



LAO PEOPLE'S DEMOCRATIC REPUBLIC
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

MINISTRY OF PUBLIC WORKS AND TRANSPORT

Department of Waterways

Southeast Asia Disaster Risk Management Project

Project ID No: P170945

**Component 1: Integrated Urban Flood Risk Management
in Pakxan City, Bolikhamxay Province**

ABBREVIATED RESETTLEMENT ACTION PLAN
Volume 1 - Main Report
(Final)

1 December 2022

Table of Contents

Abbreviations and Acronyms	v
Definitions.....	vii
Executive Summary.....	x
1 Introduction	1
1.1 Purpose of ARAP.....	1
1.2 Project Information	1
1.3 Project Proponent	2
1.4 Subproject Objectives.....	2
2 Description of the SubProject.....	3
2.1 Subproject Location.....	3
2.2 Subproject Works	2
2.3 Construction Materials	6
2.4 Disposal of Surplus Soils	8
2.5 Transportation Routes and Proposed Worker Camp Site	9
2.6 Schedule of Project Implementation	9
3 Scope of Impacts and Mitigation Measures	10
3.1 Scope of Impacts	10
3.2 Land and Displacement Impacts	11
3.3 Inventory of Loss	11
3.4 Gender Considerations	13
3.5 Mitigation Measures	14
4 Socioeconomic Profiles in Affected Villages	14
4.1 Affected Community	14
4.2 Ethnic Groups	15
4.3 Religions.....	15
4.4 Infrastructures and Facilities	15
4.5 School Facility and Health Centers.....	18
4.6 Education	18
4.7 Disease and Treatment Practices.....	20
4.8 Employments and Incomes.....	20
4.9 Labor Migration.....	20
4.10 Land Use.....	20
4.11 Domestic Animal of the Affected Villages.....	21
4.12 Cultural and Historical Infrastructure	21



4.13	Poverty Groups.....	21
4.14	Vulnerability Groups (VG).....	22
5	<i>Socioeconomic Profiles of Affected Population</i>	23
5.1	Affected Households	23
5.2	Ethnic Groups and Religions	23
5.3	Infrastructures and Facilities	23
5.4	Employments and Incomes.....	24
6	<i>Legal Framework.....</i>	25
7	<i>Principles and Policies for Compensation, Support, Resettlement and Livelihood Restoration</i>	25
7.1	Key Principles	25
7.1.1	Cash Compensation.....	27
7.1.2	House and Asset Relocation	27
7.1.3	Additional Livelihood Restoration Measures.....	27
7.1.4	Compensation Principles.....	28
7.2	Eligibility Policy.....	29
7.2.1	Categories of Displaced Persons	29
7.2.2	Displaced Persons Eligibility Criteria	29
7.2.3	Eligibility Cut-Off Date	30
7.3	Entitlements	31
7.3.1	Compensation rates.....	32
7.3.2	Entitlement Matrix.....	33
7.4	Resettlement Measures	36
7.5	Site Selection, Site Preparation, and Relocation.....	37
7.6	Livelihood Restoration Measures	37
8	<i>Implementation Arrangements.....</i>	38
8.1	Government Agencies	38
8.2	Provincial Resettlement Committee (PRC)	39
8.3	District Resettlement Committee	40
8.4	Measures for Organizational Capacity Building	41
9	<i>Information Disclosure, Consultation and Community Participation</i>	41
9.1	Information Disclosure	41
9.2	Consultation Process	42
9.3	Consultation during preparation of ARAP	42
9.4	Consultation during implementation of ARAP.....	45
10	<i>Grievance Redress Procedures</i>	46
11	<i>Implementation Schedule</i>	50
12	<i>Monitoring and Evaluation</i>	53
13	<i>Costs and Budget</i>	54

14 Attachments..... 57

List of figures

Figure 2-1 Project Location.....	1
Figure 2-2 Proposed Alignment for 2 Sections of River Embankment	3
Figure 2-3 Rip-rap Protection in the MRIMP	4
Figure 2-4 Typical Cross Sections of Embankment (Section 1 and 2)	4
Figure 2-5 Cross-section of Proposed Stairway	5
Figure 2-6 Irrigation Facility at Section 2.....	6
Figure 2-7 Location of Construction Materials	8
Figure 10-1 GRM Procedure	48

List of Tables

Table 2-1 Project Components	2
Table 2-2 List of Construction Material.....	7
Table 2-3 Construction Schedule.....	9
Table 3-1 Summary of all Losses	12
Table 3-2 Summary of Affected Main Structures.....	13
Table 3-3 Affected Secondary Structures	13
Table 3-4 Summary of affected Trees.....	13
Table 4-1 Population of Affected Villages.....	14
Table 4-2 Ethnic Groups in Affected Villages	15
Table 4-3 Religions in Affected Villages.....	15
Table 4-4 Abbreviations of Infrastructure and Facilities in the Villages	16
Table 4-5 Infrastructure and Facilities in the Affected Villages.....	17
Table 4-6 Number of School and Health Center in the Affected Villages	18
Table 4-7 Distances from Each Village to School.....	18
Table 4-8: Level of Education in the Affected Villages	19
Table 4-9 Land Use in Project Affected Villages.....	20
Table 4-10 Domestic Animals in Affected Villages	21
Table 4-11 Number of Poor Households in Affected Villages.....	22
Table 4-12 Number of Vulnerable Households in Affected Villages.....	23
Table 5-1 Number of Affected Household.....	23
Table 5-2 Infrastructure and Facilities of the Affected Households	24
Table 5-3 Level of Education of the Affected Households	24
Table 5-4 Domestic Animal of Project Affected Households	24
Table 7-1 Entitlement Matrix	34
Table 9-1 Number of Participants.....	42
Table 9-2 Summary of Consultation Results.....	43
Table 9-3 Future Consultations	45
Table 10-1 GRM Contact Persons	49
Table 11-1: ARAP Implementation Schedule	50
Table 13-1 Total Compensation Cost	55

Abbreviations and Acronyms

ADRIF	Asia Disaster Resilience Insurance Fund
AP	Affected People
ARAP	Abbreviated Resettlement Action Plan
CBO	Community Based Organizations
CERD	International Convention on the Elimination of All Forms of Racial Discrimination
COI	Corridor of Impact
COC	Code of conduct
C&R	Compensation and Resettlement
CSO	Civil Society Organizations
DDMCC	Department of Disaster Management and Climate Change
DESIA	Department of Environment and Social Impact Assessment
DMH	Department of Meteorology and Hydrology
DMS	Detailed Measurement Survey
DONRE	District Office of Natural Resources and Environment
DOP	Department of Planning
DOW	Department of Water Ways
DPWT	Department of Public Works and Transport
DRFI	Disaster Risk Financing and Insurance
DRC	District Resettlement Committee
DRM	Disaster Risk Management
DRO	District Resettlement Office
EDPD	Environmental Research and Disaster Protection Division
ECC	Environmental Compliance Certificate
EDL	Electricite Du Laos
EG	Ethnic Group
EGEF	Ethnic Groups Engagement Framework
EGDP	Ethnic Group Development Plan
EPL	Environmental Protection Law
ESCAP	Environmental and Social Code of Practice
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMMP	Environmental and Social Management and Monitoring Plan
FGD	Focus Group Discussion
GBV	Gender-Based Violence
GOL	Government of Lao PDR
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
IEE	Initial Environmental Examination
IOL	Inventory of Loss
IR	Involuntary Resettlement



LFND	Lao Front for National Development
LWU	Lao Women Union
MAF	Ministry of Forestry
M&E	Monitoring and Evaluation
MOF	Ministry of Finance
MOICT	Ministry of Information, Communication and Tourism
MONRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
MPWT	Ministry of Public Works and Transport
NGO	None Government Organization
NPA	Non-Profit Association
NRA	National Regulatory Authority
OP/BP	World Bank Operational Policies
PAH	Project Affected Households
PAP	Project Affected Persons
PDO	Project Development Objective
PDR	People's Democratic Republic
PIU	Project Implementation Unit
PM	Prime Minister
PMU	Project Management Unit
PONRE	Provincial Office of Natural Resources and Environment
PRC	Provincial Resettlement Committee
PIU	Project Implementation Unit
PRO	Project Resettlement Office
PTI	Public Works and Transport Institute
PUDA	Provincial Urban Development and Administration
RAP	Resettlement Action Plan
RCS	Replacement Cost Study
RP	Resettlement Policy
RPF	Resettlement Policy Framework
RSS	Regional Safeguards Secretariat
SEA-DRM	Southeast Asia Disaster Risk Management Project for Lao PDR
SDS	Social Development Specialist
SIA	Social impact assessment
UXO	Unexploded Ordinance
VRS	Village Resettlement Sub-committees
WB	World Bank
WBG	World Bank Group

Definitions

- **Beneficiary** - all persons and households from the villages who voluntarily seek to avail of and be part of the Project.
- **Compensation** - payment in cash or in kind of the replacement cost of the acquired assets for the project.
- **Cut-off Date** – the date prior to which the occupation or use of the project area makes residents/users of the project area eligible to be categorized as affected persons. The cut-off date is established in the Abbreviated Resettlement Action Plan (ARAP). It normally coincides with the date of the census of affected persons within the project area boundaries, or the date of public notification regarding the specific civil works that would cause displacement. Persons not covered in the census, because they were not residing, having assets, or deriving an income from the project area, are not eligible for compensation and other entitlements.
- **Displaced persons** - refers to all of the people who, on account of the activities listed above, would have their (1) standard of living adversely affected; or (2) right, title, interest in any house, land (including premises, agricultural and grazing land) or any other fixed or movable asset acquired or possessed temporarily or permanently; (3) access to productive assets adversely affected, temporarily or permanently; or (4) business, occupation, work or place of residence or habitat adversely affected; and “displaced person” means any of the displaced persons, including those who have no legal recognizable right or claim to the land they are occupying.
- **Eligible land holders** – refers to affected persons who (a) hold title to land; or (b) do not hold title but whose possession of land can be legalized with a title pursuant to the Land Law 2019 of Lao People’s Democratic Republic (PDR) including those who have no legal recognizable right or claim to the land they are occupying, but who are nonetheless entitled to assistance to restore their living standards, livelihoods, and any land-affixed assets affected.
- **Entitlement** – range of measures comprising compensation, income restoration, transfer assistance, income substitution and relocation which are due to affected people, depending on the nature of their losses, to restore their economic and social base.
- **Household** - means all persons living and eating together as a single social unit. The census used this definition and the data generated by the census forms the basis for identifying the household unit.
- **Income restoration** - means re-establishing income sources and livelihoods of PAPs to a minimum of the pre-project level.
- **Improvements** – structures constructed (dwelling unit, fence, waiting sheds, pig pens, utilities, community facilities, stores, warehouses, etc.) and crops/plants planted by the person, household, institution, or organization.
- **Land acquisition** - the process whereby a person involuntary loses ownership, use of, or access to, land as a result of the project. Land acquisition can lead to a range of associated

impacts, including loss of residence or other fixed assets (fences, wells, tombs, or other structures or improvements that are attached to the land).

- **Project Authorities** – refers to the Ministry of Public Works and Transport (MPWT), the Ministry of Planning and Investment (MPI), Ministry of Finance (MOF), Ministry of Natural Resources and Environment (MONRE) and Ministry of Information, Communication and Tourism (MoICT).
- **Project Affected Person (PAP) or Household (PAH)** – includes any person, households, entity, organizations, firms or private institutions who, on account of changes that result from the project will have their (i) standard of living adversely affected; (ii) right, title, or interest in any house, land (including residential, commercial, agricultural, forest, plantations, grazing, and/organizing land), water resources, fish ponds, communal fishing grounds, annual or perennial crops and trees, or any other moveable or fixed assets acquired, possessed, restricted, or otherwise adversely affected, in full or in part, permanently or temporarily; and/or (iii) business, occupation, place of work or residence, or habitat adversely affected, permanently or temporarily, with or without displacement.
- **Rehabilitation** – refers to assistance provided to persons seriously affected due to the loss of productive assets, incomes, employment or sources of living, to supplement payment of compensation for acquired assets, in order to achieve, at a minimum, full restoration of living standards and quality of life. Compensation for assets often is not sufficient to achieve full rehabilitation.
- **Replacement cost**- a method of valuation of assets which determines the amount of compensation sufficient to replace lost assets, including any necessary transaction costs. Compensation at replacement cost is defined as follows: For agricultural land, it is the pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes. For land in urban areas, it is the pre-displacement market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes. For houses and other structures, it is the market cost of the materials to build a replacement structure with an area and quality similar to or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor and contractors' fees, plus the cost of any registration and transfer taxes. In determining the replacement cost, depreciation of the asset and the value of salvage materials are not taken into account, nor is the value of benefits to be derived from the project deducted from the valuation of an affected asset. Where domestic law does not meet the standard of compensation at full replacement cost, compensation under domestic law is supplemented by additional measures so as to meet the replacement cost standard. Such additional assistance is distinct from resettlement measures to be provided under other clauses in OP 4.12, Para. 6.
- **Replacement Cost Study (RCS)** - The main objective of the RCS is to determine the rate of land prices based on actual transaction records of the affected areas, of affected main and

secondary¹ structures and other immovable assets. This study would be conducted by an independent appraiser. Based on the results of RCS, the PAH will receive compensation at replacement cost (reflecting market price) from RoUM for their loss of land and property due to the sub-project. The RCS will be implemented during the DMS.

- **Resettlement** – means that all measures should be taken to mitigate any and all adverse impacts of a project on PAP property and/or livelihood's, including compensation, relocation (where relevant) and rehabilitation as needed.
- **Unit Costs for Lands** - The affected private lands will most likely fall under the land categories of either residential or commercial lands. The way to obtain data on market rates is to gather data on recent land sales at/around the sub-project area. Methods for data collection include direct interviews (i) real estate agents in Community Based Organizations (CBO) (ii) land owners at/around the sub-project area who are both PAHs and non-PAHs, and (iii) local authorities at/around the sub-project area. Per results of the RCS, the unit costs of land covered with recognized proofs of ownership, structures and other immovable assets are provided.
- **Unit Costs for Structures** - The houses/structures affected by the sub-project have been categorized into two main groups – house/dwelling and other structures. The methodology employed for costing house/structures includes a quantity survey and detailed measurement of the component parts of each structure and a determination of the market value of the house/dwelling. Other structures such as wells and fences, and cultural assets such as stupas, have to be compensated at their market price, and the results of the specific rates of structures are provided.
- **Vulnerable Groups** - are distinct groups of people who might suffer disproportionately or face the risk of being further marginalized by the effects of resettlement and specifically include: (i) households headed by women, the elderly people or people with disability and households with no labors, (ii) households living below the poverty threshold, (iii) the landless, and (iv) ethnic groups as defined in OP/BP 4.10.

¹ This includes fences, huts, toilets, kitchens, etc.

Executive Summary

The South East Asia Disaster Risk Management Project for Lao PDR (Lao DRMP or Parent Project) is being implemented with financing from the World Bank (WB) with the aim of reducing the risk of flooding and enhancing the disaster risk financing capacity of Lao PDR. The Project was approved on July 6, 2017 and became effective on 11 October, 2017, with a commitment amount of US\$30 million. The Lao DRMP includes five components: Component 1 – Integrate Urban Flood Risk Management, Component 2 – Hydromet Modernization and Early Warning System, Component 3 – Financing Planning for Disaster Resilience, Component 4 – Knowledge and Coordination, and Component 5 – Contingency Emergency Response.

During project implementation, Lao PDR experienced widespread flooding in 2018 which significantly impacted its people and country's economy. To help reduce the financing gap and augment the response efforts, the World Bank approved an Additional Financing (LDRM-AF, or AF) of about \$25 million. This includes funding for Structural Investments to Strengthen Flood Protection to support additional investments in Muang Xay and to implement similar activities in two additional provinces, including Luang Prabang (LPB) and Bolikhamxay (BKK).

Objective of the Abbreviated Resettlement Action Plan (ARAP)

This ARAP is prepared to facilitate land acquisition to support the subproject implementation in Bolikhamxay Province. The overall objective of this ARAP is to avoid involuntary resettlement (IR) wherever possible; to minimize IR impacts by exploring project's design alternatives; to improve, or at least restore, the livelihoods of all affected people (AP) to the pre-project levels; and to improve the standards of living of affected people, particularly vulnerable groups. The objectives of the ARAP are to: (i) identify and mitigate involuntary resettlement (IR) impacts, and provide compensation payment for unavoidable impact, including provision of assistance to affected people (AP), and ensure fair and transparent process for the participation of affected people and other stakeholders during resettlement process.; (ii) enable Project Management Unit (PMU) (at the DOW of MPWT) to clearly identify potential adverse impacts, compensate for unavoidable impacts and restore the livelihoods of PAPs; and (iii) provide direction for the PMU in updating/finalizing, implementing and monitoring the ARAP implementation.

The ARAP identifies measures to ensure that APs are, (i) informed of, and consulted on the activities of the proposed subproject and agree in principle with the subproject; (ii) informed of resettlement/compensation options and AP's entitlements pertaining to involuntary resettlement impacts; (iii) consulted on, offered choices, and provided with suitable compensation and/or resettlement alternatives; and (iv) provided with prompt and effective compensation at full replacement cost for their loss of assets and livelihoods that are caused directly by the subproject.

Scope of Land Acquisition and Resettlement

The project is expected to cause minor physical relocation as a result of the project implementation as it will not require the permanent use of private land. The project will affect 20 project affected households (PAHs) (comprising of about 120 people including 57 females). Among the 20 PAHs, three households will have their wooden houses and/or small restaurants affected. All of them are located in Pakxan-Tai Village. These house and restaurants were built on government managed

land (reserved land). Based on the consultation with these four households, these households will relocate their houses and shops to their existing land plots which are located within the district. The total cost for compensation for affected houses, shops, trees, allowance for relocations, and income restoration is estimated at **LAK506,619,682 (USD30,230)** for compensation and income restoration as summarized as summarized in Table 13-1 below. This includes compensation for (i) affected housing structure; (i) affected restaurants; (iii) affected secondary structures; (iv) affected crops and trees; (vi) dismantlement and transportation; and (v) livelihood restoration assistances. The compensation for PAHs will be paid to the PAPA/PAHs via PAPA's bank account to ensure transparency and security.

Impacts on Land and Assets

The current design indicates that the subproject will not require any acquisition of privately owned land. However, the project will cause loss of houses, structures, shops, and trees that were established on public land and are currently owned by 20 households from three villages of Houaysiat, Anousonxay and Pakxan-Tai Villages. Affected houses include three one-story wooden house (total area of **50.46m²**, owned by one PAH in Pakxan-Tai village) and two restaurant/shops (**54m²** in total, owned by two PAHs in Pakxan-Tai village). **569.38m²** of secondary structures (owned by 21 PAHs), thirteen fish farm cages (2 PAHs), and **225 trees** (fruits, industrial trees and bamboo of 25 PAHs) would also be affected (See table 1 below).

Table 1 Summary of potential impacts on assets of 20 households

No.	Type of Loss	# of HH	# of structures	Affected #	Unit
1	Housing Structure	1	1	50.46	
1.1	One story house	1	1	50.46	m ²
2	Restaurant	2	2	54	
2.1	Restaurant	2	2	54	m ²
3	Secondary structures	21	24	566.38	
3.1	Wooden hut	8	12	348,84	m ²
3.2	Porches of house and shop	3	4	147.44	m ²
3.3	Toilet	4	4	15.42	m ²
3.4	Storage	1	1	31	m ²
3.5	Fish tank	1	1	13.68	m ²
3.6	Water tank	1	1		Tank
3.7	Electricity pole	1	1		Pole
3.8	Fish cage farm	2		13	cage
4	Tree	25		225	
4.1	Fruit trees	15		187	tree

No.	Type of Loss	# of HH	# of structures	Affected #	Unit
4.2	Industrial trees	3		16	tree
4.3	Bamboo	7		22	tree

Measures to Mitigate the Impacts and Resettlement

Effort has been made to minimize the potential resettlement impacts. This was done through reduced width of the alignment. As part of the project's resettlement policy, PAHs who are required to resettle will be provided with sufficient time and support to rebuild their new houses and shops prior to the commencement of civil works. The project will ensure that PAPs are able to continue to have access to their houses and their present livelihood activities during project implementation - to the extent possible. Impacts on their livelihood and business will also be minimized through close and effective contract management and work supervision by PMU and their construction supervision consultant to ensure that ESMP is effectively complied with and that works are completed as per work plan.

The individuals, households and businesses that will likely be affected by the construction works have been surveyed and consulted. The unit costs of compensation for affected land and assets have been established based on the principle of "Replacement Cost". The compensation rates have been consulted with and agreed upon by PAPs. The compensation will be paid to the PAPs/PAHs via PAPs' bank account to ensure transparency and security.

Legal and Policy Framework

This ARAP for BKX project complies with the World Bank's OP 4.12, applicable provisions of Decree 84 of the Lao Government on Compensation and Resettlement, the Decree on Environmental Impact Assessment (2019) and other relevant national legislation including the Land Law 2019. Where gaps and discrepancies exist between the WB OP. 4.12 and the GOL policies, the former WB policy will prevail as per the Project Agreement and will be in accordance with the Project's Resettlement Policy Framework.

Implementation Arrangements

The Project Management Unit (PMU) established under DOW of MPWT will be responsible for overall project management and coordination with concerned agencies and donors at the central level. Responsibility for day-to-day sub-project implementation, work supervision, implementation and monitoring of the ARAP lies with the Project Implementation Unit (PIU) established in the Water Ways Sector of the Department of Public Works and Transport (DPWT) of Bolikhamxay province. The PIU/DOW will work in close collaboration with the Environment and Disaster Prevention Division (EDPD) of the Public Work and Transport (PTI) under MPWT to ensure ARAP as well as associated safeguard instruments including Environmental and Social Management Plan (ESMP) and Ethnic Group Engagement Plan (EGEP) are prepared, implemented and monitored effectively by the PIU in accordance with the Project's RPF and updated national legislations, if any. Pursuant to the current legislation, MONRE is responsible for

environmental compliance review and also for legal matters regarding land ownership and expropriation.

PMU/DOW – through its provincial agency (PIU/PDPWT), are responsible for supervising and implementing safeguards implementation, including the ARAP with the technical assistance and support from EDPD/PTI. ARAP and compensation, including Grievance Redress Mechanism (GRM), will be reviewed and monitored by the Provincial and District Resettlement Committees, which will be established in accordance with the Decree 84, 2016 on compensation and resettlement. Village Resettlement Sub-committees (VRS) will also be established as needed in villages where land acquisition and resettlement will occur to facilitate ARAP preparation and implementation; including conducting consultation with PAP and managing grievance redress mechanism at the village level.

Monitoring

The ARAP monitoring and evaluation consists of two parts: internal monitoring and external resettlement monitoring and evaluation. The PMU, with technical support from EDPD/PTI, will carry out internal monitoring of the ARAP implementation. Quarterly internal monitoring reports will be submitted to the DOW, PTI/EDPD management and the WB. The DOW will engage an independent entity or consultant to do external monitoring of the project on a semi-annual basis. The external monitoring consultant will assess and certify the completion of ARAP and resettlement process before the commencement of the civil work. Both internal and external monitoring reports will be disclosed publicly through PMU’s website and at local level where resettlement takes place.

Costs and Budget

The total cost for compensation for affected houses, shops, trees, allowance for relocations, and income restoration, etc. is estimated at **LAK506,619,682 (USD30,230)**. The unit costs of compensation for affected land and assets have been established based on the principle of “Replacement Cost”. The compensation rates and its calculations were consulted and disclosed in meaningful manner to each individual affected persons/households from which they have agreed based on the documents signed. As per the advice from the WB, the second market survey was carried out during 2-10 September 2022 to estimate actual inflation of construction materials given that the prices of these materials have been notably increased while land and tree prices remain largely stable. The survey was conducted through the visit of local market (5 businesses/shops) to obtain actual/latest prices of main construction materials (such as cement, sand, gravel, wood and steel products, transport and other building materials). The survey result indicated that the inflation rate of construction materials in Bolikhamxay province (Pakxan City) was 20.43%. However, 10% of inflation rate was already added into the compensation rates approved by the Provincial Governor ((No. 147/GOV.BKK, dated 15 March 2022) during the resettlement planning process and therefore only 10.43% additional inflation rate of construction materials was added into the compensation cost in this ARAP. Budget for ARAP implementation is covered by PMU. The compensation will be paid to the PAPs/PAHs via PAPs’ bank account to ensure transparency and security. Findings of the market survey is provided in Attachment 12.

1 Introduction

1.1 Purpose of ARAP

1. The objectives of the ARAP are to: (i) serve as a binding document to ensure a fair and transparent process for participation, identification and mitigation of involuntary resettlement (IR) impacts, and payment of compensation and assistance to affected people (AP); (ii) guide the Project Management Unit (PMU) at the Department of Water Ways (DOW) of MPWT in clearly identifying, compensating, and restoring the livelihoods of PAPs; and (iii) provide direction for the PMU in updating/finalizing, implementing and monitoring the ARAP.

2. The ARAP identifies measures to ensure that APs are, (i) informed of, and consulted on the proposed project activities and agree in principle with the Project; (ii) informed of resettlement and compensation options that are available for their choice, and their rights pertaining to involuntary resettlement impacts; (iii) consulted on and provided with suitable compensation and/or resettlement alternatives; and (iv) provided prompt and effective compensation at full replacement cost for losses of assets directly caused by the Project.

3. The ARAP covers potential social impacts, land acquisition, household resettlement and livelihood and income losses anticipated from implementing the construction of riverbank protection in two sections in the Pakxan District, Bolikhamxay province. The ARAP provides mitigation measures, including compensation and allowances to PAPs in three affected villages for their affected assets such as land, houses, secondary structures, trees, businesses, etc.

1.2 Project Information

4. Lao PDR is frequently impacted by flood which affects extensively the properties and lives of the people. Between 1991 and 2013, about 200,000 people were affected annually by various floods, which pose a serious threat to the wellbeing of people and socio-economic development in Lao PDR. The Mekong River with a total river length of 4,800 km rises from the Tibetan Plateau and flows into the South China Sea via totally six countries i.e., China, Myanmar, Laos, Thailand, Cambodia, and Vietnam. The river length of the Mekong River passing through Lao PDR is 1,898km, of which the most sections play a role as the border with Thailand. Major cities located along the Mekong River and its tributaries in Lao PDR have experienced repeated damages caused by flood and bank erosion during rainy season from May to October every year. Based on MPWT's investigations, it is estimated that annual economic loss due to flood damage in Lao PDR since 2000 is approximately US\$ 40 million. River bank erosion due to flood has resulted in a loss of around 80 km² of land, raising concerns over sensitive territorial issues at bordering areas between Laos PRD and Thailand and thus a stronger need for river bank protection.

5. The Southeast Asia Disaster Risk Management Project for Lao PDR and its additional financing (LDRM-AF) is being implemented with financing from the World Bank (WB) with an aim to reduce the risk of flooding and enhance disaster risk financing capacity of Lao PDR². The LDRM-AF

² The parent project (LDRM) was approved on July 6, 2017 and became effective on 11 October, 2017, with a commitment amount of US\$30 million. The Project Development Objective (PDO) is to reduce the impacts of

consists of five components: (1) Integrated Urban Flood Risk Management being implemented by the Department of Waterways (DOW) of the Ministry of Public Works and Transport (MPWT); (2) Hydromet Modernization and Early Warning Systems being implemented by the Department of Meteorology and Hydrology (DMH) of the Ministry of Natural Resources and Environment (MONRE); (3) Financing Planning for Disaster Resilience being implemented by the State Reserve Department in the Ministry of Finance (MOF); (4) Knowledge and Coordination being implemented by the Department of Planning of Ministry of Planning and Investment (MPI); and (5) Contingent Emergency Response Component. In late 2019, additional fund of about \$25 million has been provided to increase the scope of the Component 1 to cover the need for priority investment in Luang Phabang (LPB) and Bolikhamxay (BKX) while additional fund has been provided to investment in Oudomxay (ODX) Province.

1.3 Project Proponent

6. The GOL through the MPWT is the Project proponent. The project will be implemented through existing GOL structures of the line ministries. MPI is responsible for overall coordination of the project. MPI will engage specialists to provide expertise and support related to procurement, financial management, safeguards compliance, and project management (including M&E) related to the overall project. Component-specific works and consultants will be procured by DOW, DMH, and MOF

7. The Project Management Unit (PMU) under DOW of MPWT will be responsible for overall project management and coordination with concerned agencies and donors at the central level. A Project Implementation Unit (PIU) is established in the Water Ways Sector of the Provincial Department of Public Works and Transport (DPWT) in Bolikhamxay Province for day-to-day sub-project management and work supervision. The PIU/DOW will work closely with the Environment and Disaster Prevention Division (EDPD) of the Public Work and Transport (PTI) under MPWT to ensure ARAP as well as associated safeguard instruments, including Environmental and Social Management Plan, etc., are prepared, implemented and monitored effectively in accordance to the Project's RPF and updated relevant national legislation, if any.

8. The contact details for the Project proponent of Component 1 is as follows:

Ministry of Public Works and Transport of Lao PDR
Department of Waterways
Lanxang Avenue, Vientiane Capital, Lao PDR
Project Coordinator: Moukmany Chanthasy
Contact: 856-21 412250 Fax: 856-21 412250

1.4 Subproject Objectives

9. The BKX subproject is part of the Component 1 which has been designed to reduce the flood damages from the Mekong River in Pakxan City and enhance the Government's capacity for disaster risk management.

flooding in Muang Xay of Oudomxay (ODX) Province and enhance capacity of the Government of Lao PDR (GOL) to provide hydro-meteorological services and disaster response.

2 Description of the SubProject

2.1 Subproject Location

10. Bolikhamxay Province is located in central Lao PDR. The province is south of Vientiane Capital and is a center for ecotourism activities with its two national protected areas and extensive system of wetlands. The province borders Xiengkhouang Province to the northwest, Vietnam to the east, Khammouane Province to the south and Thailand to the west. The province includes the annamite range, stretching east to Vietnam, while to the west are the Mekong River and Thailand. The province consists of seven districts and covers an area of 14,863 km².

11. Pakxan District is a town of Bolikhamxay Province and connected to the south of Lao PDR by national road No. 13. The Nam Xan River joins the Mekong River in Pakxan District at the border with Thailand. The proposed Project site comprises two specific locations along the Mekong River upstream (652 m) and downstream (550 m) of the Nam Xan Mouth (see Figure 2-1). The area is vulnerable to flood and river bank erosion. The total length of two sites is around 1.2 km along the Mekong River comprising 652m upstream (B. Houaysiat) and 550 m downstream (B. Pakxan-Tai). See Figure 2.1 below.

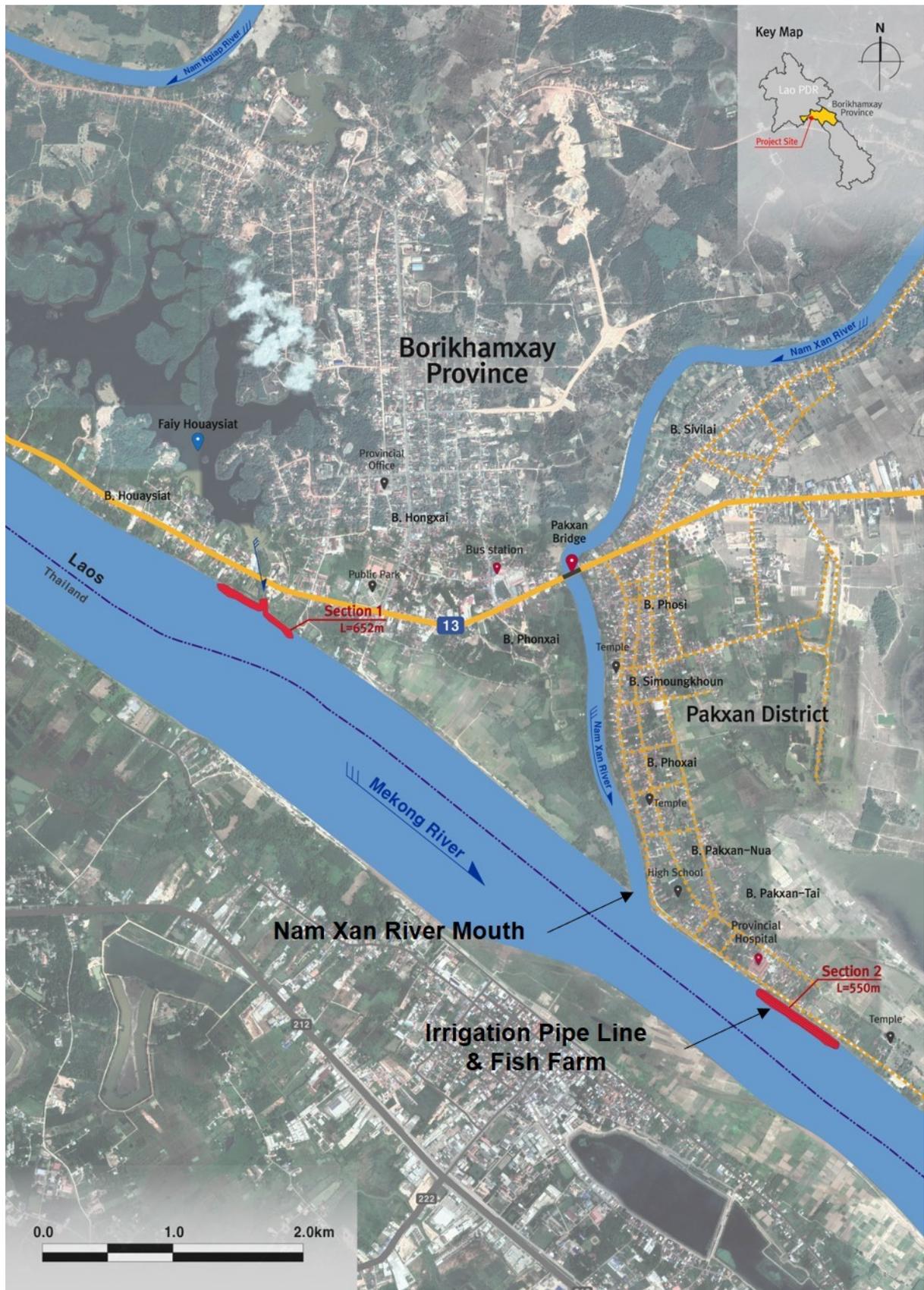


Figure 2-1 Project Location

2.2 Subproject Works

12. Based on the detailed design, the proposed Project works will comprise (a) construction of two embankments and riverbank protection structures at the left side of the Mekong River which are located upstream and downstream of the Nam Xan Mouth and (b) rehabilitation/extension of the existing pipeline to irrigate a small area located at Km 0+310 in the Section 2. The proposed works for the embankment and the river bank protection aim to mitigate flood damage of T-50-year return period of flood as recommended in the feasibility study with a total investment of about US\$ 4.9 million. The proposed embankment and river bank protection works will be extended about 7 to 10m apart from the existing riverbank toward the Mekong River and about 2m higher than the road elevation.

13. It is anticipated that the area of influence of the subproject would cover the followings:

- Construction areas where the two embankments and two river bank protections will be built (covering an estimated area of about 10,300 m² on land and about 16,700 m² in the river water body for the Section 1 and about 24,657m² on land and about 10,569m² in the river water body for the Section 2);
- Construction areas where irrigation pipeline (38m) will be installed (extended from an existing pipeline);
- Roads that will be used to transport construction materials from two initially identified borrow pits, and or construction material workshop, etc. to above mentioned construction sites. This includes also roads used to transport spoil materials from construction site to identified disposal site(s);
- Roads that will be used to transport construction materials from quarry sites/concrete plants to construction sites;
- Waterways that may be used to transport construction material from above the borrow pits to the construction sites;
- Workers' camps and working area (about 120m away from the construction sites);
- Any other areas that are potentially affected by noise, vibration, and air pollution; and
- Any other inland and waterway that may be additionally used to transport construction materials and spoil materials.

14. See Project Components in Table 2-1 (below) and technical designs in Figures 2-2 to 2-6 (See more details of subproject design at Section 2 of the ESMP prepared for this subproject).

Table 2-1 Project Components

No.	Subproject components	Sections	Locations	Details
1	Two embankments and two Riverbank Protections of 1.2km on the left side of	Section 1: no elevation of the embankment at left side of the Mekong River upstream of	Ban Houysiat	500m (Houysiat Tributary 152

No.	Subproject components	Sections	Locations	Details
	Mekong River	the Nam Xan Mouth		m)
		Section 2: with elevation of the embankment at left side of the Mekong River downstream of the Nam Xan Mouth	Ban Pakxan -Tai	550m
2	Stairways (for easy access from inland to the riverside after completing embankment construction, five stairways will be constructed as part of embankment structures to provide access to the river bank and to facilitate recreational activities along the Mekong River)	Both sections	Ban Houysiat and Ban Pakxan-Tai	5 points (W 3.0 m, L 34.0m)
3	Extension of an existing irrigation pipeline located in government managed land downstream of the Project site	Section 2	Section 2	38m

Figure 2-2 Proposed Alignment for 2 Sections of River Embankment

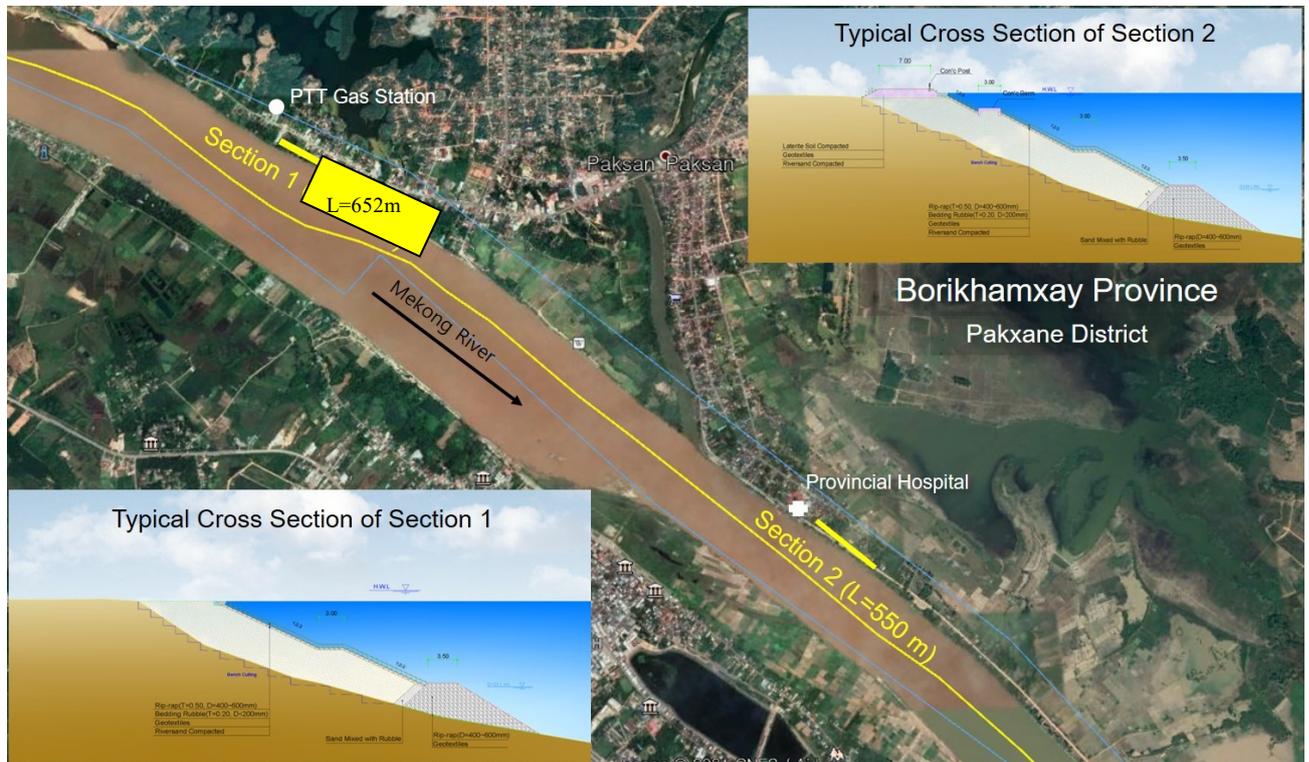


Figure 2-3 Rip-rap Protection in the MRIMP



Figure 2-4 Typical Cross Sections of Embankment (Section 1 and 2)

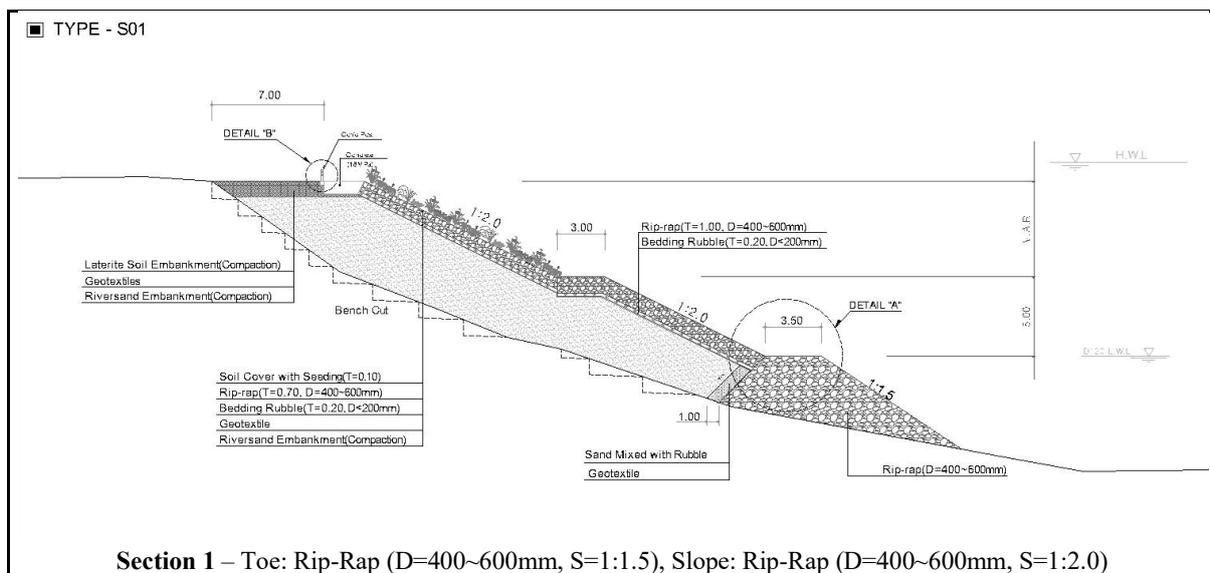
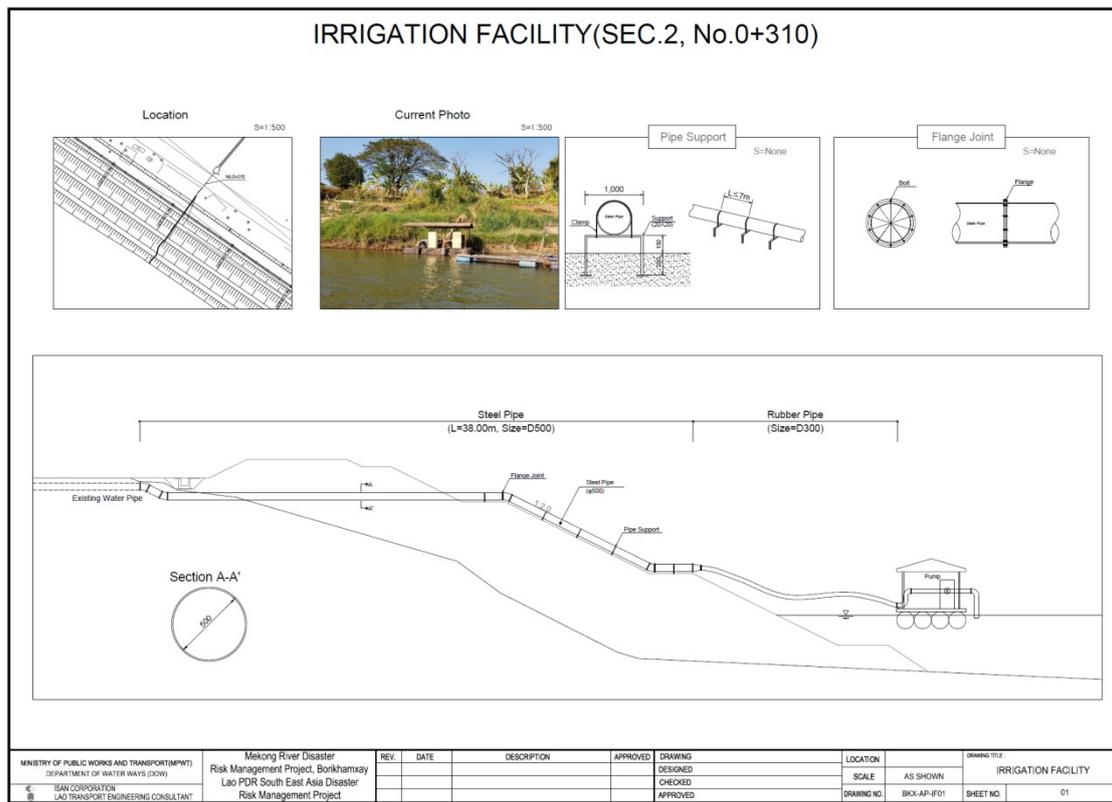


Figure 2-6 Irrigation Facility at Section 2



2.3 Construction Materials

15. The major construction materials on embankment for riverbank protection are soil; concrete and rip-rap to be provided from adjacent borrow pits, quarry sites and concrete plant. The laboratories tests have been performed to check the suitability of the materials from selected borrow pits, excavated soils, and quarry sites. Soil is used as main materials for construction of embankment for riverbank protection. Concrete and rip-rap are supplied from adjacent borrow pits, quarry sites and concrete plant. The laboratory tests have been performed to check the suitability of the materials from selected borrow pits, excavated soils, and quarry sites.

16. **Borrow pits:** The detailed design consultant (ISAN) has identified two borrow pits with a total quantity of 196,000m³ which can provide the necessary quantity of materials for the Subproject. The borrow pits are located in private land³ in Saeneoudom and Tungyai villages which are about 7km from the Subproject site and 15Km from the nearest National Protection Areas (**Table 2-2 and Figure A2-9 in Attachment 2 of the ESMP**). The borrow pits are located in private land with natural trees and bushes. The transportation route will be using the Nation Road 13 South (NR13S). DPWT of BKX will facilitate discussion and conduct consultation with land owner and facilitate for agreement between contractor and land owner. The contractor will be responsible for ensuring that the final conditions of the borrow-pit are accepted by the land

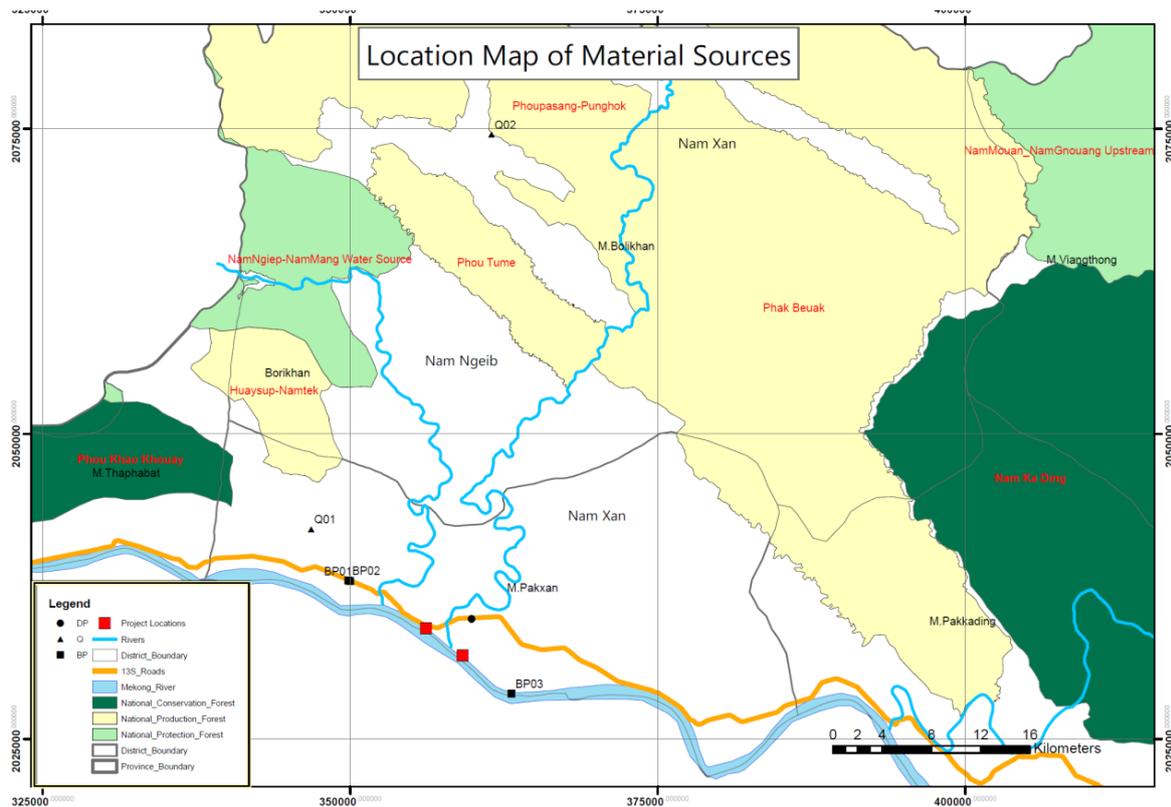
owner and this condition will be part of the C-ESMP submission. Similar arrangement will be made for soil disposal sites.

17. **Quarry sites/concrete plants:** It is estimated that construction of these embankments will require about 78,700m³ of rock and gravel for rip-rap which will be used mainly for construction of the foundation of the riverbank protection structure and toe protection structure will be supplied from quarry sites. Rip-rap materials will be tested on different criteria such as unit weight, uniaxial compressive strength and etc. to see if they meet technical requirement for use as construction materials. The quarry site and batch plant will be sourced from existing concession sites located in Harngsing and Phameaung villages which are about 25km to 55km from the Subproject site (See **Table 2-2 below and Figure A2-9 in Attachment 2 of the ESMP**). The Nation Road 13 South (NR13S) will be used for transportation of construction materials. DPWT of BKX will consult with land owners and facilitate agreement between contractors and concerned village authorities (land owners). Similar arrangement will be made for the quarry site, location of cement concrete mixing plants, borrow pits, and spoil disposal sites.

Table 2-2 List of Construction Material

No.	Types of Materials	Distance from Project Site and NPA	Estimated Available Quantity (m3)	Soil Classification		Potential Uses
				AASHTO M-145	USCS	
BP01	Yellowish brown, clayey sands	7km and 15km	>60,000	A-2-6(0)	GC	Embankment, subbase
BP02	Reddish brown, organic clays	7km and 15km	>136,000	A-7-5(15)	OH	
				A-7-6(16)	MH	
Q01	Reddish brown, sandstone	25km and 15km	>600,000			Rip-rap
Q02	Bluish gray, limestone	55km and 15km	>80,500			Rip-rap

Figure 2-7 Location of Construction Materials



2.4 Disposal of Surplus Soils

18. About 14,548m³ of excavated surplus soil are not suitable to be used as construction materials for embankment and soil covering. For the disposal of the surplus soils, DPWT of BKX Province (as the project implementation unit or PIU) has been taking actions to identify suitable locations considering urban plan, social and environmental impact, and cost.

19. About 14,548m³ of excavated surplus soil that are not suitable to be used as construction materials for the subproject works will be disposed of in an area assigned as a spoil disposal site. DPWT of BKX (as the PIU) is in the process of identifying suitable locations for spoil disposal. Different factors have been considered such as urban master plan, social and environmental impact, and costs. The following key criteria have been established by PIU for selection of soil disposal site. The potential disposal site should : (a) be the site located within the 2-3km away from the subproject site; (b) not be in mountainous areas, or areas prone to erosion, or environmentally sensitive areas such as water sources, wetland and sensitive forest, c) involve in none or minimal used as spoil disposal site. Also, removal of tree (to establish disposal site). It is also planned that will be avoided or minimized; (c) as a priority, if project affected households need surplus excavated soil (from the subproject area) for their own use as fill material for their lands, they will be provided as a priority.

20. Based on the above criteria, a spoil disposal site has been identified. The disposal site is located in area of 6.4ha and is a vacant empty private land. It is located along the NR13S with about 7 km away from the subproject site and 26 km away from the nearest NPA. There are no

residential houses located close to this disposal site (Please refer to **Figure A2-9 in Attachment 2 of the ESMP**). To make an agreement between PIU and the land owner of this land, the following terms are in the process of being used during consultation and negotiation. PIU plans to offer the followings to the land owner process are: (i) contractor will improve the access road to this site, and (ii) spray water will be sprayed to minimize control emission of dust during project construction.

2.5 Transportation Routes and Proposed Worker Camp Site

21. The existing local roads and NR13S will be used for transportation of construction materials to the subproject sites. The borrow pits, quarry sites and disposal site are located about 7km to 25km from the subproject sites. Based on the estimated quantity of construction material provided above (about 210,548 m³ of soil and 78,000 m³ of rip-rap), it will require about 24,500 times (about 80 round trips per day) by dump truck of 15 ton (8-10 dump trucks) for transportation. There are natural trees and bushes and some residential house located along the transportation routes; however, there are residential structures located along to the routes but not too adjacent to the route. The proposed impacts and mitigation measures are in Section 5.3 to 5.6 of the ESMP.

22. The proposed worker camp site is located in a 1.5ha private owned land in B. Houysiat. It is about 1.5km away from to the Section 1 site and 100m away from to the Mekong River. No other sensitive spots (such as hospitals, schools, temples) are located in the vicinity of nearby the proposed camp site (See **Figure A2-10 in Attachment 2 of the ESMP**). The total number of workers that will likely be engaged during subproject implementation is estimated to be 45 people (maximum). Contractor will be encouraged efforts to hire local workers, (including skilled workers that may be available locally) and provide sufficient accommodation with water, sanitation and hygiene facilities and to the non-local workers, including adequate measures for effective prevention of COVID-19. More details on risks and proposed mitigation measures are provided in Section 5.3 to 5.6 of the ESMP.

2.6 Schedule of Project Implementation

23. The total expected project period is 15 months for construction considering the rainy season as shown in Table 2-3 below. First 2 months of the construction period are for mobilization, and the last 2 months are for completion test and taking over.

Table 2-3 Construction Schedule

Work Items	Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Mobilization															
2. Earthworks															
3. Toe Protection Work															

Work Items	Month														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
4. Riverbank Protection Works															
5. Levee, walk paths and etc.															
6. Tests on Completion															

3 Scope of Impacts and Mitigation Measures

3.1 Scope of Impacts

24. **Positive Impacts:** The objectives of the Project are to reduce the flood damages from the Mekong River in Pakxan City and enhance the Government’s capacity for disaster risk management. Tourism is a rapidly growing business and is the second largest income source in Lao PDR (Approximate tour income of Lao PDR in 2014 is US\$ 514 million). In 2014 the number of tourists who visits Lao PDR was 4,329,093 and increasing 5,627,820 in 2016. If the riverside environment is improved by the project, the Mekong River in Pakxan City will be an important infrastructure for the growth of the tourism industry and leisure activities of residents. It is expected that the riverbank protection plan of the Project which can prevent erosion of existing river bank will positively affect environmental protection and protection of houses and assets from be affected by flooding. This project clearly has social and environmental benefits and its effects are immediate and tangible.

25. **Negative Impacts:** Construction of the embankments at Section 1 and Section 2 (1,202m) will take place only within public land (river land which is under government management). Acquisition of land owned by local households is not required. However, private assets that were established within the public land required for embank construction would be affected. These assets include:

- One one-story wooden houses with **50.46m²** (owned by one PAH);
- Two restaurants with **54m²** (owned by two PAHs);
- **569.38m²** of secondary structures (owned by 21 PAHs) and 13 fish farm cages (owned by 21 PAHs); and
- 225 trees (fruits, industrial trees and bamboo of of 25 PAHs).

26. **Ethnic Groups:** since there are only four ethnic minority households living in three subproject villages and none of them are adversely affected by the subproject, a preparation of an EGEP is not required.

27. **Physical Cultural Properties and Sensitive Areas:** There are one secondary school, one health centre and one temple located close to the project location. A detailed Environmental and Social Management Plan (ESMP) is prepared as a standalone document to be applied by the project in accordance with ESMF.

3.2 Land and Displacement Impacts

28. The project is expected to cause minor physical relocation as a result of the project implementation as it will not require the permanent use of private land. The project will affect properties and trees of 20 households in three (3) villages as presented below.

29. The process of consultation with potential contributors has been conducted in an open and transparent manner. Local authorities have documented the consultation process, outcomes and agreement as part of the project development process.

30. All PAPs and PAHs including those without legal status of property and land, will receive compensation and support of various kinds, as per the principles outlined in the Entitlement Matrix, to assist them in their efforts to maintain their livelihoods and well-being prevailing prior to implementation of the project. Those who may have encroached or illegally occupied land after the cut-off date will not be compensated for loss of land but will receive compensation for loss of other assets which have been established with their own finances and for loss of income such that they are assisted in their efforts to maintain their livelihoods and well-being.

31. PAPs were notified and consulted during 9-13 November 2020; 18-29 February 2021 and 7-9 July 2021, regarding the principles of land acquisition and loss of, or damage to, assets. Damages to assets, such as structures, standing crops, trees, and loss of income will be minimized, although some disruption is inevitable. Where disruption occurs, PAP and PAH will be compensated without regard to legal status of ownership according to the Entitlement Matrix.

32. A market survey were conducted from 18-27 August 2021, to assess the prevailing market prices of land and construction materials for affected structures, crops and relevant items which will be used as the unit prices to determine compensation. As per the advice from the WB, the second market survey was carried out during 2-10 September 2022 to estimate actual inflation of construction materials given that the prices of these materials have been notably increased while land and tree prices remain largely stable. The survey was conducted through the visit of local market (5 businesses/shops) to obtain actual/latest prices of main construction materials (such as cement, sand, gravel, wood and steel products, transport and other building materials). The survey result indicated that the inflation rate of construction materials in Bolikhamxay province (Pakxan City) was 20.43%. However, 10% of inflation rate was already added into the compensation rates approved by the Provincial Governor ((No. 147/GOV.BKK, dated 15 March 2022) during the resettlement planning process and therefore only 10.43% additional inflation rate of construction materials was added into the compensation cost in this ARAP. Budget for ARAP implementation is covered by PMU. Findings of the market survey is provided in Annex 13. This exercise will provide assurance to communities and PAP and PAH that they will be able to rebuild new houses and other types of structures affected. Loss of income and assets will be compensated on a net basis without tax, depreciation or any other deduction.

3.3 Inventory of Loss

33. The Inventory of Loss (IOL) has been conducted during 7-9 July 2021 based on the current design and alignment of the project within the offset ranging from 13m to 15m from river bank

alignment (Attachment 11 Compensation Offset Line). The current design indicates that the project will not require an acquisition of private land but will result in the loss of property and trees occupied by 20 households in three villages including Houaysiat, Anousonxay and Pakxan-Tai Villages. This includes one one-story wooden houses with **50.46m²**, two restaurants with **54m²**, **569.38m²** of secondary structures, 13 fish farm cages, and 225 trees (fruits, industrial trees and bamboo). Please refer to Table 3-1 and Attachment 1 List of PAPs for more details.

34. Table 3-2 shows the number of main structures (housing and shops) to be affected by the project. The project will affect 1 one-story house with **50.46m²** (1 household) and 2 small shops with **54m²** (2 households) in Pakxan-Tai Village. These structures were built in the government land (reserved land) outside the boundary of their land title (land plot) and based on the consultation with them they will relocate the structures to their new land plot which is located within the district.

35. Table 3-3 presents the area and number of secondary structures to be affected by the project. About **566.38m²** of secondary structures (including porches of houses/shops, toilet, huts, storage and fish tank), 1 water tank and private electricity pole and 13 fish farm cages will be affected by the project.

36. In addition to the main and secondary structures, about 225 trees (187 fruit trees, 16 industrial trees and 22 bamboo trees) will also affected by the project (Table 3-4).

37. This project will not affect any public land or communal infrastructures and public utilities.

Table 3-1 Summary of all Losses

No.	Type of Loss	# of HH	# of structures	Affected #	Unit
1	Housing Structure	1	1	50.46	
1.1	One story house	1	1	50.46	m ²
2	Restaurant	2	2	54	
2.1	Restaurant	2	2	54	m ²
3	Secondary structures	21	24	566.38	
3.1	Wooden hut	8	12	348,84	m ²
3.2	Porches of house and shop	3	4	147.44	m ²
3.3	Toilet	4	4	15.42	m ²
3.4	Storage	1	1	31	m ²
3.5	Fish tank	1	1	13.68	m ²
3.6	Water tank	1	1		Tank
3.7	Electricity pole	1	1		Pole

No.	Type of Loss	# of HH	# of structures	Affected #	Unit
3.8	Fish cage farm	2	13		cage
4	Tree	25		225	
4.1	Fruit trees	15		187	tree
4.2	Industrial trees	3		16	tree
4.3	Bamboo	7		22	tree

Sources: Field Survey, July 2021

Table 3-2 Summary of Affected Main Structures

No.	Village Name	# of Affected HH	# of Affected House	Total Affected Area (m ²)	Affected %
1	One-story wooden house	1	1	50.46	
1.1	Pakxan-Tai	1	1	50.46	100%
2	Restaurant	2	2	54	
2.1	Pakxan-Tai	2	2	54	100
	Total	4	4		

Sources: Field Survey, July 2021

Table 3-3 Affected Secondary Structures

No.	Village Name	Wooden hut	House/ Shop Porch	Toilet	Storage	Fish tank	Water Tank	Electricity pole	Fish cage
	Unit	m ²	m ²	m ²	m ²	m ²	tank	pole	cage
1	Houaysiat	45.88							
2	Pakxan-Tai	302.96	147.44	15.42	31	13.68	1	1	13
	Total	348.84	147.44	15.42	31	13.68	1	1	13

Sources: Field Survey, July 2021

Table 3-4 Summary of affected Trees

No.	Village Name	Fruit Tree	Industrial Trees	Bamboo Tree
1	Houaysiat		2	
2	Anousonxay	3	0	1
3	Pakxan-Tai	184	14	21
	Total	187	16	22

Sources: Field Survey, July 2021

3.4 Gender Considerations

38. A gender-responsive social assessment has been made during consultation of the ARAP to identify potential impacts for different populations (ethnic peoples and vulnerable groups – women and female/male youth and children, the elderly and disabled, landless, and poor, etc.) in relation to their health and safety concerns. The result of the gender consultation and assessment

indicates that both men and women shared similar concerns and recommendation on community health and safety, noise and dust, compensation with reasonable price and recruitment of local people for the construction works.

39. Gender mainstreaming and integration has been promoted during the ARAP and unit price preparation to encourage active participation of women and this will continuously be encouraged during implementation and M&E to strengthen implementation and monitoring of project activities that can be carried out by local authorities with active engagement of local communities on the use of nature-based/green infrastructure solutions and waste (solid and liquid) management to reduce pollution along the waterways.

3.5 Mitigation Measures

40. Efforts have been made during detailed design to avoid the needs for land acquisition and resettlement. In addition to this ARAP for the project activities, a detailed Environmental and Social Management Plan (ESMP) was also prepared as a standalone document to be applied by the subproject in accordance with ESMF. The ESMP including environmental, social, health and safety measures, chance findings and good civil engineering practices (e.g., ESCoP) will be applied to mitigate potential adverse impacts induced by the proposed sub-project.

4 Socioeconomic Profiles in Affected Villages

41. The census and socio-economic information and data collection were carried out during 7-9 July 2021 using census survey form for village census data. Data processing and analysis were implemented by the expert team in Vientiane Capital. This section provides census data and information of village located in the Sub-project boundary. The results of socio-economic survey are summarized in the following sections and the data collection form is in Attachment 2.

4.1 Affected Community

42. The project covers three villages which are home to a total of 4,878 people from 956 households (See Table 4-1 below). The data shows that the household density in Anousonxay and Pakxan-Tai Villages is higher than Houaysiat Village. Please see Table 4-1 below for more detail information.

Table 4-1 Population of Affected Villages

No	Villages	Population	Number of household	Female	Male
1	Houaysiat	540	115	270	
2	Anousonxay	2,080	431	1,082	
3	Pakxan-Tai	2,258	410	1,201	
	Total	4,878	956	2,553	

Source: Village Census Survey (July 2021)

4.2 Ethnic Groups

43. Table 4-2 below provides information on the population by ethnic group in the affected villages. Lao Tai is the largest group making up 99% of the population (4,855 people, 2,543 females and 2,312 males). The remaining 1% includes Hmong and Khmu ethnic groups. Lao language is the main language used by Lao Tai. Neither Hmong nor Khmu ethnic groups are anticipated to be affected by this subproject.

Table 4-2 Ethnic Groups in Affected Villages

No.	Village Names	Ethnic Groups	HH	Population	Female
1	B. Houaysiat	Lao Tai	111	517	260
		Khmu	1	6	3
		Hmong	3	17	7
2	B. Anousonxay	Lao Tai	431	2,080	1,082
3	B. Pakxan-Tai	Lao Tai	410	2,258	1,201
Total			956	4,878	2,553
Lao Tai			952	4,855	2,543
Khmu			1	6	3
Hmong			3	17	7

Source: Household Survey (June 2021)

4.3 Religions

44. The main religion adopted in the affected villages is Buddhism (99.5% of the population). Only 0.6% (4 HHs) of Hmong and Khmu ethnic groups in Houaysiat Village practice animism. Both Hmong and Khmu ethnic groups have been living in the existing villages for a long time and are well integrated into local Lao communities (Table 4-3).

Table 4-3 Religions in Affected Villages

No	Village Name	Number of Households	Buddhism	Animism (HH)
1	Houaysiat	115	111	4
2	Anousonsay	431	431	0
3	Pakxan-Tai	410	410	0
Total		956	952	4

Source: Household Survey (July 2021)

4.4 Infrastructures and Facilities

45. The following tables describe characteristic of existing infrastructure and facilities available in the affected households. It informs accessibility of households to different types of facilities such as latrine, market, electricity network, water supply network and road. The table also shows number of small shops, factory, big company, hotel/guesthouse available in the affected villages.

There acronym and numbering system was created in order to be used as variable in the Table 4-4 below.

46. The survey shows that all affected villages have relatively good infrastructure and public utilities. Table 4-5 shows that population in the affected village have good condition of infrastructures and facilities. Among them, there are a total of 9 major companies, 1 main market, 135 small shops, 15 guesthouses occurred in the project villages. In addition, there are more than 691 cars/pickup trucks and all houses have at least one motorbike. This information is an indicator of the wealth of the villages or households. People have access to range of facilities and convenient services such as good access to sanitation, electricity network, clean water supply, all season road, market, etc. The details can be seen in Table 4-5 below.

Table 4-4 Abbreviations of Infrastructure and Facilities in the Villages

Types of infrastructure and facilities	Acronym	Unit
1. Latrine	L	HH
2. Market	M	Number
3. Big Company	BC	Number
4. Small Shop	SS	Number
5. Hotel and Guesthouse	HG	Number
6. All weather land Road	A-R	Number
7. Boat Transportation	BT	Number
8. Public Bus	PB	Public transport
9. Pick-up and Truck	P-T	Car
10. Motorbike	MB	Bike
11. Tractor	T	Tractor
12. Rice Mill	RM	Number
13. Electricity Household	EH	HH
14. Industrial factory	ID	Number
15. Drilled Bore	DB	HH/tap
16. Pipe Water	PW	HH
17. River and Lake	R-L	River



Table 4-5 Infrastructure and Facilities in the Affected Villages

No.	Village Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		L	M	BC	SS	HG	AR	BT	PB	PT	MK	T	RM	EH	ID	DB	PW	RL
1	Houaysiat	115	0	3	5	3	1	1	0	61	115	3	0	115	0	0	115	2
2	Anousonxay	431	0	4	70	8	12	1	0	280	431	5	0	431	2	0	431	2
3	Pakxan-Tai	410	1	2	60	4	3	1	10	350	410	50	3	410	0	8	410	1
Total		956	1	9	135	15	16	4	18	691	956	58	3	956	2	8	956	5

Source: Household Survey (July 2021)

4.5 School Facility and Health Centers

47. There are 9 primary schools, with a total of 50 classrooms, and oversight by 28 teachers. The total number of secondary school and high school together is 4 schools, 32 classrooms and 56 teachers are available to provide the service to the public (see Table 4-6). Students travel about 500m to 4km distance to their schools by bicycles or/and motorbikes. There is one health centre located in Pakxan-Tai Village with distance to households ranging from 200m to 4km (See Table 4-6 and Table 4-7). These facilities will be not be affected by the project in terms of land requisition; however, a school and a health centre in Pakxan-Tai Village are located nearby the project site. During the consultation with communities, the project was recommended not to transport construction materials during the students commuting to schools and pay attention to mitigation measures of noise and dust as well as regularly communication with the school and health officials on the construction activities and schedule.

Table 4-6 Number of School and Health Center in the Affected Villages

#	Village Name	No. of Primary School			No. of Secondary/High school			Health Centre
		School	Classroom	Teacher	School	Classroom	Teacher	
1	Houaysiat	1	5	6	0	0	0	0
2	Anousonxay	2	3	11	0	0	0	0
3	Pakxan-Tai	6	11	11	4	32	56	1
Total		9	19	28	4	32	56	1

Sources: Household Survey, July 2021

Table 4-7 Distances from Each Village to School

No.	Village Name	Distance (km)		
		Primary School	Secondary/High School	Health centre
1	Houaysiat	2 Km	2 Km	2 Km
2	Anousonxay	4 Km	4 Km	4 Km
3	Pakxan-Tai	500m	800m	200m

Sources: Household Survey, July 2021

4.6 Education

48. It is noticed all population in the affected villages can read and write. There are many levels of schooling from primary school up to university level. The highest number of students' enrolment is the primary school level followed by secondary school, higher diploma, and university level respectively. This represents number of youths is high in the affected villages (Table 4-8).



Table 4-8: Level of Education in the Affected Villages

#	Village Name	Uneducated		Primary school		Secondary school		High school		Higher diploma		University	
		Total	Female	Total	F	Total	F	Total	F	Total	F	Total	F
1	Houaysiat	0	0	100	45	150	72	50	23	40	20	72	45
2	Anousonxay	0	0	395	200	154	98	538	287	480	248	104	60
3	Pakxan-Tai	0	0	623	342	575	300	120	85	102	54	298	150
Total		0	0	1118	587	879	470	708	395	622	322	474	255

4.7 Disease and Treatment Practices

49. According to the field survey, there is no malnutrition issue or epidemic disease in the last two years. When people feel sick, they use services from the public hospital and health center nearby. Some of them may buy medicine from a clinic or pharmacy to treat their illness. The current situation of COVID-19 pandemic has impacted the socio-economic conditions as a whole. The provincial health authorities as well as the provincial authorities from other sectors have implemented the mitigation measures based on the relevant Prime Minister Instructions and Orders. Between May and June 2021, two cases were found in Pakxan District. No death was reported in the province. As of 27/06/2021, the number of people receiving the first dose of the vaccine was 33,623 and the number of the second dose was 29,250⁴.

4.8 Employments and Incomes

50. Occupations of people in the affected villages includes government officials (including teachers, soldiers, general public services in provincial and district government departments represent approximately 16% of total affected people), and other of this population is currently engaged in private sector employment, family business and students. This is similarly to the occupation and income sources of affected households.

4.9 Labor Migration

51. There was incident of labor migration in the last three years in the affected villages. Young people were migrated to work in the other province, mainly Vientiane Capital. Young people also migrated to work in Thailand. From the interview, men will migrate to work in construction, agriculture, and mining industries.

4.10 Land Use

52. The Table 4-9 shows the land use in the affected villages of which the residential land accounts for 83% of the total land area followed by agriculture, village land and cemetery land accordingly. The land use data of the affected household was not provided during the data collection.

Table 4-9 Land Use in Project Affected Villages

No.	Village Name	Total area of village (Ha)	Residential land (Ha)	Agricultural Land (Ha)	Village forest land (Ha)	Cemetery (Ha)
1	Houaysiat	996	309	90	198	0
2	Anousonxay	300	100	0	20	0
3	Pakxan-Tai	158	800	365	0	1
Total		1,454	1,209	455	218	1

⁴ <https://www.covid19.gov.la/index.php?r=site/detail&id=899>

4.11 Domestic Animal of the Affected Villages

53. Table 4-10 below shows the number of domestic animals in affected villages. The majority of villagers raise poultry as main sources of food and incomes followed by coat, cow, buffalo and pig respectively.

Table 4-10 Domestic Animals in Affected Villages

No.	Village Name	Buffalo		Cow		Coat		Pig		Poultry	
		# of animal	# of HH	# of animal	# of HH	# of animal	# of animal	# of animal	# of HH	# of animal	# of HH
1	Houaysiat	0	0	0	0	0	0	0	0	2,000	100
2	Anousonxay	0	0	36	2	5	1	12	2	6,500	130
3	Pakxan-Tai	30	5	400	21	900	50	25	6	135,000	250
Total		30	5	436	23	905	51	37	8	143,500	480

Sources: Field Survey, March 2020

4.12 Cultural and Historical Infrastructure

54. Each village has a temple for conducting traditional and cultural practices. There is one with few local stupas located close to the project site. During the consultation with local communities, the project was recommended to conduct traditional ceremony asking permission from the land and water spiritual before starting construction activities and working on the big Buddha day is not allowed. Other than that, the project is not expected to create any impacts on any local and national archaeological, paleontological or cultural significance. However, there is a possibility for (as yet undiscovered) sites of local cultural significance (i.e., artifacts, sacred sites, cemeteries) in subproject areas during construction. Nonetheless, a “Chance Finds Procedure” in the ECOP describing the process to be followed when any artifacts are found.

4.13 Poverty Groups

55. The Guideline number 0830/MAF, dated 06/04/2018 on guideline for implementation the decree 384, 2017 sets the Criteria for Poverty Graduation and Development. Section 4 of this guideline indicates that families that graduate from poverty are the families that have achieved six criteria for graduation of families’ from poverty defined in the Decree 348/GOL, but still do not have stabilization, and are vulnerable with risk to fall back into poverty as they have not yet achieved the majority of criteria for developed families such as: political aspects, education, cultural, environmental, and national defense-peace keeping. Importantly, although members of a family have occupations, they remain at subsistence income. They do not have savings to ensure economic stability of their families. Average income per person should not be less than 5.6 million kip or USD700 per person per year.

56. Table 4-11 indicated that there are 3 households with 11 people including 3 females are poor households in 3 villages. However, no poor households are expected to lose their properties or land or trees from the project.

Table 4-11 Number of Poor Households in Affected Villages

No.	Village Name	Ethnic	Total PAHs	Total Pop.	Female
1	Houaysiat	0	0	0	0
2	Anousonxay	Lao Tai	1	2	1
3	Pakxan-Tai	Lao Tai	2	9	2
	Total		3	11	3

4.14 Vulnerability Groups (VG)

57. As per the given definition above, vulnerable groups are distinct groups of people who might suffer disproportionately or face the risk of being further marginalized by the effects of resettlement and specifically include: (i) households headed by women, the elderly people or people with disability and households with no labors, (ii) households living below the poverty threshold, (iii) the landless, and (iv) ethnic groups.

58. Vulnerable households, as defined by Decree 348/GOL, dated 16/11/2017 on the Criteria for Poverty Graduation and Development, Article 4 of this Decree defined criteria for graduation of families from poverty as following:

- Have safe and strong housing;
- Have assets and equipment necessary for their livelihoods and income generation;
- Have labor, stable income or employment;
- School age family members receive lower secondary school education;
- Have access to clean water and stable sources of energy;
- Have access to primary public health services;

59. In order to put this decree into implementation, the government also issued a Guideline number 0830/MAF, dated 06/04/2018 on guideline for implementation the decree on the Criteria for Poverty Graduation and Development. Section 4 of this guideline indicated that families that graduated from poverty are the families that achieved six criteria for graduation of families' from poverty defined in the Decree 348/GOL, but still do not have stabilization, and vulnerable to development, risk to fall back to poverty family due to those families are not yet achieved the majority of criteria for developed families such as: political aspects, education, cultural, environmental, and national defense-peace keeping. Importantly, although members of family have occupations, they remain at subsistence income. They do not have saving for families to ensure economic stabilities of their families. Average income per person should not be less than 5.6 million kip or USD700 per person per year.

60. Table 4-11 indicates that there is only one female-headed family in Anousonxay Village but this will not be affected by the project in terms of land acquisition and loss of properties and trees.

Table 4-12 Number of Vulnerable Households in Affected Villages

No.	Village Name	Ethnic	Total PAHs	Total Pop.	Female
1	Houaysiat	0	0	0	0
2	Anousonxay	Lao Tai	1	5	2
3	Pakxan-Tai	0	0	0	0
	Total		1	5	2

5 Socioeconomic Profiles of Affected Population

61. The census and socio-economic information and data collection were carried out during 7-9 July 2021 using household survey form for affected house census data. Data processing and analysis were implemented by the expert team in Vientiane Capital. This section provides census data and information of households to be affected by the project. The results of socio-economic survey are summarized in the following sections and the data collection form is in Attachment 2.

5.1 Affected Households

62. Table 5-1 indicates that the project will affect 20 project affected households (PAHs) with 120 project affected people (PAP) including 57 females by various forms of losses as presented in Section 2 above. Among the 20 PAHs, there are two PAHs in Houaysiat and Pakxan-Tai Villages and 2 PAHs in Pakxan-Tai will have an impact on their housing structures and small hut shops respectively.

Table 5-1 Number of Affected Household

No.	Village Name	# of PAHs	# of PAPs	Female	Male
1	B. Houaysiat	4	28	13	15
2	B. Anousonxay	2	11	4	7
3	B. Pakxan-Tai	14	81	40	41
	Total	20	120	57	63

Source: Household Survey (July 2021)

5.2 Ethnic Groups and Religions

63. All affected households are Lao Tai and their religions are Buddhism. Lao language is the main language used by Lao Tai. Neither Hmong nor Khmu ethnic groups are anticipated to be affected by this subproject.

5.3 Infrastructures and Facilities

64. Water, sanitation and hygiene in the affected households are good. All affected households have access to pipe water supply. They have enough clean water for washing and cleaning. All of the affected households buy drinking water from service providers delivering to their house once a week. The access to food and household supplies are easy as there are many small shops nearby

their houses. The survey result shows that each PAH has at least 1 car and/or 2 motorbikes. Affected households are happy that the road will be improved as it will be more convenient, safe and time saving for travelling and transportation of goods. See Table 5-2 for more details.

Table 5-2 Infrastructure and Facilities of the Affected Households

No.	Village Name	1	4	9	10	11	12	15
		L	SS	PT	MB	T	EH	PW
1	Houaysiat	4	0	8	4		4	4
2	Anousonxay	2	0	2	2	1	2	2
3	Pakxan-Tai	14	2	11	14		14	14
Total		20	2	21	20	1	20	20

Source: Household Survey (July 2021) Education

65. Table 5-3 shows overall level of education of affected people. Majority of affected people finished secondary school.

Table 5-3 Level of Education of the Affected Households

#	Village Name	Uneducated		Primary school		Secondary school		High school		Higher diploma		University	
		Total	Female	Total	F	Total	F	Total	F	Total	F	Total	F
1	Houaysiat	0	0	8	4	8	5	7	4	5	3	0	0
2	Anousonxay	0	0	3	2	1	0	3	2	3	1	1	0
3	Pakxan-Tai	0	0	18	10	23	10	13	5	19	8	8	5
Total		0	0	29	16	32	15	23	13	17	12	9	5

Sources: Household Survey, July 2021

5.4 Employments and Incomes

66. Occupations of affected people include government officials, employee in private, family business and students. Table 5-4 presents the number livestock of affected households. The majority of the affected households also raise poultry as main sources of food and incomes followed by pig, cow and coat respectively.

Table 5-4 Domestic Animal of Project Affected Households

No.	Village Name	Cow		Coat		Pig		Poultry	
		# of animal	# of HH	# of animal	# of HH	# of animal	# of HH	# of animal	# of HH
1	Houaysiat	3	1	0	0	0	0	160	4
2	Anousonxay	30	1	7	1	1,000	1	2,000	1
3	Pakxan-Tai	0	0	0	0	0	0	570	13
Total		33	2	7	7	1,000	1	2,730	19

Sources: Field Survey, July 2021

6 Legal Framework

67. The main objective of compensation policy under this ARAP is to ensure that all persons subjected to adverse impacts (displaced persons or PAPs) are compensated at replacement costs for loss of assets (e.g. land, houses, structures, trees, businesses...) and livelihoods as a result of the project, and other assets or otherwise provided with any rehabilitation measures or other forms of assistance necessary to provide them with sufficient opportunity to improve, or at least restore, their incomes and living standards. Given the nature of the project activities, the project area will need land acquisition and/or compensation. The compensation and resettlement relevant policies of the World Bank and GOL will be applied to address temporary impacts and ARAP will be prepared and implemented in accordance with the policies.

68. This ARAP for BKK project complies with the World Bank's OP 4.12, applicable provisions of Decree 84 of the Lao Government on Compensation and Resettlement (2016), the Decree on Environmental Impact Assessment (2019) and other relevant national legislation including the Land Law 2019. Where gaps and discrepancies exist between the WB OP. 4.12 and the GOL policies, the former WB policy will prevail as per the Project Agreement and will be in accordance with the Project's Resettlement Policy Framework.

7 Principles and Policies for Compensation, Support, Resettlement and Livelihood Restoration

69. This section provides the compensation, resettlement and livelihood restoration strategy that will be applied for different categories of impacts and PAPs associated with land acquisition for the Project. The strategy considers national laws and regulations, and international standards for formal and informal land tenure.

7.1 Key Principles

70. Most aspects of the World Bank Involuntary Resettlement Policy (OP/BP 4.12) are largely addressed in Lao PDR law. The overarching objective of the project in relation to land and asset acquisition is to assist the PAP and PAH to restore their livelihoods, at least, to the level equal to their pre-project level. Specific principles that apply include:

❖ Principles for Compensation and Support

- Urban flood risk management infrastructure investments should avoid residential areas wherever possible to minimize the physical relocation of PAP and PAH, and select the infrastructure footprint that minimizes acquisition of privately or publicly held productive land;
- Ensure design standards minimize the need to impose land use restrictions on adjoining areas;
- Develop fair and transparent procedures, as defined in the Entitlement Matrix of this RPF to determine compensation for (i) temporary loss of land and/or assets during riverbank protection, construction and reparation works; (ii) permanent acquisition of land and/or

assets; and (iii) restrictions on use of land that may be applied to areas adjoining the sub-projects' river conservation zone footprint and RoI;

- Acquire land (or right to use land) through negotiated agreements and with the use of the power of eminent domain only as a last resort;
- Upon completion of the urban flood risk management infrastructure riverbank protection, construction and reparation works, restore land as best as possible to its original condition in the event of temporary disruption to enable landowners/users/lessees to resume their pre-sub-project activities;
- Keep PAP and PAH, and communities fully informed about the sub-projects, the process that will be followed to acquire and compensate for land, and their related rights and avenues for redress;
- Ensure that aggrieved PAP and PAH will have redress and recourse options and that solutions are in line with principles stipulated in this RPF and, more importantly, are employed;
- All PAP and PAH, without regard to legal status of property, will receive support of various kinds, as per the principles set out in the Entitlement Matrix, to assist them in their efforts to maintain their livelihoods and well-being prevailing prior to the project. PAP and PAH who may have adverse possession of land (i.e., squatters) may not be compensated for loss of land but can receive compensation for loss of other assets which had been established with their own finances, and for loss of income such that they assisted in their efforts to maintain their livelihoods and well-being. Detailed measures to be implemented will be determined based on a RoI census and socio-economic baseline survey conducted when the ARAP is developed;
- PAP and PAH will be notified of the project implementation schedule and consulted regarding the principles of land acquisition and loss of, or damage, to assets; and
- Damages to assets, such as standing crops, trees, fences and kiosks, and loss of income (including loss of harvest) will be minimized, however inevitable, and will be compensated without regard to legal status of ownership according to the Entitlement.

❖ **Principles for Physical Resettlement**

- All households who lose their houses (fully affected, or partially affected but the remaining part is not usable) must be entitled to buying at least a standard land plot in the project's resettlement site.
- Households building houses on public land prior to project's cut-off day will be compensated for affected houses at full replacement costs and are eligible for financial assistance to relocate and to enable them to afford a standard land plot in the project resettlement site if they have no other place to move to.
- By the end of the project, if the livelihoods of affected households have not yet restored to pre-project levels, additional support measures will be provided.

71. As this ARAP is one of the project components, the subproject will not be considered complete until the ARAP is fully implemented and meets the objectives of the World Bank's OP 4.12.

7.1.1 Cash Compensation

72. The urban context of much of the project area combined with its linear nature and limited availability of vacant land of reasonable proximity and / or quality to the land that will be acquired for the Project, means that cash compensation is an appropriate approach. Based on socioeconomic and land use surveys conducted in Project Affected Villages, this was the general preference of Affected Persons consulted over compensation in kind. Key reasons why this approach is generally preferred include:

- Freedom to choose a preferred new location, size and quality of the land;
- Having cash compensation enables Affected Persons to buy larger and cheaper pieces of land, and build a better house elsewhere rather than having physical replacement of land equivalent to the advantage of the previous one;
- Cash compensation creates opportunity to bargain for land and invest the savings in enterprise-based livelihoods; and
- The amount of time required for the physical resettlement process starting with identification and preparation of new suitable land and accommodation will be lengthy and less efficient for the Affected Person and for development of the Project.

73. The cash compensation approach is consistent with the GOL policy and approach to compensation and livelihood restoration implemented for other similar projects in Lao PDR. Affected households will also be provided with an option to select like-for-like compensation e.g. land for land, in line with international standards.

7.1.2 House and Asset Relocation

74. There is no resettlement in the project area. However, some lands have to be cleared as villages use their land for agriculture activities. Therefore, cash compensation will be made for their affected structures and trees before commencement of any construction activities.

75. In case of resettlement site will be required, the plan will be designed after the completion of the final design and the field survey, as well as site selection. Thus, compensation and relocation of the above public and community infrastructures and public utilities will be covered in a separate relocation plan to be prepared and implemented by the concerned agencies and technical service providers before the commencement of project activities (works).

7.1.3 Additional Livelihood Restoration Measures

76. The detailed approach to livelihood restoration is outlined in Section 7.6. The key principles of the approach of providing additional livelihood restoration measures in addition to cash compensation are:

- Eligible Affected Persons will receive compensation and livelihood rehabilitation measures sufficient to assist them to improve or at least maintain their pre-project living

standards, income earning capacity and production levels. In some circumstances this will require additional measures beyond cash compensation;

- Affected Persons who stand to lose part of their productive land will not be left without a means to sustain their current standard of living, for example through provision of compensation and other livelihood restoration measures;
- Particular attention will be paid to the needs of the poorest Affected Persons, and socially and economically vulnerable groups. This may include those without legal title to the land or other assets, households headed by females, the elderly or disabled, and other vulnerable groups, such as people living in extreme hardship; and
- For severely affected people sustainable livelihood restoration measures will be identified in consultation with Affected Persons.

7.1.4 Compensation Principles

77. Compensation for Affected Persons will be based on the following principles:

- Affected Persons who will experience impacts and losses under the Project will be entitled to adequate and prompt compensation for land and assets lost;
- The Project will replace or pay compensation for assets lost as a result of displacement and in addition will:
 - Provide disturbance allowances to assist Affected Persons with their relocation;
 - Pay an allowance for loss of income incurred because of relocation (if appropriate/required).
- Cash compensation for loss of land will be based on open market value;
- All community assets destroyed or whose land is required for the Project will be compensated and assistance provide for re-establishment of the assets;
- For affected business, lost income will be compensated by way of a disturbance allowance, taking into account the nature of the business and transition period, and that access to similar opportunities will be facilitated through the livelihood restoration program;
- Where there is loss of income due to destruction of community assets, additional compensation will be considered for damages and destruction to property;
- Household with crops and gardens within the Project areas will be compensated for the loss of land and / or derived livelihood;
- Lack of formal legal rights to assets lost will not deprive any Affected Person from receiving compensation and entitlements. Distinctions will not be made between Affected Persons “with” and “without” formal legal land titles; and
- For any cultural sites such as cemeteries affected, compensation and / or relocation will be done in accordance with cultural norms and regulatory requirements with adequate compensation allocated to facilitate the process.

7.2 Eligibility Policy

7.2.1 Categories of Displaced Persons

78. The Lao PDR sub-projects will have both positive and adverse (negative) impacts on people in Bolikhamxay's provincial capital, Pakxan District, and vicinity where urban flood protection measures are under consideration. It is reasonable to presume that households, commercial enterprises and public infrastructure (e.g., schools, health clinics and hospitals, government buildings' boundary fences) whose properties encroach the dike construction zone, drainage canal and floodgates, weir and riverside parks will potentially be affected adversely, if only in a minor way.

79. Although all project activities have the potential to affect all categories of people in the respective RoI locations (whether categorized by race, religion, ethnicity, gender, age, economic status, land tenure or other), only activities that require relocation either on a temporary or permanent basis are considered to have the potential of causing serious displacement problems. The RPF recognizes that certain social groups may be less able to restore their living conditions, livelihoods and income levels; and therefore, are

80. At greater risk of impoverishment when their land and other assets are affected. During the ARAP social assessment, the project will identify any specific needs or concerns that should be considered for the different populations (ethnic peoples and vulnerable groups – women and female/male youth and children, the elderly and disabled, landless, and poor, etc.) without means of support. Gender integration will be considered during the planning and implementation of the ESMF, RPF and EGEF processes.

7.2.2 Displaced Persons Eligibility Criteria

81. Following Lao PDR laws and regulations on acquisition of land and, in consideration of the World Bank Involuntary Resettlement policy (OP/BP 4.12), the basic principles of land acquisition and land donation for the project include the following elements:

- a. Minimize negative or adverse impacts as much as possible;
- b. Carry out land adjustment or compensation to improve or, at least, restore the pre-project income and living standards of PAP and PAH;
- c. Ensure free, prior and informed consultation with PAP and PAH on land donation, land acquisition and compensation arrangements, and ensure the process is well documented; and
- d. Provide compensation, if applicable, for private assets at replacement rates, prior to commencement of urban flood risk management infrastructure investments.

82. Displaced persons may be classified in one of the following three groups:

- a. Those who have formal legal rights to land (including customary and traditional rights recognized under the laws of the country); will be entitled to compensation for the land they lose, all assets affixed to the land, as well as income restoration measures;

- b. Those who do not have formal legal rights to land at the time the census begins but have a claim to such land or assets—provided that such claims are recognized under the laws of the country or become recognized through a process identified in the resettlement plan will be entitled to compensation for the land they lose, all assets affixed to the land, as well as income restoration measures; and
- c. Those who have no recognizable legal right or claim to the land they are occupying will be entitled to all assets affixed to the land, as well as income restoration measures. In cases where the remaining portion of land is no longer viable, they will be entitled to a replacement plot.

83. Persons covered under a) and b) are provided compensation for the land they lose, and other assistance in accordance with Para. 6. Persons covered under c) are provided resettlement assistance in lieu of compensation for the land they occupy, and other assistance, as necessary, to achieve the objectives set out in this policy, if they occupy the sub-project area prior to a cut-off date established by the borrower and acceptable to the Bank.

84. All PAP and PAH comprised of different populations (see Entitlement Matrix) will be provided with compensation (if deemed legal owner or occupant during census), and rehabilitation and restoration if: (i) their land is acquired for project purposes (ii) their income source is directly and adversely affected; (iii) their houses are partially or fully demolished; and (iv) other assets (i.e., crops, trees and facilities) or access to these assets will be reduced or damaged due to land acquisition. Those PAPs or PAHs who have encroached upon public land will have the right to claim compensation for their lost assets such as houses/structures, trees and/or crops, and will not necessarily have the right to compensation for land that they cannot establish ownership of or a right of access to.⁵

85. Thus, land acquisition and/or land donation and its effect on income sources either on a temporary or permanent basis will apply to all proposed sub-projects in Lao PDR under the SEA DRM Project regardless of whether they are directly funded by the World Bank or not. The policy applies to all PAP and PAH regardless of the number or the severity of the induced impact.

86. Attention is to be given to the needs of different populations (ethnic peoples and vulnerable groups – women and female/male youth and children, the elderly and disabled, landless, and poor, etc.).

7.2.3 Eligibility Cut-Off Date

87. The eligibility cut-off date should be the date of completion of the census and Inventory of Loss for households/persons affected by the Project. Persons becoming part of the Project Affected Households after the cut-off date are not eligible for compensation and/or livelihood restoration assistance unless they are a part of the natural growth of the community (i.e. marriage,

⁵ Lao PDR DRM Project funds may be used to compensate for land acquired under the project as well as pay expenses such as income restoration and moving allowances for both formal and informal occupants at the impacted sites.

birth). Similarly, fixed assets (such as houses, structures) and crops and trees established after the cut-off date, or after an alternative mutually agreed date, shall not be compensated.

88. If adequate public notice of the cut-off date has been given, persons who settle in the project site after the announced cut-off date are not entitled to compensation for their affected assets or any other form of resettlement assistance.

89. On 15 February 2021, the DPWT of Bolikhamxay Province has issued new Cut-Off Date letter to notify Government's departments, organizations, people's army, public security, village authorities and other line agencies within the Pakxan, the DPWT of Bolikhamxay Province (Please refer to Attachment 5 Cut-Off-Date). The letter emphasises the project activity will require some land acquisition on along the Mekong River, and therefore the DPWT notifies all stakeholders who are currently managing Mekong Rivers to provide cooperation and follow the notification as follows:

- Do not construct any structure such as houses, restaurants, services shops, animal pens/coops, riverbank protection, and other buildings in the preserved areas of Mekong Rivers;
- Do not excavate soil, gravel, sand, fill or cut the river channel without permission from relevant authorities;
- Buildings or structures occurred outside the project development areas can be improved but it will require permission from the relevant regulations.

90. The Governor of Bolikhamxay Province established a Provincial Resettlement Committee (PRC) on 6 October 2020 (Please refer to Attachment 3 Provincial Agreement on Establishment). The Agreement also appointed the Committee's Secretariat and its technical team with responsibility to conduct data collection and assessment of project impacts. The Agreement gives the authority to the DPWT to serve as the leading agency responsible for compensation and resettlement works in consultation with relevant provincial and district authorities. Therefore, the inventory of loss of land and assets of affected people, households and other public and community infrastructure has been the responsibility of the PRC and its secretariat. The consultant will work closely with the PRC to ensure the identification, assessment and valuation of land and assets are conducted in compliance with the national laws and regulation as well as principles set forth in this ARAP.

91. The Provincial Governor of Bolikhamxay Province established a committee responsible for development of compensation rates for DRM project on 7 July 2021. This committee is leading by the DPWT in cooperation with various provincial and district government agencies as well as affected communities on establishment of appropriate compensation rates that are accepted by all key stakeholders.

7.3 Entitlements

92. The Project entitlements presented in the Entitlement Matrix and summarized below will address various types of losses that may potentially occur due to Project implementation. As set out above, the absence of legal or formal title to land does not prevent affected household from their entitlement to compensation for their affected assets. Both male and female members of

Project Affected Households should be consulted, and their rights recognized. Negotiations, compensation payments, and livelihood restoration, should be with both male and female head of each household.

93. The compensation measures to be provided by DOW should include in-kind compensation and/or cash for land and other structures at full replacement cost acceptable to all Project Affected Households. Specifically, the following compensation and associated provisions should be provided:

- Cash compensation for affected structures and assets at full replacement cost. Cash compensation for crops, trees and other productive assets (e.g. fish cage) affected due to the Subproject;
- Affected community facilities such as wells, sanitation facilities, and roads, etc. Will be repaired, replaced, or reinstalled with the pre-project standards or higher at project's costs;

94. The entitlements will be finalized based on agreement obtained from consultation with affected households/persons, Provincial and District authorities. DOW shall formalize the outcomes of these consultation meetings in a Compensation Agreement and liaise with the local authorities to determine compensation rates.

7.3.1 Compensation rates

95. Compensation rates for affected assets shall be based on full replacement costs, and the value of compensation for lost production should reflect estimated net income lost (i.e. with deduction of cost of production), irrespective of whether compensation is provided in cash or in-kind.

96. The Provincial Resettlement Committee (PRC) was established as per the Agreement of the Provincial Governor (No.506/Gov.BKL, dated 6 October 2020). The Committee was established specifically for Project to oversee the compensation activities associated with the Project. This committee will also confirm the compensation rates to be used so they are consistent for all Project Affected Households. The committee for drafting compensation policy and unit rate was established as per the Agreement of the Vice Provincial Governor (No.490/Gov.BKL, dated 7 July 2021). Please see Attachment 3 for both agreements and Attachment 6 for the Decision of Provincial Governor, No. 147/GOV.BKK, dated 15 March 2022 on Compensation Rates for the BKK Project. A replacement cost survey was conducted on 5 to 12 July 2021 as basis for houses, construction materials and trees.

97. Further details on the intended compensation for affected structures and industrial trees are provided in the entitlement matrix below (Table 7.1).

98. Rates of compensation were determined based on actual value of land and assets at open market prices (please refer to Attachment 4 Methodology for Unit Rate Assessment). A summary of rates of compensation calculation principles are outlined below:

- Trees and Crops: Compensation = number of tree (trees/tree) x compensation rate for each type of tree (LAK/Tree).

- For annual crops, time will be arranged by contractor to enable farmers to harvest their produces at least six months in advance. Thus, there will be no compensation for annual crops. If farmers are not formally informed and the project needs to acquire the land where standing crops are not ready for harvest, the project will provide compensation for such affected annual crops as per the valuation of the PRC.
- Housing and secondary structures: Compensation = area of structures (m²) x price of each type of structures (LAK/m²/ or LAK/m).
- Loss of income: The actual compensation cost will be calculated based on the actual number of days that the shops would need to be closed during the construction period multiplied with net profit per day derived from the monthly tax payment.
- For fish cage farming: Compensation = number of cages x net profit per cage x selling season (3 selling seasons per year).
- The unit costs of compensation for affected land and assets have been established based on the principle of “Replacement Cost”. The compensation rates and its calculations were consulted and disclosed in meaningful manner to each individual affected persons/households from which they have agreed based on the documents signed⁶. As per the advice from the WB, the second market survey was carried out during 2-10 September 2022 to estimate actual inflation of construction materials given that the prices of these materials have been notably increased while land and tree prices remain largely stable. The survey was conducted through the visit of local market (5 businesses/shops) to obtain actual/latest prices of main construction materials (such as cement, sand, gravel, wood and steel products, transport and other building materials). The survey result indicated that the inflation rate of construction materials in Bolikhamxay province (Pakxan City) was 20.43%. However, 10% of inflation rate was already added into the compensation rates approved by the Provincial Governor (No. 147/GOV.BKX, dated 15 March 2022) during the ARAP preparation and therefore only 10.43% additional inflation rate of construction materials was added into the compensation cost in this ARAP.

99. During the preparation of compensation unit rate, consultations had been undertaken at various levels, including district, village authorities, and representatives of the affected people and it will continue throughout the Project. So far, the consultation focused on setting the unit prices for compensation, defined types of affected assets, affected people and how compensation process and grievance process will be placed and implemented. The project affected households (PAHs) have been consulted on the proposed compensation rates and have indicated their acceptance of the proposed rate (See Minutes of Consultation at Attachment 8).

7.3.2 Entitlement Matrix

100. All affected households are entitled to the various entitlements for losses anticipated under the Project and compensation measures set out in the following Table 7-1 Matrix.

⁶ The signed document with individual household is available at the PMU/PIU office.

Table 7-1 Entitlement Matrix

Type of Losses	Entitled Persons	Entitlements	Implementation Issues
A. Loss of Houses/Structures			
<p>Totally Affected Houses/Shops, and Secondary Structures (kitchen, rice bins)</p> <p>Partially Affected Houses/Shops but no longer viable (Will require physical relocation)</p>	<p>Owners of affected houses whether land is owned (regardless of legal status).</p>	<p>Cash compensation at full replacement costs for entire affected structures, including compensation for (i) construction materials with the same quality without depreciation, (ii) transportation costs for construction materials; and (iii) labor costs that cover dismantling, transport of debris to disposal site, and rebuild the new house/ structure. No deduction will be made for salvageable materials;</p>	<p>The cash compensation for the entire structures may not be based on the current market price.</p> <p>Concern that the compensation may not be release before the dismantling and before their transfer, thus affected owners may advance these costs</p>
		<p>Timely provision of trucks for hauling personal belongings at no cost to the PAP.</p>	<p>The trucks that will haul the personal belongings shall have enough laborers</p> <p>The personal belongings shall be itemized and ensure that its secured and safe during the actual transfer.</p> <p>Transfer and hauling shall not be during rainy season.</p>
<p>Partially Affected Houses and Shops and secondary structures (Will not require physical relocation)</p>	<p>Owners of affected houses whether or not land is owned.</p>	<p>Cash compensation at full replacement costs for the affected portion of structure, including (i) new construction materials of the same quality (as a minimum) without deduction for depreciation or salvageable materials for houses and structures (ii) transportation of construction materials to construction site to build new houses/ structures, and transportation of debris to disposal site (iii) cost for repairing/ restoring the unaffected portion of houses/structures to its original function.</p>	<p>Cash compensation may not be based on the current market prices.</p> <p>Cash compensation may not be release timely or delayed in available of funds.</p>
B. Loss of Crops and Trees and other mean of livelihoods			

Type of Losses	Entitled Persons	Entitlements	Implementation Issues
<i>Crops and , Trees and fish cages</i>		Cash compensation at market price for affected cash crops, and at replacement costs for the perennial trees	Cash compensation may not be release timely or delayed in available of funds.
<i>Fish cages</i>		Loss of income from caged fish farming will be compensated at the rate equivalent to income earned in three consecutive harvest seasons (one year) for each cage.	If requested, affected households will be assisted to find another suitable place for resuming caged fish farming if caged fish farming is not allowed in the same place following completion of embankment construction.
C. Temporary Impacts Due to Sub-Project Construction or Maintenance			
Temporary Use of Land	Legal owner or occupant.	For agricultural and residential land to be used by the civil works contractor as by-pass routes or for contractor’s working space, (i) rent to be agreed between the landowner and the civil works 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 to the pre-project land condition within 1 month before Contractor’s returning the temporarily used land back to the land owner (subject to the conditions agreed between the landowner and the civil works contractor).	The construction supervision consultant will ensure that the (i) location and alignment of the by-pass route to be proposed by the civil works will have the least adverse social impacts; (ii) that the landowner is adequately informed of his/her rights and entitlements as per the Project resettlement policy; and (iii) agreement reached between the landowner and the civil works contractor are carried out.
Transportation allowance	Relocated households	Provision of trucks to transport all old and new building materials and personal possessions from affected site location to resettlement site.	PAP/PAH may also opt for cash assistance. The amount (cost of labor and distance from affected site to resettlement site) will be determined based on consultation with resettled households during ARAP implementation.

7.4 Resettlement Measures

101. Displaced persons will be entitled to the following types of compensation and livelihood restoration measures – subject to further consultation with affected people during the field survey prior to ARAP implementation:

(1) Persons losing agricultural land and crops/trees/structures on land:

- a) The preferred mechanism for compensation of lost agricultural land will be through provision of replacement land of equal productive capacity and satisfactory to the displaced person. If satisfactory replacement land cannot be identified, compensation at replacement cost may be provided.
- b) Displaced persons will be compensated for the loss of standing crops at market price, for economic trees at net present value, and for other fixed assets (ancillary structures, wells, fences, irrigation improvements) at replacement cost.
- c) Compensation will be paid for temporary use of land, at a rate tied to duration of use, and the land or other assets will be restored to prior use conditions at no cost to the owner or user.

(2) Persons losing residential land and structures on land

- a) Loss of residential land and structures will be compensated either through replacement land for housing and garden area of equivalent size which is satisfactory to the displaced person, or in cash at full replacement cost.
- b) If the remaining residential land (which is not affected) is not sufficient to rebuild or restore a house or structures of equivalent size or value, the remaining residential land and structure will be acquired, if requested by the affected person. Compensation for the non-affected part will be paid at full replacement cost.
- c) Tenants, who have leased a house for residential purpose, will be provided with a cash grant of three months rental fee at the prevailing market rate in the area and will be assisted in identifying an alternative accommodation.

(3) Affected businesses

- a) Compensation for loss of business will involve, as relevant: (i) provision of alternative business site of equal size and accessibility to customers, satisfactory to the affected business operator; (ii) cash compensation at full replacement costs for lost business structures; and (iii) transitional support for loss of business income, including employee wages, during the transition period.

(4) Infrastructure and access to services

- a) Affected infrastructure, such as water supply, roads, sewage systems, electrical supply, communication, public works such as schools, clinics or community centers will be repaired/restored or replaced at no cost to the communities affected.

7.5 Site Selection, Site Preparation, and Relocation

102. The project has completed the inventory of loss and the estimation of the compensation costs. Based on the current design, impacts, and consultation with three households whose houses are affected, arrangement of a resettlement site for these households will not be required as the three affected households plan to rebuild their houses in their land located just adjacent to the existing house location. However, in case of any unforeseen relocation would happen, two resettled households will be assisted to find a new location that is appropriate to them.

7.6 Livelihood Restoration Measures

103. All eligible Aps are provided with income restoration measures sufficient to assist them to improve or at least restore their living standards, income earning capacity and production to the pre-project level. Eligible Aps include households who are resettled physically and those who are vulnerable and poor households, including the following households:

- a) Households with female heads who are divorced or widowed with dependents and with monthly income per capita between 240,000 to 500,000 Kip;
- b) Households with person with disability and with monthly income per capita between 240,000 to 500,000 Kip;
- c) Households with members with monthly income per capita under 240,000 Kip (below government's poverty line); and
- d) Households with the elderlies who have no support and monthly income per capita between 240,000 to 500,000 Kip.

104. The affected vulnerable households would be supported to have access to project's occasional construction related works that are appropriate to them.

105. The measures focus on minimizing social risks and are organized around the themes that include: a) reducing barriers to access to markets, trading and employment opportunities; b) empowerment through good governance, sound participatory processes and effective organization of the poor; and c) reducing vulnerability to poverty through building social assets by providing allowance as follows:

- a) For affected house and shop with no proof of income (no income tax payment receipt) will receive allowance of 3 month supply of rice per person in the household with the allowance equivalent to 16kg of rice at current market price). The allowance cost is provided in Table 13-1.
- b) For those with proof of income (with income tax payment receipt), the actual compensation cost for the loss of income will be calculated based on the actual number of days that the shops would need to be closed during the construction period multiplied with net profit per day derived from the monthly tax payment.

106. Article 15 of the Decree on Compensation and Resettlement Management in Development Project (No. 84, 2016) requires that there must be a special assistance to address the needs of the vulnerable groups who are affected by the development projects in order for these groups of

people to overcome poverty and to restore their livelihood conditions based on the supervision of the provincial or district compensation and resettlement committee.

107. Special assistance to vulnerable groups may include:

- Ensuring they rightfully receive their compensation;
- Protection from opportunistic relatives;
- Open bank accounts;
- Special support for widows and children from female headed households to access support from the Provincial or District Committee for Compensation or designated representative at the district and provincial levels so as to enable them to process their entitlements;
- Financial literacy training;
- Find new land and / or accommodation;
- Livelihood restoration (e.g. training) with special consideration of vulnerable groups;
- Securing land tenure in new location.

8 Implementation Arrangements

108. The implementation framework of this ARAP complies with the World Bank's OP 4.12, some provisions of Decree 84 of the Lao Government, and the Decree on Environmental Impact Assessment (2019) in consultation with the relevant national legislations including the Land Law 2019.

8.1 Government Agencies

109. The institutional structures to be put in place for the implementation of the ARAP for the Project will be consistent with national guidelines and will include:

- Department of Waterways under the MPWT who is the Project Owner (PO) led by the Director General as the Project Director;
- Provincial Department of Public Work and Transport (PDPWT) in Pakxan, Bolikhamxay, the Sub-Project Owner;
- Public Works and Transport Institute (PTI) partnered to support preparation of safeguard instruments (ESMF, RPF, EGEF and ESMP, and ARAP), monitoring and reporting on implementation of the safeguard instruments including ARAP;
- Provincial Resettlement Committee (PRC, Bolikhamxay Province) led by the Provincial Vice-Governor and comprises of relevant provincial departments in charge of oversight and review of ARAP preparation, compensation and GRM;
- District Compensation and Resettlement Units (Pakxan) by the District Vice-Governor of Pakxan and comprises of relevant district offices which serves as a secretariat of PRC in charge of supervision, review and report on ARAP implementation, compensation and handling with GRM;

8.2 Provincial Resettlement Committee (PRC)

110. A Provincial Resettlement Committee (PRC) will be established for the Project in Bolikhamxay Province. PRC members will be appointed by the Governor of the Province. The PRC's main role will be to oversee the implementation of ARAP for the project, and the committee will meet at least quarterly or more regularly if required.

111. The PRC has been recently established with an Agreement of the Provincial Governor which include representatives from provincial cabinet office, Lao Front for National Development, PONRE, Public Security, DPWT, Provincial Propaganda Office, and District Governor (refer to below). The chair of the committee should be the Provincial Governor or Vice-Governor. Representatives of the PRC should include:

- Vice-Governor of Bolikhamxay Province;
- Provincial Department of Natural Resources and Environment (PONRE) staff;
- Provincial Justice Department representatives (if required for grievance redress).
- Lao Front for National Development (LFND);
- Department of Public Works and Transport (DPWT);
- Provincial Public Security;
- District Governor.

112. The specific responsibilities of the Provincial Resettlement Committee (PRC) are outlined in Decree 84, Article 20 as follows:

- Supervise, manage the planning and implementation of the plan for compensation, resettlement and rehabilitation of the livelihood of people of the project owner and units under his supervision;
- Appoint a unit to manage the compensation and resettlement, and an operation unit of the compensation and resettlement;
- Consider and approve a plan for the environmental, social and natural management, follow-up and examination of the development project before the final endorsement of the Ministry of Natural Resources and Environment;
- Work out a policy and define a unit of compensation, set the duration of maintenance of the allocation-resettlement area, transitional period and the period of livelihood rehabilitation of each development project;
- Consider and timely settle the request(s) relating to compensations, allocation resettlement and the rehabilitation of people's livelihood according to its mandate and responsibilities;
- Report on its performance to the government and make copies and distribute them to the Ministry of Natural Resources and Environment at each period;
- Issue decisions or notices as references for the implementation of the plan for compensation, resettlement and the rehabilitation of people's livelihood;

- Provide information for the affected and other stakeholders concerning the development project, benefits and impacts, progress in the implementation of the plan for compensation, resettlement and rehabilitation of people's livelihood throughout the implementation of the development project; and
- Exercise rights and perform other duties as assigned by the government.

8.3 District Resettlement Committee

113. The further planning and implementation of the project will be undertaken in coordination with district government agencies, through the establishment of District Resettlement Committee (DRC) for each district affected by the project, which will be appointed by the PRC. The main function of the DRC will be to represent the interest of the PAPs and stakeholders in dealing with Project impacts and mitigation measures with regards to resettlement and land impacts.

- Guide and facilitate the implementation of activities related to the plan for compensation, resettlement and rehabilitation of people's livelihood in its locality;
- Support and render co-operation, co-ordinate with and join the unit to manage the compensation, and resettlement and the project owner in implementing timely the plan for compensation, resettlement and rehabilitation of people's livelihood in its locality;
- Consider and timely settle the request(s) related to the compensation, and resettlement and rehabilitation of people's livelihood according to its mandate and responsibilities;
- Report the unit's performance to the management unit of compensation and resettlement, and other related parties at each period (in this case reporting would be to the PRC);
- Supply information to the affected and other stakeholders on the development project, benefits, and impacts, progress in the implementation of the plan for compensation, resettlement and rehabilitation of people's livelihood throughout the implementation of the development project; and
- Exercise rights and perform other duties as assigned by the management unit of the compensation, and resettlement, and higher authorities.

114. The members of the DRC will include representatives from all districts potentially affected by the project. The DRC will be chaired by the District Governors or Vice-Governors of the relevant districts. The representatives from each district required to provide full and balanced advice on ARAP implementation include:

- Vice-Governor of Bolikhamxay Province;
- Provincial Office of Natural Resources and Environment (PONRE) staff;
- District Office of Natural Resources and Environment (DONRE) staff;
- District Justice Department representatives (if required for grievance redress);
- District Forestry Officer;
- District Agriculture Officer;
- District Land Officer;
- Lao Women Union (LWU) representatives;
- Lao Front for National Development (LFND);

- Representatives; and
- Village chiefs from affected villages, including traditional leaders as required.

115. Village Authority is responsible for facilitating ARAP preparation and implementation and dealing with GRM at village level. The Village Authority includes Village Mediation Committees or Units (VMCs/VMUs) in charge of receiving, addressing and recording grievances in GRM logbook, and escalating pending grievance that could not be resolved at village level to district and provincial level committees respectively.

8.4 Measures for Organizational Capacity Building

116. The Project is expected to create positive impacts on the environment by improving climate resilience of the road and reducing greenhouse gas emissions from traffic per kilometer travelled. The Project will also provide significant capacity building through on-the-job training, the introduction and implementation of Bolikhamxay project.

117. The PMU with the support from EDPD/PTI will have a supervisory role in planning, capacity building and monitoring the implementation of ARAP to ensure that provisions contained in the ARAP are implemented, monitored and reported through the following capacity buildings:

- Institutional capacity building may be required to effectively carry out implementation activities in the affected areas. This is particularly important as livelihood restoration (beyond cash compensation) is a critical component of the program and is not a legislative requirement, meaning that Local Governments and organizations within affected communities may not have prior experience with mobilization, implementation support and monitoring of livelihood restoration measures.
- Institutional capacity building could include training activities, workshops and technical assistance provided in advance of entitlement distribution and land acquisition. Capacity building would improve the institutional groups' understanding of the objectives of the ARAP. Capacity assessment should be included in all livelihood restoration initiatives to confirm that the stakeholders involved will have the capacity to implement the initiatives proposed, and capacity building activities should target any gaps identified. Lessons learnt from previous similar projects will be important to incorporate into capacity building exercises.

9 Information Disclosure, Consultation and Community Participation

9.1 Information Disclosure

118. Both English language and Lao language versions (executive summary) of ARAP will be posted on the MPWT official government website and will also be distributed to national and local governments, key stakeholders and civil society organizations, and different stakeholders two weeks prior to the second public consultation meeting. Previous consultation indicated that consulted stakeholders, including affected households, support implementation of the proposed subproject.

119. Once the ARAP is cleared by the World Bank for implementation, the ARAP will be disclosed in English and Lao languages on the MPWT’s website, and locally in Lao language at the village halls. The final English version of ARAP will be disclosed on the World Bank’s website.

9.2 Consultation Process

120. The project adopts a participatory consultation approach to promote meaningful consultation with project affected households. A focus is placed on consultation with affected vulnerable groups, including female headed households, ethnic minorities, women, youth, the elderly, the poor, and people with disability, etc. Consultation with CSOs (NPAs, CBOs) and other relevant stakeholders were also hold to understand their perspective and inform project design as well as overall impact mitigation approach.

9.3 Consultation during preparation of ARAP

121. PAPs and PAHs were invited to participate in public meetings in the early stages of the ARAP preparation. They were provided with reliable information on the proposed Bolikhamxay project, its impacts and proposed mitigation measures and economic restoration activities. Information publicly disclosed includes cut-off dates for each sub-project, eligibility criteria and entitlements, modalities of compensation, complaints and grievance redress procedures.

122. During the preparation of ARAP, ESMP and IEE including the unit rate, there were several consultations undertaken with provincial, district and village authorities including representatives of the affected people (men, women, ethnic minorities, and disadvantaged people). The PAP and PAH and different populations were provided with opportunities to present their ideas and suggestions as inputs into the ARAP and Unit Rate preparation process through a series of participatory exercises and focus group discussion (FGD) with PAP and PAH, to ensure affected parties have a stake in the process.

123. To date, there were four rounds of consultations with a total number of 214 participants of which 78 are female as presented in Table 9-1 and Table 9-2 below. Please also see List of Participants in Attachment 8 and Photos of Consultations in Attachment 9.

Table 9-1 Number of Participants

No.	Dates	Objective	Meeting Locations	Total	Female
1	9-13 Nov 2020	<ul style="list-style-type: none"> • To disseminate project information such as the planned structures for river bank protection; • To present positive and negative impacts and proposed mitigation measures; • To obtain opinions, concerns and recommendations 	DPWT Meeting Room	28	11

		of community people about implementation of the project.			
2	18-19 Feb 2021	<ul style="list-style-type: none"> To disseminate entitlements for losses anticipated under the project and compensation measures. 	Houaysiat and Pakxan-Tai Villages	50	21
3	7-9 Jul 2021	<ul style="list-style-type: none"> To collect socio-economic census data; To obtain opinions, concerns and recommendations of community people about implementation of the project; To conduct Inventory of Loss (IOL). 	Houaysiat, Pakxan-Tai and Anousonxay Villages	108	42
4	3-5 Nov 2021	<ul style="list-style-type: none"> To obtain agreement/consent from PAPs on compensation unit costs. To finalize draft Provincial Agreement on Compensation Unit Rate. 	Houaysiat, Pakxan-Tai and Anousonxay Villages	28	4
			Total	214	78

Table 9-2 Summary of Consultation Results

Positive Impacts	Negative Impacts	Recommendations/Comments
<ul style="list-style-type: none"> All participants agreed with the project development plan. The project should start as soon as possible as it will help prevent the erosion as it increases about 50cm-1m each year. The project will prevent erosion of river bank and protect the land people lands, 	<ul style="list-style-type: none"> Affect lands and properties such as houses, small shops, fish cage farm, and River garden with seasonal crops but not main income. Community health and safety from transportation of construction materials, noise and dust emissions, solid waste and waste water from worker camps, and risks of Covid-19 infection. 	<ul style="list-style-type: none"> The design shall be designed to minimize the impacts on people lands and properties. The loss and compensation amount data shall be checked and confirmed with PAPs. Compensation should be paid for all affected lands and assets with fair prices and consultation with PAPs. The compensation shall be completed before starting any construction activities. Notify village authorities and villagers 2 months in advance of construction takes place. Implement measures to prevent community health and safety such as control of driving speed limit, water spraying, noise control, and cover the

<p>properties and lives especially for those who live along the river bank.</p> <ul style="list-style-type: none"> • Villagers will have beautiful riverbank and having a nice recreation place to sit. • It will be easy to go fishing as the project will install stairs. • The project will improve community economy such as more shops and increase incomes. 	<ul style="list-style-type: none"> • Social issues from labour influx such as thieves, drunk, violence including gender and child violence and abuses. • Poor waste management from people selling foods if no proper management of the improved river bank. 	<p>truck when transporting construction materials to prevent falling on the road and so on.</p> <ul style="list-style-type: none"> • Implement good solid waste and waste water management for worker camp and storage areas. • Implement measures to avoid social issues and risks on COVID-19 infection such as having vaccination to prevent COVID-19 outbreak before coming to work. • Request to recruit local people for construction works both men and women. • Request the project to improve the access road to the temple in Houaysiat Village. • Request the project to install fences along river bank to prevent the children falling in the river. • After the contrition completed, can villagers use the improved river bank for selling foods and fish cage farming? • Request for campaigns on community engagement in keeping the improved river bank clean, green and beautiful especially community solid waste management. • Request to conduct spiritual ceremony to ask for permission from the river and soil spirits before construction. • Request to not working on Buddha Day “Van Sin”. • Regular consultations with local communities and temples on the construction activities and schedules during the construction phase. <p>All recommendations are integrated in the project design and responded in this ARAP and the updated ESMP.</p>
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9.4 Consultation during implementation of ARAP

124. During ARAP implementation, monthly meetings will be held face-to-face with PAH to garner their feedback on how the ARAP implementation can be improved. Representatives of PAH be invited to sit in various committees, including grievance redress committee which will be established to ensure PAH’s voice will be heard during various stages of decision-making process throughout the ARAP implementation process. Upon completion of ARAP implementation, a survey will be undertaken by the MPWT/DOW/PMU/PTI to assess their level of satisfaction of PAP/ PAH as to ARAP implementation process and result.

125. The consultation with affected communities shall be implemented and undertaken continuously throughout the construction phase. Consultation report of each consultation shall be made with minutes of meeting along with attendance records and the signatures of all participants. The future consultations are listed in Table 9-3 below.

Table 9-3 Future Consultations

No.	Consultation	Objectives	Methods	Implementing Bodies	Timelines
Pre-construction					
1	ARAP Implementation: Consultation with concerned authorities and affected households on confirmation of loss and compensation amount and method. Separate consultations may need to be conducted with vulnerable households and individuals to ensure that their concerns and needs have been met.	To confirm and verify and obtain consent from PAP on their losses and compensation amount	Meetings and open discussions	PTI/EDPD and DPWT/PIU	October 2022
Construction Phase					
4	Consultations with affected communities on	To inform PAP on project construction	Open meeting	Contractor, CSC, DPWTs	Throughout construction phase

No.	Consultation	Objectives	Methods	Implementing Bodies	Timelines
	project activities, impacts, construction schedule and work plan	activity and schedule and potential risks as well as community health and safety			
5	Consultation various community development measures and livelihood restoration initiatives.	To obtain opinion/ideas and proposal from PAP on livelihood restoration initiatives.	Meeting, Focused Group Discussion and In-depth Interview	PTI/EDPD and DPWT/PIU	Throughout construction phase
6	Dissemination of community health and safety with affected communities	To educate PAP on community health and safety and accident prevention measures	Open meeting	Contractor, CSC, DPWTs	Throughout construction phase
7	Ad hoc meetings on a basis where substantial changes have been made or conflict has arisen due to accident, misunderstanding or other causes.	To address or solve conflicts	Open Meeting, Focused Group Discussion and In-depth Interview	Contractor, CSC, DPWT, PIU, PTI	Throughout construction phase
Operation Phase					
8	Consultation on Green Clean and Beautiful (GCB) community network on waste management in Bolikhamxay (Moving towards GCB for Bolikhamxay)	To obtain opinion of local community on participatory GCB community network on waste management	Open Meeting, Focused Group Discussion and In-depth Interview	PTI/EDPD and DPWT/PIU	O&M Phase

10 Grievance Redress Procedures

126. The PMU-DOW/MPWT and PIU-DPWT have established a grievance redress committee at the village level, as well as the district and provincial level. These were established to deal with

resettlement related grievances as they arise. These committees will receive, evaluate and facilitate the resolution of PAP and PAH concerns, complaints and grievances. Grievance redress committees will be comprised of representatives of PAP and PAH, community leaders, and independent civil society organizations (Non-Profit Association and CBO) in addition to representatives from village and district levels, and PMU and PIU authorities. If the grievance relates to a dispute over the valuation of an asset to be acquired, then the DOW-MPWT will acquire an additional independent assessor to inform the decision of the relevant grievance redress committee. The grievance redress committees will function, for the benefit of PAP and PAH during the entire life of the sub-projects, including the defects liability period.

127. Throughout the project planning, implementation and operation, all complaints and grievances may be received in writing, or if given verbally then written at the same time and place, members of the affected ethnic group community and duly recorded by each level of the grievance redress process (community, district, provincial). A template or form will be developed that is easy to understand and to fill in for anyone who wishes to issue a complaint. Members of affected ethnic group communities will be exempted from all administrative and legal fees incurred pursuant to the grievance redress procedures. Grievances related to any aspect of the proposed project will be dealt with through negotiations with the ultimate aim of reaching a consensus. Grievance redress procedures aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. These grievance redress procedures are not meant to circumvent the government's inbuilt redress process, nor provisions of the national laws, but rather to address members of ethnic group communities' concerns and complaints promptly, making it readily accessible to all segments of ethnic group communities and scaled to the risks and impacts of the project.

128. The EGEP will establish the means for members of affected ethnic group communities to bring complaints to the attention of relevant project authorities. Grievance procedures should include reasonable performance standards, including time required to respond to complaints and should be provided without charge to those displaced persons. The EGEP should also state other avenues available to aggrieved persons if the project-related procedures fail to resolve complaints. Article 23 and 24 of the C&R Decree (No. 84/GOL, 2016) require the project to establish an effective mechanism for grievance resolution. The decree requires that the sub-project proponent, Provincial Department of Public Works and Transport (DPWT) Bolikhamxay Waterway Sector, is responsible for setting up the grievance redress mechanism and to take actions to resolve issues.

129. The ESMF contains details on the grievance redress mechanism for the project. Grievances related to environmental and social issues from directly or indirectly affected ethnic groups as a result of implementation of project will be resolved by the Grievance Redress Committee (GRC) through the project grievance redress mechanism presented in Figure 10-1 below.

130. However, the complainant also retains the right to bypass this procedure and can address a grievance directly to the DPTW PIU office or the national assembly, as provided by law in Lao PDR. At each level grievance details, discussions and outcomes will be documented and recorded in a grievance logbook. The status of grievances submitted and grievance redress will be reported to Provincial DPWT Bolikhamxay Waterway sector management through the monthly report. In

order to effectively and quickly resolve grievances PAP and PAH may have, the following process will be applied:

- a) Stage 1: If PAP and PAH are not satisfied with the resettlement plan or its implementation, the person can issue oral or written complaint to the village committee or the District Resettlement Office (DRO). If it is oral complaint, the village should deal with this complaint and make written records. Village committee or DRO should solve the complaint within two weeks.
- b) Stage 2: If PAP and PAH are not satisfied with the result of step 1, he/she can file appeal with the Project Resettlement Office (PRO) after he receives the decision made in step 1. The PRO should make a decision within two weeks.
- c) Stage 3: If PAP and PAH are not satisfied with the result of step 2, he/she can file appeal with provincial Resettlement Committee for administrative arbitration after receiving the decision made by the PRO. The administrative arbitration organization should make the arbitrated decision within 10 days.
- d) Stage 4: If PAP and PAH are still unsatisfied with the arbitrated decision made by the administrative arbitration organization, after receiving the arbitrated decision, he/she can file a lawsuit in a civil court according to relevant laws and regulations in Lao PDR.

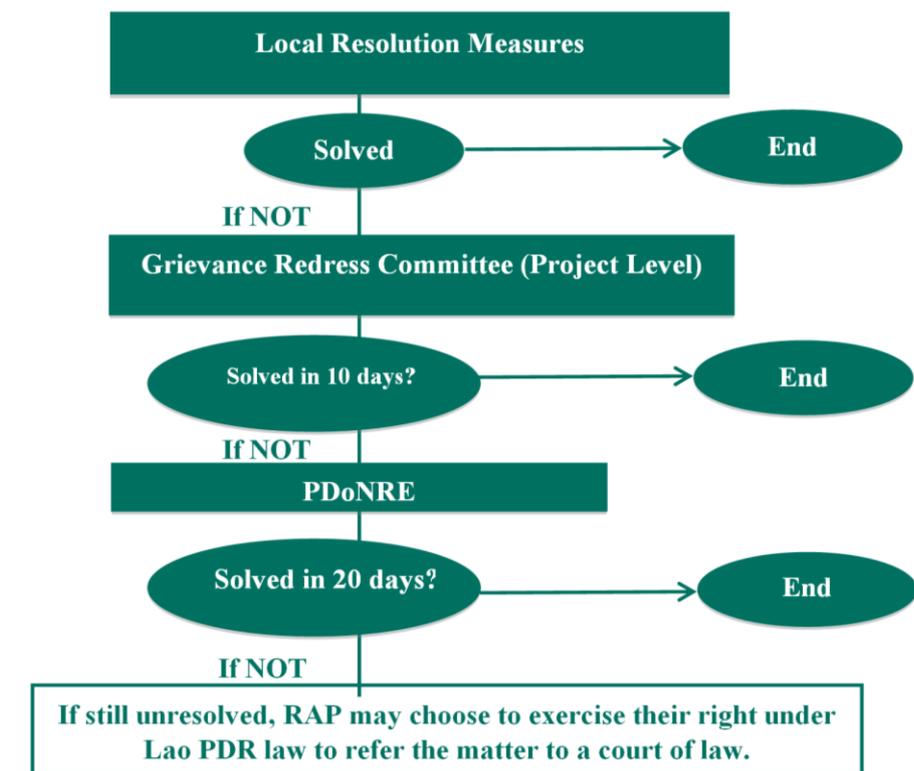


Figure 10-1 GRM Procedure

131. Members of ethnic group communities can make a complaint or appeal on any aspects of project’ design and implementation, including issues related to resettlement. A complaint and grievance feedback form will be developed under the project and made available at Bolikhamxay’s provincial capital, Pakxan City, and vicinity, including in ethnic group

communities, for use by community members to raise complaints or grievances. Ethnic group community members will be clearly informed of the complaint and appeal channels described above through community meetings and other forms of communication (Please refer to Attachment 10 GRM Monitoring Form).

132. PAP and PAH can make a complaint or appeal on any and all aspects of project design and implementation, including issues related to resettlement. A hotline phone will be established with dedicated staff assigned to so that PAPs or complainants will not be charged for their phone calls used to raise their grievances and their complaints are responded in an efficient manner. PAP and PAH will be clearly informed of the complaint and grievance redress mechanism and appeal channels described herewith through village meetings and other channels. In addition, a complaint box should be made available in a convenient location of the village.

133. The Project organizations addressing the community level complaint and appeal process shall not charge any fee. Any expenses incurred due to complaint and appeal should be paid as unexpected expenses and paid for by the Project. The communities and individuals who believe that they are adversely affected by a WB supported project may submit complaints to existing project-level grievance redress mechanism or the WB’s Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaints to the WB’s independent Inspection Panel which determines whether harms occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the WB’s attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank’s corporate Grievance Redress Service (GRS), please visit www.worldbank.org/grs. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

134. The communities and individuals who wish to submit their complaints to existing project-level grievance redress mechanism or the WB’s Grievance Redress Service (GRS) could be done by contacting the following relevant staff and organizations as presented in Table 10-1 below:

Table 10-1 GRM Contact Persons

No.	Name and Surname	Position	Organization	Contact Number
1	Mr. Souphalak Xaysanasy	Vice Governor of Pakxan-Tai district	District cabinet office for Pakxan District	020 55257089
3	Mr. Bouala Duangphachan	Head of Lao front Office	Lao front office for Pakxan District	020 55247197
4	Ms. Chindavong Heuangsomphou	Head of district cabinet office	District cabinet office for Pakxan District	020 54632895

No.	Name and Surname	Position	Organization	Contact Number
5	Ms Syvanh Luangsopha	Head of district Lao Women Union	Lao Women Union office for Pakxan District	020 22200902
6	Ms. Phonkeo	Deputy head of district justice office	District justice office for Pakxan District	030 4925403
7	Mr. Khaykham	Deputy head of district youth union	District youth union for Pakxan District	02056969307
8	Mr. Khampasueth Panyanouvong	Head of PIU Office	PIU office in BKK	020 23288878
9	Ms. Lattiyakone Duangthasy	ESS Officer for PMU office	PMU office in VTE	02055895899
10	Ms. Phouangmali Sithsathon	Village head	Houaysiat Village	020 55652204
11	Mr. Somphon Sorpaseuth	Village head	Pakxan-Tai Village	020 97574776
12	Mr. Lammon Bolivanh	Village head	Anousonsai Village	020 94445897

11 Implementation Schedule

135. The overall schedule covering all settlement activities from preparation through implementation, including target dates for the achievement of expected benefits to PAH (resettles) and linked to the implementation of the overall project is presented in Table 11-1 below.

Table 11-1: ARAP Implementation Schedule

No	Task	Description	Responsibility	Schedule
1	Establishment of PRC	The PRC will oversee the implementation of the ARAP including the preparation phase.	PRC and MPWT/DOW	06 October 2020
2	Notify Cut-Off-Date	PIU disseminate Cut-Off Date letter issued by DPWT of Bolikhamxay Province.	PIU	15 February 2021
3	Establishment an committee for compensation	An ad hoc committee was established to develop compensation rates for the loss of land and assets in the DRM project areas.	MPWT/DOW and Provincial authorities	07 July 2021
4	Government capacity building	Capacity building for key Government stakeholders e.g. members of PRC.	MPWT/DOW	09-14 March 2021

No	Task	Description	Responsibility	Schedule
5	Completion of the inventory of loss	The inventory of loss of land and assets in Cheng village completed before finalization of the ARAP.	PRC and the Consultant	5-12 July 2021
6	Conduct on-going formal consultation and public disclosure with affected communities and relevant authorities	The PRC, MPWT/DOW and the Consultant to notify stakeholders of project activities and allow participation in planning and decision making particularly on compensation and resettlement works.	PRC, DOW and the Consultant	March 2022
7	Conduct detailed measurement survey (DMS) of land and assets affected by the DRM's subprojects.	Formal consultation with PAPs of concern, and valuation of 100% of assets impacted by the Project and its associated works to be conducted.	MPWT/DOW and DPWT	October 2022
8	Identification of compensation/restoration requirements for land and assets impacted by the DRM project.	Identification of compensation and restoration measures should consider any factors of vulnerability identified during detailed measurements and consultation.	MPWT/DOW and DPWT and PRC	October 2022
09	Issuance of compensation / restoration requirements for land and assets impacted by the Project.	Issuance of compensation and additional restoration measures for land and assets impacted at the project development sites in agreement with asset owner. Information on compensation amounts and processes, requirements that Affected Persons must fulfil before payment is affected and payment timing will be communicated to Affected Persons. All compensation payments will be made prior to land acquisition and through the designated bank accounts of Affected Persons	MPWT/DOW and DPWT and PRC	November 2022

No	Task	Description	Responsibility	Schedule
10	Finalization of ARAP	Final ARAP will follow review and update of draft ARAP	Consultant in association with DOW/MPTW	25-30 November 2022
11	Asset owners impacted by the project development will be required to resettle	Resettlement / relocation activities to include demolish their houses, move their assets to the new premises, harvest of crops, transportation of livestock and any additional support required to restore activities at new site (e.g. installation of equipment, fencing etc.).	MPWT/DOW and DPWT and PRC	10-15 December 2022
12	Delivery of livelihood restoration support for severely affected PAPs/PAHs (those who lose >10% of productive assets, resettle physically) and affected vulnerable and poor household	Implementation of various community development measures and livelihood restoration initiatives. Villages affected by construction to be prioritised for livelihood restoration. Initiatives to then continue for villages to be affected by sub-project development activities.	MPWT/DOW and DPWT and PRC	10-15 December 2022
14	Relocation of public utilities and infrastructure	Relocation of public utilities (electricity, telephone lines and water supply system)	EDL and concern agencies	16-30 December 2022
15	Inspection and verification of ARAP/compensation completion by supervision consultant to recommend site handover to PIU and contractor to start work	All structures and assets compensated have to be removed before hand over the project site to contractor. Social safeguard specialist of Supervision consultant will review and certify if the compensation and resettlement are completed and recommend PIU to hand over the project site to contractors to start their works.	Social safeguard specialist of Supervision (ISWS) consultant	January 2023

No	Task	Description	Responsibility	Schedule
16	Monitoring the implementation of ARAP with GRM continue to be active until the end of the project works	Follow up/monitoring ARAP during and after resettlement including GRM and include the results in the safeguard monitoring report	MPWT/DOW and DPWT and PRC	November 2022 - January 2023
17	Completion audit	A completion audit will be undertaken once all mitigation measures have been completed to assess whether the ARAP provisions have been met.	WB, Consultant	January 2023
18	Reporting	Completion Report Preparation for Resettlement and Compensation	MPWT/DOW and DPWT and PRC	January-February 2023

12 Monitoring and Evaluation

136. Monitoring is a key component of the project implementation. MPWT DOW will appoint adequate full-time staff to support PIU in internal monitoring of ARAP implementation. The appointed staff will monitor the process of ARAP implementation, compensation payment, land acquisition, resettlement, and livelihood restoration in collaboration with local village or district authorities.

137. Internal Monitoring:

- 1) Monthly internal monitoring reports will include:
 - a) Consultation and participation of affected people during ARAP implementation;
 - b) Compensation payment, including use of funds for compensation, support, and livelihood restoration;
 - c) Support for project affected vulnerable groups;
 - d) Grievances recording and grievance resolution process;
 - e) Land readjustment and reallocation;
 - f) Quality and quantity of newly reclaimed land;
 - g) Schedule of the above activities;
- 2) Monitoring visits will be undertaken on a quarterly basis in order to:
 - a) Improve environmental and social management practices;
 - b) Ensure the efficiency and quality of the environmental and social assessment processes;
 - c) Establish evidence- and performance-based environmental and social assessment for the project; and
 - d) Provide an opportunity to report the results of safeguards instrument impacts and proposed mitigation measures' implementation.

138. External Monitoring: Given the small scope of impact, external monitoring is not engaged for this subproject.

13 Costs and Budget

139. A compensation unit rates for the BKK Subproject was prepared by PRC in consultation with concerned departments and PAPs and was approved by the Governor of Bolikhamxay Province. Compensation rate for one-floor wood house is LAK 843.286/m². The Decision of Provincial Governor, No. 147/GOV.BKK, dated 15 March 2022 on Compensation Rates for the BKK subproject is provided in **Attachment 6**.

140. Based on the IOL, estimation of the compensation and income restoration for affected assets such as houses, structures, shops, restaurant, trees, etc. was calculated based on the unit rate for compensation cost approved by the Governor of Bolikhamxay Province as referred above. Total amount for compensation payment and livelihood supports, is estimated to be **LAK506,619,682 (USD30,230)** (See summary in Table 13-1 below). The unit costs of compensation for affected land and assets have been established based on the principle of “Replacement Cost”. The compensation rates have been consulted with and agreed upon by PAPs. As per the advice from the WB, the second market survey was carried out during 2-10 September 2022 to estimate actual inflation of construction materials given that the prices of these materials have been notably increased while land and tree prices remain largely stable. The survey was conducted through the visit of local market (5 businesses/shops) to obtain actual/latest prices of main construction materials (such as cement, sand, gravel, wood and steel products, transport and other building materials). The survey result indicated that the inflation rate of construction materials in Bolikhamxay province (Pakxan City) was 20.43%. However, 10% of inflation rate was already added into the compensation rates approved by the Provincial Governor (No. 147/GOV.BKK, dated 15 March 2022) during the ARAP preparation and therefore only 10.43% additional inflation rate of construction materials was added into the compensation cost in this ARAP. Findings of the market survey during 2-10 September 2022 is provided in Attachment 12. Budget for ARAP implementation is covered by PMU. The compensation will be paid to the PAPs/PAHs via PAPs’ bank account to ensure transparency and security.

141. The above compensation amount does not include operational costs such as travel related costs, accommodation, monitoring and reporting, capacity building or training for implementing agencies and committees. The operational costs are covered in separate project management budget which include safeguard implementation, monitoring and consultants’ costs.

Table 13-1 Total Compensation Cost

No.	Type of Loss	# of HH	# of structures	Affected #	Unit	Original Unit Price (LAK) ⁷	Unit Price (LAK) ⁸	Compensation Amount (LAK)
1	Housing Structure	1	3	50.46				42,552,212
1.1	One story wooden house	1	1	50.46	m ²	766,624	843,286	42,552,212
2	Shop	2	2	54				29,548,692
2.1	Restaurant	2	2	54	m ²	462,000 -766,624	510,187-843,286	29,548,692
3	Secondary structures	21	24	566.38				406,146,596
3.1	Wooden hut	8	12	348.84	m ²	330,000-776,324	364,419-843,286	178,512,347
3.2	Porches of house and shop	3	4	147.44	m ²	407,000	447,700	66,008,888
3.3	Toilet	4	4	15.42	m ²	250,000 -1,298,000	363,000-1,427,800	12,554,476
3.4	Storage	1	1	31	m ²	330,000	364,419	11,296,989
3.5	Fish tank	1	1	13.68	m ²	352,000	387,200	5,296,896
3.6	Water tank	1	1		Tank	250,000	330,000	330,000
3.7	Electricity pole	1	1		Pole	700,000	847,000	847,000
3.8	Fish cage farm	2	13		cage	1,850,000	2,020,000	131,300,000
4	Tree	25		225				28,309,078
4.1	Fruit trees	15		187	tree	30,000-291,500	30,000-291,500	21,142,578

⁷ Original unit price with 10% inflation and approved by the Governor of Bolikhamxay Province (No. 147/GOV.BKX, dated 15 March 2022)

⁸ New unit price with 20.43% inflation rate of construction materials



No.	Type of Loss	# of HH	# of structures	Affected #	Unit	Original Unit Price (LAK) ⁷	Unit Price (LAK) ⁸	Compensation Amount (LAK)
4.2	Industrial trees	3		16	tree	159,500-247,500	159,500-247,500	3,396,500
4.3	Bamboo	7		22	tree	170,000-200,000	170,000-200,000	3,770,000
5	Livelihood restoration							5,360,000
5.1	Rice supports for affected HH with affected houses and shops/restaurants	1	1	3		16kg rice x person x 3month	16kg rice x person x 3month	3,360,000
5.2	Dismantlement and Transportation Costs for Affected Houses and Shops	1		1	LS	2,000,000	2,000,000	2,000,000
Total Compensation Cost (LAK)								506,619,682
Total Compensation Cost (USD)								30,230
<u>Exchange Rate BCEL on 2022-10-10, 1USD=LAK16,759</u>								

The actual compensation cost for loss of income will be calculated based on the actual number of days that the shops would need to be closed during the construction period multiplied with net profit per day derived from the monthly tax payment.

14 Attachments

- Attachment 1 List of PAHs and Inventory of Loss (IOL) Form
- Attachment 2 Village Social Economic Census Form
- Attachment 3 Provincial Agreement on Establishment of Resettlement and GRM Committees
- Attachment 4 Methodology of Unit Rate Assessment
- Attachment 5 Cut-Off-Date
- Attachment 6 Decision of Provincial Governor, No. 147/GOV.BKX, dated 15 March 2022 on Compensation Rates for the BKX Project
- Attachment 7 Focus Group Discussion Guideline and Consultation Results
- Attachment 8 Minutes of Consultation Meetings and List of Participants
- Attachment 9 Photos of Consultation Meetings
- Attachment 10 GRM Monitoring Form
- Attachment 11 Compensation Offset Line
- Attachment 12 Findings of the Market Survey during 2-10 September 2022