue during the identification and instruction) consequent of the counterpart. Although participatory tools are more widespread, the quality of participation is often questionable, and it is common that vulnerable and marginalized groups are excluded from participatory processes. It is therefore important to improve the quality of participation to ensure inclusion, with a particular focus on women. It is essential that the integration of the gender dimension is perceived as a strategy to improve the efficiency of projects rather than as extra diligence. In general, women need three types of support:

- The strengthening of their capacities, whether illiteracy, vocational training, or participation in decision-making.
- Access to control of resources, security land tenure and recognition of their rights (labour decent, inclusion in the formal sector); and
- Access to credit.

Finally, good projects from a gender point of view are those who adopt an integrated approach, transversal and adapted to the context: the questions of division of labour between men and women and access and control of resources arise in all sub-sectors for all projects. Likewise, the projects create dynamics that are not always easy to predict: it is therefore crucial to monitor these gender dynamics during project implementation and to provide means of adapting current activities project in the event of negative impacts/developments.

***Strategic Areas and Activities***

The overall objective of the Gender Action Plan is to provide participatory mechanisms that ensure consultation and access to participation, and representation in project decision, making by women. This is the primary safeguard used to ensure women's interests and rights are maintained and included in the decision-making process. The strategic areas for addressing gender issues in the three project components are as follows:

- Assurance of gender disaggregated data in planning, implementing, monitoring, and reporting. The gender balance targets are set for each activity in the logframe.
- Increase women's access to and control over productive resources. The gender balance targets are set for each activity in the logframe.
- Operationalize Gender Action Plan at village, district and provincial levels will be under Project Management Unit.

The gender balance targets set for each activity in the following GAP matrix are based on the targets related to reducing risks for women and girls from disaster and climate change in the draft fourth Five Year National Plan of Action on Gender Equality (2021-2026), The targets relevant to this project are summarized as follows:

- Ratio of women representation at village and district level governance must be 10% and 20% respectively.
- Ratio of women members in the national and regional committee to protect and control natural disasters and man-made disaster shall cover 30% of all positions.
- Ratio of women who receive the training on protection and response to natural disaster and man-made disaster shall cover 40% of all participants
- Ratio of women who receive training on energy-efficient and sustainable agriculture technology shall cover 50% of all participants.

These gender balance targets have been discussed at the national as well as provincial level consultations on the draft ProDoc and the participants raised concerns that it may not achievable due to the representation of female technical staff at the concerned provincial and district office is less than 30% so in order to achieve 40% representation of female participants in the technical training the government must recruit only female staff in the next 4 years which is unlikely to be materialized. Thus, the proposed representation of female participation in technical training for government offices by the end of the project shall be 30% with 15% by the mid-term period.

Female representation in village and district level governance should be as it is planned for the IX$^{th}$ Five Year Socio-Economic Plan 2021-2025 with 10% and 20% respectively. At the village level, the women already represent

10% in the village authorities as Village LWU so the provincial authorities should make effort to reach the target of 20% women representation at the district level governance. It could be 15% by the mid-term and 20% by the end of the project.

The 30% representation of women in the national and regional committee for protection and control of natural or man-made disaster could be set out for 25% by the end of the project based on the target of Ministry of Agriculture and Forestry.

Since the Fourth National of Action for Gender Equality has not been approved yet during the preparation of this ProDoc, the target of 50% of village women representation at the technical training in agriculture and livelihoods development can be based on the target of MAF of 45% with the target set for the mid-term period of 30% and 45& by the end of the project.

**Table 12: Gender Action Plan**

| Project components | Project outcomes | Project outputs | Project activities | Gender Balanced Target | Actions | Responsible agency |
|---|---|---|---|---|---|---|
| Component 1: Developing national and provincial capacities for Integrated Catchment Management (ICM) and integrated urban Ecosystem-based Adaptation (EbA) for climate risk reduction. | Outcome 1: Enhanced national and provincial capacities for integrated catchment and flood management in target rural and urban communities | Output 1.1: Flood- and drought-risk maps of and an economic evaluation of urban ecosystem services and protective options produced for the Xe Bang Hieng River Basin and Luang Prabang city, respectively. | Activity 1.1.1: Design and implement central and provincial training programme to enable climate risk-informed water management practices in target urban and rural areas | At least 30% of Women participation in the training programme by the end of the project with the target of 15% by the mid-term end | Relevant female staff of MAE and PONRE to have access to the training programme | PIP, Project management Unit (PMU), DWR |
| | | | Activity 1.1.2: Map current and future zones of the Xe Bang Hieng River Basin at risk of climate change-induced flooding and drought based on existing hydrological models and conduct protective infrastructure optioneering based on the identified at risk zones. | At least 25% of the participants in the consultation during the mapping exercise must be the women | The consultations for mapping zones at risk of climate change must take into account concerns and opinions of women | PIP, PMU, DoWS |
| | | | Activity 1.1.3: Conduct an economic valuation of urban ecosystem services and protective options in Luang Prabang. | At least 25% of the informants for economic valuation must be women | Economic valuation of urban ecosystem services and protective options | PIP, PMU, DoWS |

| Project components | Project outcomes | Project outputs | Project activities | Gender Balanced Target | Actions | Responsible agency |
|---|---|---|---|---|---|---|
| | | Output 1.2: Integrated Climate-Resilient Flood Management Strategies developed for Luang Prabang and the Xe Bang Hieng River Basin, supported by an updated hydrometeorological monitoring network, EWS and revised emergency procedures for the Xe Bang Hieng River Basin. | Activity 1.2.1: Draft and validate fine-scale climate-resilient development and land-use plans for Luang Prabang and in the headwater and lowland areas of the Xe Bang Hieng River Basin | Women participation in land use planning must be at least 25% and land-use plans must be gender responsive | Women in the project areas accessing land because of land use planning | PIP, PMU, DoWS |
| | | | Activity 1.2.2: Assess and update current Xe Bang Hieng River Basin hydrological monitoring network — including village weather stations — to improve efficiency. | At least 25% of the participants in the consultation on the assessment of the hydrological network must be the women | | PIP, PMU, DoWS |
| | | | Activity 1.2.3: Review and revise early-warning systems and emergency procedures of vulnerable Xe Bang Hieng River Basin communities | Early-warning systems and emergency procedures must be gender responsive | Consultation with women and women's groups on their needs and requirements for for revision of the early-warning system and emergency procedures | PIP, PMU, DoWS |
| Component 2: Ecosystem-based Adaptation (EbA) interventions, with supporting protective infrastructure [4], and livelihood enhancement. | Outcome 2: Reduced flood risk through headwater conservation, restoration and protective infrastructure, supported by climate-resilient and alternative livelihoods. | Output 2.1: Ecosystems conserved and restored through conservation zone management, Ecosystem-based Adaptation, and protective infrastructure, supported by innovative communication | Activity 2.1.1: Conserve Xe Bang Hieng protected forests through enhanced conservation zone management and enhanced natural regeneration and restore Xe Bang Hieng degraded | At least 25% women participation in the consultations on the EbA interventions for improvement of ecological integrity | Consultation with women and women's groups on needs and requirements associated with with restoration of Xe Bang Hieng headwater | PMU, PIP & DWR |

[4] Such as cascading weirs, drainage channels, reservoir networks and rainwater harvesting structures

| Project components | Project outcomes | Project outputs | Project activities | Gender Balanced Target | Actions | Responsible agency |
|---|---|---|---|---|---|---|
| | | and knowledge management tools/technology. | headwater conservation zones and implement EbA interventions to improve ecological integrity for the delivery of ecosystem services. | | conservation zones | |
| | | | Activity 2.1.2: Construct site specific protective infrastructure to reduce flood risk (such as cascading weirs and drainage channels) and drought risk (such as reservoir networks and rainwater harvesting) based on protective infrastructure optioneering conducted under Output 1.1. | Women participation in the trainings must be at least 45% by the end of the project with the 25% target by mid term end | Women access to the training in the use of improved practices, tolls and technologies to support head water conservation zone management | PMU, PIP & DWR |
| | | | Activity 2.1.3: Develop and distribute communication and knowledge management tools and technologies (such as mobile phone apps and community radio) and train communities on their use to support headwater conservation zone management and increase their resilience to floods and droughts. | Women participation in the consultations on the development of protective infrastructure must be at least 25% | Consultation with women and women's groups on needs and requirements associated with the construction of protective infrastructure to reduce flood and drought risks | PMU, PIP & DWR |

| Project components | Project outcomes | Project outputs | Project activities | Gender Balanced Target | Actions | Responsible agency |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | Output 2.2: Climate-resilient and alternative livelihoods promoted in headwater and lowland communities through Community Conservation Agreements (CCAs) and diversified livelihood opportunities. | Activity 2.2.1: Conduct market analyses, including: i) analyzing supply chains for climate-resilient crops, livestock, and farming inputs; ii) assessing economic impacts and market barriers; and iii) recommending mitigating strategies to address these barriers. | Women participation in consultation of market analysis must be at least 25% | Consultation with women and women's groups in analyzing supply chains for climate-resilient crops, livestock and farming inputs, in assessing economic impacts and market barriers; and the concerns of women are taken into consideration in recommending mitigating st strategies | PMU, PIP & DOF |
| | | | Activity 2.2.2: Undertake Community Conservation Agreement process to encourage climate-resilient agriculture, fisheries, and forestry/forest-driven livelihoods and practices | Women participation in the consultations on the community conservation agreement must be at least 25% | Consultation with women and women's groups on needs and requirements in community conservation agreement in climate-resilient agriculture, fisheries | PMU, PIP & DOAE (MAF) |

| Project components | Project outcomes | Project outputs | Project activities | Gender Balanced Target | Actions | Responsible agency |
|---|---|---|---|---|---|---|
| | | | | | and forest drive livelihoods and practices | |
| | | | Activity 2.2.3: Introduce diversified activities and opportunities through community Conservation Agreements (developed under Activity 2.2.1) in agriculture (livestock and crops, including vegetable farming) as well as fisheries, non-timber forest products (NTFP), and other off-farm livelihoods | At least 25% of the participants benefiting in the diversified activities must be the women | Equal access to diversified livelihood activities and opportunities between men and women | PMU, PIP & DOAE (MAF) |
| Component 3: Knowledge management and Monitoring and Evaluation (M&E). | Outcome 3: Effective knowledge management and M&E through awareness/advocacy and monitoring of climate change impacts and adaptation opportunities in target rural and urban communities. | Output 3.1: Training and awareness/advocacy campaigns conducted to enhance knowledge management, M&E and information exchange on climate change impacts on agricultural production and socioeconomic conditions and lessons disseminated on community-based adaptive solutions. | Activity 3.1.1: Provide training and awareness raising to Xe Bang Hieng River Basin communities on: i) climate change impacts on agricultural production and socio-economic conditions; and ii) community-based adaptation opportunities and strategies (e.g. water resources management, agroforestry, | At least 40% of the training participants in the training must be the women with the target of 30% by mid term end | Women in project areas accessing training in climate change impacts on agricultural production and socio-economic conditions and community-based adaptation opportunities and strategies and their benefits | PMU, PIP & DoDMCC |

| Project components | Project outcomes | Project outputs | Project activities | Gender Balanced Target | Actions | Responsible agency |
|---|---|---|---|---|---|---|
| | | | conservation agriculture, alternatives to shifting cultivation) and their benefits | | | |
| | | | Activity 3.1.2: Establish a knowledge management hub to collect, and from which to share, project lessons, within Lao PDR and through South-South exchanges, on strengthening climate resilience with regards to: i) catchment management; ii) flash flood management and iii) EbA. | At least 25% of the participants in the exchange sharing must be the women | Women access to the exchange visits on catchment management, flash flood management and Eba. | PMU, PIP & DoDMCC |
| | | | Activity 3.1.3: Conduct awareness-raising campaigns on urban EbA and flood management for communities and the private sector in Luang Prabang. | At least 25% of the participants in the awareness raising campaign must be the women | Women access to the campaign in Luang Prabang on urban EbA and flood management | PMU, PIP & DoDMCC |

| Project components | Project outcomes | Project outputs | Project activities | Gender Balanced Target | Actions | Responsible agency |
|---|---|---|---|---|---|---|
| | | Output 3.2: Community-based water resources and ecological monitoring systems established, and community members trained in their operations and maintenance | Activity 3.2.1: Develop and implement community-based monitoring systems to measure changes in key ecological determinants of ecosystem health and resilience in the Xe Bang Hieng River Basin. | At least 10% of the committee members for community-based monitoring mechanism must be the women | Consultation with women and women's groups in the development | PMU, PIP & DoDMCC |
| | | | Activity 3.2.2: Community members trained on the operations and maintenance of systems developed under Activity 3.2.1 | All female members of the committee members for community-based monitoring system must participate in the training. | Women access to training on the operation and maintenance of the monitoring systems. | PMU, PIP & DoDMCC |
| Project Management Unit | Effective project implementation and monitoring | GAP is operationalized at all levels of project implementation and monitoring | Monitoring the implementation of the GAP | Gender balance targets of all outputs are achieved by the mid-term of the project | Promotion of active involvement of women and monitoring and evaluation of GAP implementation | Project Gender Office, PMU |
| | | | Awareness raising on gender mainstreaming and the GAP for the district level project officers and coordinators included in training under Activity 1.1.1. | 15 participants from each of the 5 target districts and Luang Prabang City | | |
| | | | Awareness raising on gender mainstreaming and the GAP at the village level included under in training under Activity 3.1.1. | 15 participants from each of the 18 target villages | | |

## Annex 14: Grievance Redressal Mechanism

The following section details the process by which people concerned with, or potentially affected by, the project can express their grievances for consideration.

Who can submit a grievance?

A Grievance can be sent by any individual or group of individuals that believes it has been or will be harmed by the Project. If a Grievance is to be lodged by a different individual or organization on behalf of those said to be affected, the Claimant must identify the individual and/or people on behalf of who the Grievance is submitted and provide written confirmation by the individual and/or people represented that they are giving the Claimant the authority to present the Grievance on their behalf. The GRM will take reasonable steps to verify this authority.
How is the grievance communicated?

The GRM shall maintain a flexible approach with respect to receiving Grievances in light of known local constraints with respect to communications and access to resources for some Stakeholders. A Grievance can be transmitted to the GRM by any means available (i.e. by email, letter, phone call, meeting, SMS, etc.).

The Village Head and the Village Committee will be the first contact point for affected people with a grievance, and the Village Head and Village Committees will be provided training and guidance on the scope of issues and those which will require reference to the next level for a decision.

In the meantime, the UNDP Office of Audit and Investigations (OAI) can be contacted via the contact details below.
Phone (reversed charges): +1-844-595-5206 in the USA
Email directly to OAI at: reportmisconduct@undp.org
Mail: Deputy Director (Investigations)
Office of Audit and Investigations
United Nations Development Programme
One UN Plaza, DC1, 4th Floor
New York, NY 10017 USA

To facilitate communications with and between the GRM and potential Claimants, the GRM will receive support from the PB members and relevant local government units.

The Grievance should include the following information:
The name of the individual or individuals making the Complaint (the “Claimant”);
Means for contacting the Claimant (email, phone, address, other);

If the submission is on behalf of those alleging a potential or actual harm, the identity of those on whose behalf the Grievance is made, and written confirmation by those represented of the Claimant’s authority to lodge the Grievance on their behalf;

The description of the potential or actual harm;

Claimant’s statement of the risk of harm or actual harm (description of the risk/harm and those affected, names of the individual(s) or institutions responsible for the risk/harm, the location(s) and date(s) of harmful activity);
What has been done by Claimant thus far to resolve the matter;
Whether the Claimant wishes that their identity is kept confidential; and
The specific help requested from the GRM.

**Redress Procedure for Complaints for Communities**

The project team shall strive to resolve complaints as soon as possible, thereby avoiding the escalation of issues. However, where a complaint cannot be readily resolved, then it must be escalated. In order to effectively and quickly resolve grievances of affected people, according to the Law on Grievance Redress or the revised Law on Handling Petitions 012/NA approved by the National Assembly on December 5, 2014 and the President in 2015 and also the guideline on consultation with ethnic groups was launched by the Lao Front for National Development (LFND formerly known as LFNC), in 2013, in line with the National Guideline on Public Involvement, 2012, to ensure an effective and efficient grievance, a mechanism for the project is proposed as follows:

***Stage 1:*** The first level of complaint resolution, following traditional methods in Laos, should be the Village through its Village Mediation Unit (VMU). The VMU at the village level would comprise representatives of the ethnic group community leaders, and the head of the mediation unit or a village elder. Complaints can be submitted in verbal or written forms. It is expected that some complainants such as ethnic minorities or vulnerable individuals/households might not be able to write any complaints. In this case, they can submit complaints verbally. Complainants may

also retain the right to bypass the VMU procedure and as such can direct their grievance directly to DWR, as provided by law in Lao PDR. The VMU shall make the arbitrated decision within 10 days. The Village/Subdistrict level, specifically the Chief of Mediation Unit, Village Chief, should record the grievance and how it was resolved and communicate it to the PMU. There are no fees or charges levied for the lodgment and processing of grievances at this level.

***Stage 2:*** In cases where grievances cannot be resolved on the spot, the second stage allows people to file grievances directly with the PMU. People will have been informed of the PMU's contact information during consultations. The PMU will be able to record the grievance and offer a solution within 15 days, consulting with the Project Management Units at the MOMRE, as needed. This may include a visit to the project site by the PMU if necessary. There are no fees or charges levied for the lodgment and processing of grievances at this level.

***Stage 3:*** in cases where grievance still cannot be resolved or not resolved to the satisfaction of any complainant, he/she shall have the right to submit a complaint to the Project Manager and Director of the PMU of the MAE as desired by the complainant. The administrative arbitration organization shall make the arbitrated decision within 20 days. Like the two previous stages, there are no fees or charges levied for the lodgment and processing of grievances at this level.

***Stage 4:*** if the complainants are still unsatisfied with the arbitrated decision made by the administrative arbitration organization at the Provincial level, after receiving the arbitrated decision, they can file a lawsuit in a civil court according to relevant laws and regulations of the Lao PDR. The complainant will bear the cost at this stage but will be reimbursed for their expenses by MAE if their complaint is successful.

It is important to note that the UNDP SES and GRM do not apply to person-to-person disputes, but only state-to-person disputes. Person-to-person disputes should be dealt with by the regular land registration dispute resolution mechanism.

In cases where grievance still cannot be resolved or not resolved to the satisfaction of the person making the complaint, the person has the right to submit a complaint to the District or Province authorities, as desired by the complainant. The Complainant could also decide to submit to complaint directly to the Courts. The complainant will bear the cost for these steps but will be reimbursed for their expenses by the MAE if their complaint is successful.

Where accessible, complainants may opt to raise their grievances directly to PMU of DWR-MAE as the Project Management Unit of the IWRM-EBA Project via alternative means hotline call and/or text message (WhatsApp) largely used even in most rural areas or via the project website to be set up under the project. The project will assign safeguard focal person in the PMU responsible for the GRM, including the hotline number. The grievances from the hotline and WhatsApp will be included into the GRM database by recording the phone calls or screenshots the messages from WhatsApp that would be uploaded into the database. Contact details of focal staff from PMU-MAE with the technical support form UNDP-CO are responsible for GRM should be provided in project information leaflet/booklet to be prepared and distributed to all project villages well in advance of consulting and GRM training for village mediation committees. Hotline/WhatsApp grievances will be recorded by the PMU and CMUs/ focal person, same as with other grievances received.

The project will provide GRM committees in all target villages and districts with a logbook where grievances are registered in writing and maintained as a database for monitoring and reporting. Sample templates for GRM logbooks and grievance forms are included in the SEP.

**Redress Procedure for Complaints for Workers**

Project workers can lodge their grievance/complaint as follows:

**Step 1 – Construction Contractor.** Project workers can submit their grievance to their Contractor who serves as the first focal point for receiving and resolving grievance. Grievance can be lodged verbally or in writing, in person or by phone, text message, mail or email (anonymous complaint is accepted). The Contractor involved will resolve the case no later than 15 days. Once resolved and the project worker is satisfactory, the Employer will report the case, including resolution process and results, to the PMU for information and record. If the Project worker is not satisfied with the resolution of their Contractor, the Contractor will refer to the Project Worker to the GRM focal point of PMU, if needed, and inform the Project Worker of this referral. It is noted that if a complaint concerns the safety and health of one or more individuals, such a complaint shall be resolved as soon as possible, depending on the nature and urgency of grievance.

**Step 2 – PMU level.** DWR (MAE) will resolve the complaint referred to by the Contractor and acknowledge receipt of the Project Workers' complaints within two weeks from the date of complaint receipt. If the GRM of PMU cannot resolve the complaint, the GRM focal point of PMU will consult with the Project Manager to resolve the issue. The GRM focal point of PMU will inform the Project Workers of the PMU's resolution result in writing within 30 days

from the date of complaint receipt. If the Project Worker is not satisfied with the resolution outcome proposed by PMU, PMU will refer the case to the PMU for resolving and informing the Project Worker of this referral in writing.

**Step 3 – Court of Law.** If the Project Worker is not satisfied with the resolution proposed above, the Project Worker can initiate a lawsuit to the court of law at any step. The cost associated with the lawsuit shall be borne by the Project Worker. The decision of the Court will be final.

**Recording Grievance in Logbook**

Established and managed by the PMU, a complaints register will be established as part of the project to record any concerns raised by any stakeholder during the implementation of the IWRM-EBA Project, with overall responsibility under the IWRM-EBA PMU. Any serious complaint (such as life-threatening, relating to GBV/SH or criminal) will be advised to the World Bank within 24 hours of receiving the complaint. A focal point of the E&S team at PMU will be responsible for the combined database. This same focal point will be analyzing and reporting the data from the database.

A summary list of complaints received, and their disposition, along with key statistics on the number of complaints and duration taken to close-up, must be reported in the regular project reporting and be at least every 6 months if not more frequent. Each record is allocated a unique number reflecting the year and sequence of complaints received (for example 2021-01, 2021-02 etc.). Complaint records (letter, email, record of conversation) should be stored together, electronically or in hard copy under the responsibility of the Project's.

Grievances can be submitted anonymously, or the aggrieved person can also request their name be kept confidential. Responsibility for the Grievance Log will be with the PMUs office (Please see Table below). This information should include:

- ✓ Stakeholder name and contact details (if not anonymous).
- ✓ Details of the nature of grievance.
- ✓ Date received, way it was responded to, and
- ✓ How it was submitted, acknowledged, responded to, and closed out.
- ✓ Grievances can be submitted anonymously, or the aggrieved person can also request their name be kept confidential. Responsibility for the Grievance Log will be with the Project Management Unit (PMU); and RCs.
- ✓ Previous records of similar incidents
- ✓ Evidence, supporting documents and statements
- ✓ Screening, review, validation, and investigation results; any follow-up and meetings, corrective actions, staff responsible to resolve; progress (pending, solved), agreements/commitments
- ✓ Time taken to respond or resolve the complainant(s)
- ✓ How, when and by whom a decision was communicated
- ✓ Closure date, and confirmation that the complainant was satisfied
- ✓ Quantitative data on the number of complaints received, the number of complaints relevant, and the number of complaints resolved.
- ✓ Qualitative data on the type of complaints and answers provided, and issues that are unresolved Management actions to avoid recurrence

**Sample Grievance Log for the Project**

| Name of complainant (or anonymous) | Sex (M/F) | Contact info | Date Received | Details of the nature of the grievance (Environmental impacts, Social impacts, Labour, Health, etc.) | To whom was grievance submitted | Action to resolve grievance | Date grievance was settled (and what stage) | How was the response provided? |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |

# Annex 15: Free, Prior and Informed Consent

### 1. Introduction

The IWRM-EbA Project acknowledges the rights of Indigenous Peoples and ethnic groups to participate meaningfully in decisions that affect their lands, livelihoods, cultures, and well-being. In alignment with the UNDP Social and Environmental Standards (SES) and the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), the project commits to implementing a culturally appropriate **Free, Prior and Informed Consent (FPIC)** process throughout all stages of the project cycle.

### 2. Key Principles of FPIC

- **Free**: Participation must be voluntary, without coercion, intimidation, or manipulation.
- **Prior**: Consent must be sought in advance of any project implementation, providing sufficient time for internal community discussions.
- **Informed**: Communities must receive full, relevant, and understandable information about the project, including potential benefits, risks, and alternatives.
- **Consent**: The right of communities to accept or reject project activities that may affect them, and the right to withdraw consent if agreed conditions are not met.

### 3. FPIC Implementation Approach

The FPIC process for the IWRM-EbA Project has been embedded within broader stakeholder consultations, with additional safeguards and procedures for ethnic groups:

- **Early Engagement**: Initial consultations were held with communities—including ethnic and Indigenous Peoples—during project design (2020–2021), well before finalizing any interventions.
- **Localized Facilitation**: Trained facilitators from ethnic communities or with local language skills were involved in ensuring effective communication and trust-building.
- **Inclusive Participation**: Separate consultations were held with different groups—men, women, youth, elders—to ensure all voices were heard, especially those of vulnerable groups.
- **Culturally Appropriate Tools**: Use of visual aids, village meetings, and translated materials helped ensure accessibility of information in non-written and ethnic languages.
- **Iterative Process**: Community feedback was gathered, documented, and integrated into project design. Draft project documents and safeguard instruments were disclosed and validated with stakeholders before finalization.

### 4. Steps and Outcome of FPIC Process

The consultations confirmed that:

- Communities broadly supported the project's goals and appreciated proposed interventions, particularly those that address climate risks, water access, and agricultural resilience.
- Concerns raised—such as the need for equitable benefit-sharing, protection of sacred sites, access to grievance mechanisms, and gender-sensitive measures—were incorporated into the project design and ESMP.
- While formal "signed consent" was not uniformly obtained in each case, **verbal consent and consensus through culturally appropriate community mechanisms** were documented and accepted by both local authorities and UNDP safeguards teams as consistent with Lao customary practice.
-

To achieve the foregoing outcomes, the following steps of FPIC should be carried out:
**Step 1 (Free)**: The project must commit to undertaking the consultation process free of coercion, intimidation and manipulation.
To complete this step, the PMU must provide the following information:

- Documented evidence of community consultations related to the proposed project activities and attendant environmental and social risks and proposed initial mitigation measures.
    - This has been implemented for all communities.
- Documented evidence that the community has been able to make decisions about proceeding with the project using their own decision-making process.
    - This will be confirmed in follow-up stakeholder consultations.
    - Note that the communities must be given the necessary time to implement their decision- making process.

- Documented evidence that the community has been able to co-design revisions to the project activities and the SES risk mitigation measures.
    - The communities have provided input related to the project activities and risks.
    - The project must demonstrate that it has duly considered the information provided in the initial stakeholder consultation and integrated it into the project activities and mitigation measures.
    - This will be confirmed during follow-up stakeholder consultations.
- Interviews or surveys with community members confirming that the project team has not used any form of intimidation, including pressure from Government departments.
    - A third-party NGO or independent consultant should confirm during the focus-group discussions in the follow-up consultations the communities do not feel intimidated or pressured to consent to the project activities.
- Interviews or surveys with community members confirming that no money, goods, or enticements whatsoever have been offered by the project team or Government to influence the decisions of the community and that the community knows that it has no obligation to provide consent. Note: in most cases, activities such as livelihood or small grant activities would not be considered "enticements."
    - A third-party NGO or independent consultant should confirm this during focus-group discussions in the follow-up consultations.

**Step 2 (Prior)**: The project shall, carry out periodic FPIC consultations with customary land owners (tribal/indigenous people) starting at project inception and continuing throughout the project life cycle to allow the community to reach a decision. The consultations will ordinarily be at 12 months interval with extra-ordinary consultations carried out when there are major project activities to be carried out, or when unforeseen circumstances make it necessary. The consultations shall be inclusive of all legitimate FPIC representatives of all affected customary landowners (tribal/Indigenous people) in the project area.
In order to complete this step, the PMU must provide the following information:

- Documented evidence that the FPIC process was initiated prior to any decisions being taken regarding the project's advancement, and that the timeline has been established and agreed upon by the community.
    - The PMU will be required to follow up with the communities with the finalized design of the proposed livelihood activities and land use maps. They will then be required to provide sufficient time for the communities to consider the livelihood activities and the land use maps and provide consent or lack of consent.
- Documented evidence demonstrating that the project team understands the local or customary decision-making processes and that this has been respected and adhered to, including the time required to reach a decision.
    - During the follow-up consultation the facilitators must ask about the community's decision-making process and ensure that all community members, included women and marginalized people, have been engaged in this process.
    - The project must ensure that the decision-making process has been used for arriving at the final decision related to consent.
    - A table as shown below can be used to document attendance of the FPIC consultations.

**Table**: Attendance at FPIC consultation

| *Project title:* | | ***Place:*** | | ***Date:*** |
|---|---|---|---|---|
| *Topic/ Purpose of meeting:* | | | | |
| *Name* | *Representing* | *Contact details* | *Gender* | *Signature* |
| | | | | |
| | | | | |

**Step 3 (Informed)**: The project must ensure that the community understands all relevant information pertaining to the proposed activities and UNDP's SES. This includes disseminating the information in a culturally appropriate manner and in a language(s) understood by the community.
In order to complete this step, the PMU must provide the following information:

- Documented evidence that the project has a Stakeholder Engagement Plan for engaging the stakeholders and ensuring that the relevant information pertaining to the proposed activities and relevant safeguard commitments is accessible to the community.
    - The project has prepared a Stakeholder Engagement Plan as well as FPIC.
    - The PMU presented the relevant information pertaining to the proposed activities and relevant safeguard commitments during the consultations.

    - The presentation materials used Tok Pisin and were explained using examples that are familiar to the community members.
    - Comprehension of the presentations was assessed using the follow-up focus group discussion questions.
- Documented evidence that the relevant information pertaining to the proposed activities and the relevant safeguards commitments is disclosed in all necessary languages in order for the information to be fully understood by the community.
    - As above, the presentation materials used Tok Pisin and were explained using examples that are familiar to the community members.
- Documented evidence of interviews, surveys, or questions and answers during the meetings with stakeholders that demonstrate that the relevant information pertaining to the proposed activities and relevant safeguard commitments has been understood by the community.
    - As per the focus group discussion question responses it appears that the comprehension level was high except for issues relating to managing the expectations of the community
    - There were instances where the communities explicitly stated that they would require follow-up consultations to ensure comprehension. The PMU must ensure that these are implemented.

**Step 4 (Consent)**: The project must ensure the community has formally agreed to the project activities (requiring FPIC) through signing, for example, a memorandum of understanding, contract, or formal document.

Note: this process could also take the form of traditional practices such as a ceremony in conjunction with executing a formal document. In some cases, communities may not be comfortable signing a formal document, in which case only local/traditional practices will be used.

In order to complete this step, the PMU must provide the following information:

- The PMU will be required to formalize consent prior to implementing the activities requiring FPIC. Note that the project can proceed with activities not requiring FPIC prior to receiving consent for activities requiring FPIC.

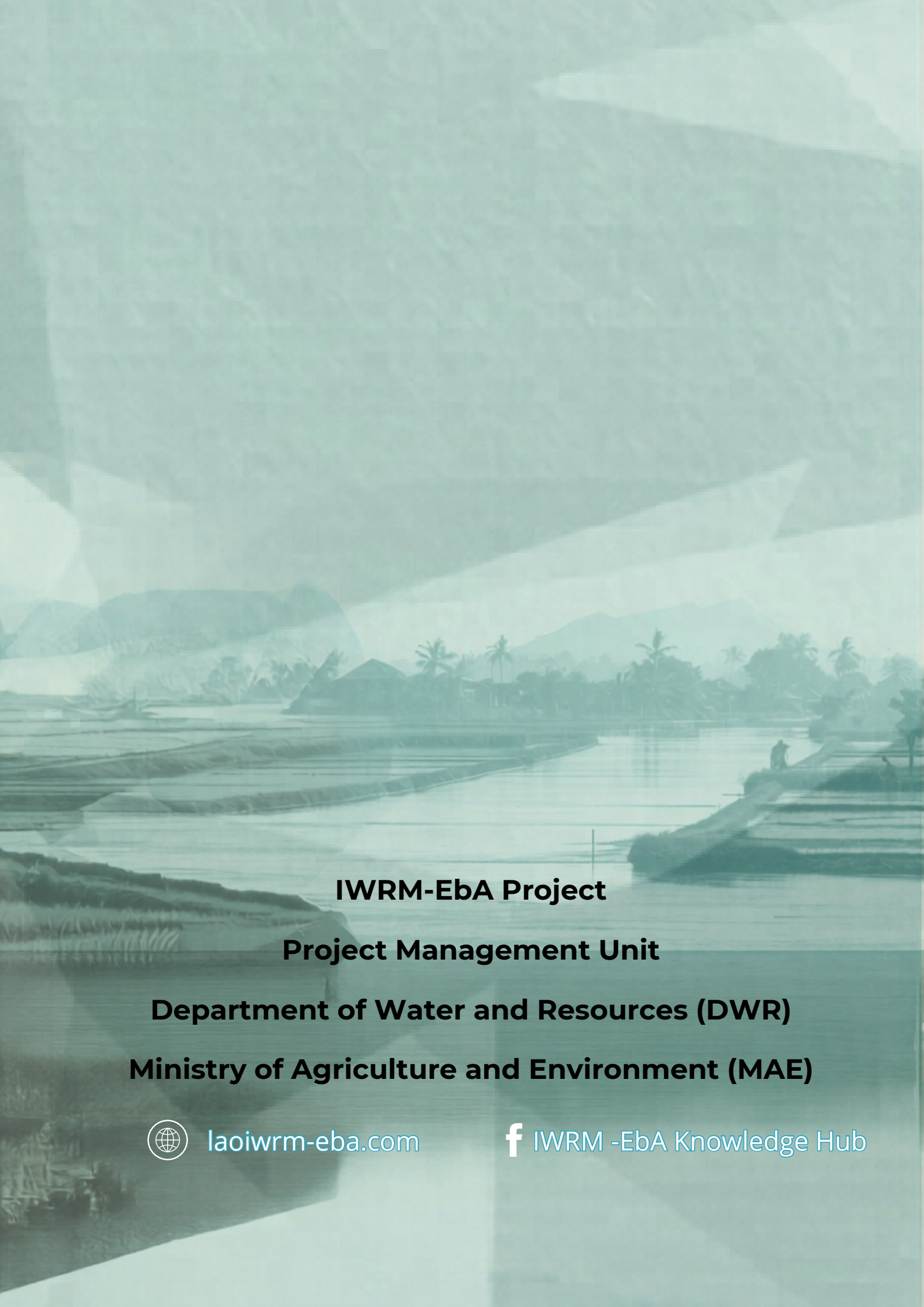
**5. Ongoing FPIC and Feedback Mechanisms**

- The FPIC process will continue during implementation through regular community consultations, mid-term reviews, and participatory monitoring.
- A community-level **Grievance Redress Mechanism (GRM)** has been established to allow ethnic groups to raise issues at any stage.
- Any future changes to the scope, site, or nature of project interventions in ethnic areas will require renewed consent through the FPIC process.

**6. Institutional Oversight**

- **PONRE/DONRE and the Project Management Unit (PMU)** are responsible for ensuring compliance with FPIC principles.
- **Ethnic leaders** will support facilitation and monitoring of consent procedures at village level.

**UNDP Country Office** will provide oversight and safeguard compliance.



**IWRM-EbA Project**

**Project Management Unit**

**Department of Water and Resources (DWR)**

**Ministry of Agriculture and Environment (MAE)**

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