



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
The Nam Kor and Nam Mao River Improvement Project in
Muang Xay, Oudomxay Province: Lot 2

Resettlement Action Plan for Lot 2 (RAP2)
Volume 1 Main Report
(Final)

1 December 2022

Table of Contents

Abbreviations and Acronyms	vi
Definitions and Terms	viii
Executive Summary	1
1 Introduction	1
1.1 Purpose of this document	1
1.2 Project Information	1
1.3 Project Proponent	3
1.4 Project Objectives and Outcomes.....	4
2 Description of Component 1	4
2.1 Project Location.....	4
2.2 Sub-project Design and Area of Influence	5
2.3 Borrow Pits and Quarry Site	16
2.4 Excavated Soil Utilization Plan.....	17
2.5 Disposal of Surplus Soils	19
2.6 Construction Worker Camps.....	21
2.7 Construction Plan and Schedule	22
3 Potential Impacts Identified	23
3.1 General Impacts	23
3.2 Land and Displacement Impacts	26
3.3 Inventory of Loss	27
3.3.1 Affected Land.....	29
3.3.2 Affected Housing Structure	29
3.3.3 Affected Shop	30
3.3.4 Affected Secondary Structures	31
3.3.5 Affected Crops and Trees	33
3.3.6 Affected Public Public Utilities	33
3.4 Labor Influx and Core Labor Standards.....	34
3.5 Gender Considerations	34
4 Socio-Economic Information of Affected Villages.....	34
4.1 Population and Households.....	35
4.2 Ethnic Groups	35
4.3 Religions	36
4.4 Infrastructures and Facilities	37
4.5 Current School and Health Center Conditions	39
4.6 Level of Education in Affected Villages	41
4.7 Disease and Treatment Practices.....	43

4.8	Labor Migration	43
4.9	Land Use	43
4.10	Domestic Animal	44
4.11	Gross Income and Expense per Year	46
4.12	Cultural and Historical Infrastructure	47
4.13	Poverty Groups.....	47
4.14	Vulnerability Groups (VG).....	47
5	Socio-Economic Information of Affected Households.....	48
5.1	Population and Households.....	48
5.2	Ethnic Groups	49
5.3	Religions.....	50
5.4	Infrastructures and Facilities	51
5.5	Level of Education in Affected Villages	52
5.6	Land Use	54
5.7	Domestic Animal	54
5.8	Poverty Groups.....	56
5.9	Affected Vulnerability Groups (VG)	56
6	Legal Framework.....	59
7	Resettlement Strategy and Eligibility.....	60
7.1	Key Principles	60
7.1.1	Cash Compensation Approach.....	61
7.1.2	House and Asset Relocation	61
7.1.3	Additional Livelihood Restoration Measures.....	62
7.1.4	Compensation Principles.....	62
7.2	Compensation Categories.....	63
7.2.1	Permanent Loss	63
7.2.2	Temporary Loss.....	63
7.2.3	Temporary Disturbance.....	64
7.3	Eligibility Policy.....	65
7.3.1	Categories of Displaced Persons	65
7.3.2	Displaced Persons Eligibility Criteria	65
7.3.3	Eligibility Cut-Off Date	67
7.4	Entitlements	68
7.4.1	Rates for Compensation.....	69
7.4.2	Compensation Matrix.....	70
7.5	Resettlement Measures	74
7.6	Site Selection, Site Preparation, and Relocation.....	75
7.7	Housing, Infrastructure, and Social Services	76
7.8	Livelihood Restoration Measures	76
8	Implementation Arrangement	77

8.1	Government Agencies	77
8.2	Provincial Resettlement Committee (PRC)	78
8.3	District Resettlement Committee	79
8.4	Measures for Organizational Capacity Building	80
9	<i>Community Participation, Consultation and Information Disclosure</i>	81
9.1	Information Disclosure	81
9.2	Consultation Process	81
9.3	Consultation during preparation of RAP2	81
9.4	Consultation during implementation of RAP2	86
10	<i>Grievance Redress Procedures</i>	88
11	<i>Action Plan and Implementation Schedule</i>	91
12	<i>Monitoring and Evaluation</i>	94
13	<i>Compensation Budget.....</i>	96
14	<i>Attachments.....</i>	101

List of figures

Figure 2-1 Project Location.....	5
Figure 2-2 General Plan for the total works (Lot 1 and Lot 2 - US\$16.2M).....	8
Figure 2-3 Location of the Movable Weir and Sample.....	12
Figure 2-4 Location of the Road Improvement	12
Figure 2-5 Typical Cross Section of Road Improvement Section	13
Figure 2-6 Some Sample of Traffic Sign Plan	13
Figure 2-7 Detour Line of the Walk Path.....	14
Figure 2-8 Location of Construction Materials for both Lot 1 and Lot 2	17
Figure 2-9 Excavation Section	18
Figure 2-10 Embankment on the proposed dike.....	18
Figure 2-11 Embankment and Soil Covering.....	19
Figure 2-12 Location of Unusable Soil Disposal Sites	21
Figure 2-13 Location of Worker Camps	22
Figure 3-1 Location of Sensitive Areas.....	25
Figure 3-2 Detour Line of the Walk Path.....	26
Figure 9-1 GRM Procedure.....	90

List of Tables

Table 2-1 Scope of works to address flooding in Muang Xay (Lot 1 and Lot 2).....	6
Table 2-2 Section for the Dike and Riverbank-protection	10
Table 2-3 Design Concept of Riverside Parks.....	11
Table 2-4 List of Construction Material.....	16
Table 2-5 Quantity of Excavated Soil.....	17
Table 2-6 List of Disposal of Surplus Soils Sites	21
Table 2-7 – List of Workers’ Camp Sites	22

Table 2-8 Construction Plan Schedule.....	23
Table 3-1 Summary of all Losses for Lot 2.....	28
Table 3-2 Summary of Affected Land	29
Table 3-3 Summary of Affected Housing Structures.....	30
Table 3-4 Summary of Affected Shop/Restaurant.....	30
Table 3-5 Affected Secondary Structures	32
Table 3-6 Summary of affected Trees.....	33
Table 3-7 Affected Public Utilities.....	33
Table 4-1 Number of Households and Population in Project Affected Villages	35
Table 4-2 Ethnic Groups in Project Affected Villages	36
Table 4-3 Religions in Project Affected Villages	36
Table 4-4 Abbreviations of Infrastructure and Facilities in the Villages	37
Table 4-5 Infrastructure and Facilities in Project Affected Villages	38
Table 4-6 Number of School and Health Center in Project Affected Villages.....	40
Table 4-7 Distances from Each Village to School and Health Center/Hospitals.....	41
Table 4-8 Level of Education in Affected Villages (Persons).....	42
Table 4-9 Land Use in Project Affected Villages	43
Table 4-10 Domestic Animals in Project Affected Villages	45
Table 4-11 Gross Income and Expense per Year of Project Affected Households	46
Table 5-1 Number of Project Affected Households and People.....	48
Table 5-2 Number of Households and People with Affected Housing Structures	49
Table 5-3 Number of Households and People with Affected Shops/Restaurants.....	49
Table 5-4 Ethnic Groups of Project Affected Households	50
Table 5-5 Religions of Project Affected Household.....	50
Table 5-6 Abbreviations of Infrastructure and Facilities in the Villages	51
Table 5-7 Summary of Infrastructure and Facility of Project Affected Households	52
Table 5-8 Level of Education of Affected Households (Persons)	53
Table 5-9 Land Use of Project Affected Households	54
Table 5-10 Domestic Animal of Project Affected Households	55
Table 5-11 Affected Poor Households.....	56
Table 5-12 Losses and Compensation Costs of Affected Poor HHs	56
Table 5-13 Affected Vulnerable Households	56
Table 5-13 Losses and Compensation Costs of Affected Vulnerable Households.....	58
Table 7-1 Entitlement Matrix	70
Table 9-1 Locations and Participants of Consultation Meetings	82
Table 9-2 Number of Participants in May 2020	82
Table 9-3 Summary Results of Consultation Meetings during Nov 2019-March 2021.....	83
Table 9-4 Future Consultations	86
Table 10-1 GRM Contact Persons	91
Table 11-1 RAP2 Implementation Schedule.....	91
Table 13-1 Total Compensation Budget	98

Abbreviations and Acronyms

ADRIF	Asia Disaster Resilience Insurance Fund
AP	Affected People
ARAP1	Abbreviated Resettlement Action Plan for Lot 1 Activities
CBO	Community Based Organizations
COI	Corridor of Impact
C&R	Compensation and Resettlement
CSO	Civil Society Organizations
DDMCC	Department of Disaster Management and Climate Change
DIA	Designated Implementing Agency
DESIA	Department of Environment and Social Impact Assessment
DMH	Department of Meteorology and Hydrology
DMS	Detail 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
EGEP	Ethnic Group Engagement Plan
EGDP	Ethnic Group Development Plan
EMDP	Ethnic Minority 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
FPICP	Free, Prior and Informed Consultation Process
GBV	Gender-Based Violence
GoL	Government of Lao PDR
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
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	Non-Government Organization
NPA	Non-Profit Association
NRA	National Regulatory Authority
OP/BP	World Bank Operational Policies
PAH	Project Affected Households
PAP	Project Affected Persons
PAV	Project Affected Village
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
Pop.	Population
PRC	Provincial Resettlement Committee
PIU	Project Implementation Unit
PRO	Project Resettlement Office
PTI	Public Works and Transport Institute
RAP2	Resettlement Action Plan for Lot 2 Activities
RCS	Replacement Cost Study
RoI	Region of Influence
RP	Resettlement Policy
RPF	Resettlement Policy Framework
RSS	Regional Safeguards Secretariat
SEA-DRM	Southeast Asia Disaster Risk Management Project for Lao PDR
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SIA	social impact assessment
UXO	Unexploded Ordinance
VRS	Village Resettlement Sub-committees
VAC	Violence Against Children
WB	World Bank
WBG	World Bank Group

Definitions and Terms

- **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 Resettlement Action Plan (RAP). 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** - refers to 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 Persons (PAP) or Households (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/or 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-** is the 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 with low incomes and with dependents to take care, 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

Lao PDR is frequently impacted by flood which causes extensive damage to properties and impacts people life. Between 1991 and 2013, on average, 200,000 people per year were affected by various floods, which pose a serious threat to wellbeing life and socio-economic development in Lao PDR. The Muang Xay City also had been highly damaged by serious flood in 2008, 2013 and 2017. Therefore, the Government of Lao PDR is implementing the Lao PDR Southeast Asia Disaster Risk Management Project. The South East Asia Disaster Risk Management Project for Lao PDR (Lao-DRM or the Project) 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 PDR. The Project was approved on 6 July 2017 and became effective on 11 October, 2017, with a commitment amount of US\$30 million.

The Project consists of 5 components. This Resettlement Action Plan (RAP2) of Component 1: Integrated Urban Flood Risk Management in Muang Xay, Oudomxay (ODX) Province (Lot 2) (hereafter ‘the Project’) has been prepared by the Department of Water Ways (DOW) for the Ministry of Public Works and Transport (MPTW) of the Lao People’s Democratic Republic (Lao PDR). This RAP2 covers the project activities under the Lot 2 of the Sub-project that will be implemented in Oudomxay province which includes river works (dike and riverbank protection), weir, riverside parks, and riverside road, drainage and flap gates in Muang Xay, the provincial town of Oudomxay province.

Objective of the Resettlement Action Plan

The objectives of the RAP2 are to: (i) serve as a binding document to ensure a fair and disclosed process for participation, identification and mitigation of to 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 Waterways 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 RAP2.

The RAP2 identifies measures to ensure that APs are, (i) informed about, and consulted on, the proposed project and agree in principle with the Project; (ii) informed about their options and rights pertaining to involuntary resettlement impacts; (iii) consulted on, offered choices among, and provided with suitable compensation and/or resettlement alternatives; and (iv) provided prompt and effective compensation at full replacement cost for losses of assets attributable directly to the Project.

Scope of Land Acquisition and Resettlement Impacts

With a Project Corridor of Impacts (COIs) identified at 30 m (or 15 meters from the river centerline), it is determined that 256 households (1,470 PAPs, including 726 females) in ten villages would be affected by various forms of asset losses such as land acquisition, household resettlement and livelihood and income losses from the key project activities under the Lot 2 project activities (12.5 million US\$) (Table 2 below). The Inventory of Losses (IOL) has been conducted within the offset line ranging from 1m to 150m from the construction line (riverbank

line) in ten villages. The Lot 2 project activities will require acquisition of **109,268m²** of private-owned land. This includes 8,482m² (78 PAHs) of residential land, 21,407m² (10 PAHs) of paddy field land and 79,380m² of garden land. The data shows that there are 46 housing structures with 3,316m² (total of 40 PAHs); 10 shops/restaurants with 1,101m² (7 PAHs); 170 secondary structures with **5,152m², 520m (fence) and 21 (poles)**; and **5,097 trees** will be affected by the Lot 2 project activities (See table 1 below). The estimated total cost for compensation and income restoration is at **LAK24,294,831,736 (USD1,449,659)** for compensation and income restoration as summarized in Table 13-1 below. This includes compensation for (i) affected land; (ii) affected housing structures; (iii) affected shops and restaurants; (iv) affected secondary structures; (v) affected crops and trees; (vi) dismantlement and transportation, and livelihood restoration assistances; and (vi) relocation and re-installation of public utilities. The compensation for PAHs will be paid to the PAPs/PAHs via PAPs' bank account to ensure transparency and security. Relocation and reconstruction of the public infrastructure and utilities will be undertaken through separate arrangements and agreements. These arrangements will be made between the PMU and respective government agencies and utility owners in accordance with government's regulations.

Relocation and reconstruction of the communal and public infrastructure and utilities will be undertaken through a separate arrangement and agreements to be made between the PMU and respective government agencies and utility owners. Compensation for affected infrastructures that are owned by government will be made in accordance with government regulation using government budget. Such compensation will be agreed upon and arranged in a manner that would not affect the overall construction progress of the subproject. Since compensation for government owned works and utilities will be carried out in accordance with government's regulations, it is not described in this RAP2 which is for people affected by the subproject.

Impacts on Land and Assets

Within the ten affected villages, there is an appropriate **109,268m²** of private-owned land. This includes 8,482m² (78 PAHs) of residential land, 21,407m² (10 PAHs) of paddy field land and 79,380m² of garden land. The data shows that there are 46 housing structures with 3,316m² (total of 40 PAHs); 10 shops/restaurants with 1,101m² (7 PAHs); 170 secondary structures with **5,152m², 520m (fence) and 21 (poles)**; and 5,097 trees will be affected by the Lot 2 project activities. (See table 1 below).

Table 1 Summary of potential impacts on assets of 256 PAHs

No.	Type of Loss	# of PAH	# of Affected Structure	Affected #	Unit
1	Land	157		109,268	
1.1	Residential land	78		8,482	m ²
1.2	Paddy land	10		21,407	m ²
1.3	Garden land	69		79,380	m ²
2	Housing Structures	40	46	3,316	m ²
2.1	Two-story house		10	850	m ²

No.	Type of Loss	# of PAH	# of Affected Structure	Affected #	Unit
2.2	One-story house (wooden and concrete)		36	2,467	m ²
3	Shops and Restaurants	7	10	1,101	m²
3.1	Shops and Restaurants	7	10	1,101	m ²
4	Secondary Structures	157	170	5,152m²+520m (fence)+21(poles)	
4.1	Kitchen and stove	27	28	745	m ²
4.2	Bathroom/toilet	31	32	257	m ²
4.3	Porch of house/shop, balcony & window	29	34	1,052	m ²
4.4	Huts	9	10	306	m ²
4.5	Garage and storage	9	10	1,011	m ²
4.6	Animal coops (pig, chicken, duck and bird)	22	26	1,543	m ²
4.7	Concrete yard and soil filled	4	4	194	m ²
4.8	Water and flog/fish tanks	4	4	43	m ²
4.9	Wall/fence	19	19	520	m ²
4.10	House&electricity pole	3	3	21	pole
5	Tree	354		5,097	
5.1	Fruit tree	198		4,241	tree
5.2	Industrial tree	48		440	tree
5.3	Bamboo and grass	110		416	tree

Table 2 Number of Project Affected Households and Population

No.	Village Name	Total # of Affected HH	Total Pop.	Female
1	B. Nasao	10	50	28
2	B. Namy	26	146	74
3	B. Nalao	16	112	57
4	B. Nawannoy	68	410	186
5	B. Thin	30	169	90
6	B. Vanghai	5	27	13
7	B. Pasak	25	145	61
8	B. Monetai	29	139	70
9	B. Longkordeua	46	267	144
10	B. Cheng	1	5	3
	Grant Total	256	1.470	726

There are 4 poor PAHs with 22 PAPs (8 females) will be directly affected by the Lot 2 project activities. This includes 2 Lao Tai (non IP) PAHs (24 PAPs including 11 females) and 2 Khmu (IP) PAHs (15 PAPs including 5 females). Their losses include residential land, garden land, crops and fruit trees. Please refer to Table 5-11 and Table 5-12 for more details.

Also, the Lot 2 will directly affect 5 female headed households (27 people including 14 females) in three villages. This includes 3 Lao Tai (non IP) PAHs (17 PAPs including 10 females) and 2 Khmu (IP) PAHs (10 PAPs including 4 females). Their losses will include chicken coop, residential land, garden lands, and crops/fruit trees. Please refer to Table 5-13 and Table 5-14 for more details.

Measures to Minimize Impacts and Resettlement

Efforts have been made to minimize the resettlement impacts by analysis of design options to reduce the width of the COIs. In addition, and as part of the project's resettlement policy, PAHs will be provided with sufficient time and support to resettle and rebuild their houses and shops prior to the commencement of civil works. The project will ensure that PAPs are able to continue with access to their houses and their present livelihood activities during project implementation to degree possible. Impacts on their livelihood and business will be also minimized through close and effective construct management and work supervision by PMU. PMU's supervision consultant will ensure that the updated ESMP is effectively implemented and in full compliance and that works are completed as per agreed workplan. In the event if the construction work cannot be completed as per approved workplan which restrict PAHs/PAPs' access to their houses and their daily livelihood activities and income generation activities, PMU and PIU will timely work with contractor(s) to consult with affected households to agree on additional measures or supports that PMU will provide to affected household. Additional measures/support will be timely provided in a manner that facilitates restoration of livelihoods activities of the affected households, including income generation activities, and ensure the livelihoods of the affected peoples are not worse off as a result of the delayed construction. Additional measures that may be carried out (if any), implementation plan and implementation progress and outcome will be reported in the PMU's safeguard progress report to be submitted to the WB on a quarterly basis. Impacts, losses, and damage associated with civil work and caused by the contractor will be fixed and restored or compensated by the contractor. This will be included in the work contract.

Legal and Policy Framework

This RAP2 for ODX project 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. Wherever, gaps and discrepancies exist between the WB OP. 4.12 and the GoL policies, the former (the WB policy) will be prevailing.

The individuals, households and businesses that will be likely affected by this subproject have been surveyed, and the compensation costs endorsed by Governor of Oudomxay Province (the

Decision of Provincial Governor, No. 039/GOV.ODX, dated 9 January 2020) for affected building/construction, trees and land are based on the “Replacement Cost” principle as per WB’s Operational Policy on Involuntary Resettlement (OP 4.12). The unit costs of compensation for affected land, assets and trees have been agreed upon with the PAPs through consultation meetings.

Implementation Arrangements

The PMU-MPWT DOW has the lead responsibility for the ODX projects and implementation of the RAP2. The MPWT DOW in association with the Provincial Department of PWT Waterway Sector Project Implementation Unit (PIU) in the provinces of Oudomxay and PTI/EDPD has developed RAP2 according to the policies and procedures articulated in the RPF, relevant Lao PDR national laws and decrees, and the World Bank safeguards policy (OP/BP 4.12). In addition to MPWT DOW, a number of other government departments will play instrumental roles in the design, construction and operation of the project. Pursuant to the active legislation, MONRE is responsible for environmental issues. MPI is responsible for legal matters regarding land ownership and expropriation.

The PMU-MPWT DOW with the technical assistance and support from EDPD/PTI are responsible for supervising and providing implementation support for safeguards, including the RAP2. Compensation will be reviewed and managed or 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, and the VRS will facilitate compensation and consultation with the project affected people and their households and manage the grievance redress mechanism at the village level. The VRS will be established within villages where land acquisition and resettlement impact exist.

Monitoring

The monitoring and evaluation consist of two parts: the internal resettlement monitoring and the external resettlement monitoring and evaluation. The PMU will carry out internal monitoring of the implementation. Quarterly internal monitoring reports will be submitted to the DOW, PTI/EDPD and WB. The DOW will engage an independent entity or consultant to do external monitoring of the project on a semi-annual basis. 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 planning of compensation and RAP2 is prepared based on the data collection, analysis and establishment of the inventory of losses under the Lot 2 project activities (US\$12.5M). The results of these gives a preliminary estimate at **LAK24,294,831,736 (USD1,449,659)** for compensation and income restoration. This includes compensation for (i) affected land; (ii) affected housing structures; (iii) affected shops and restaurants; (iv) affected secondary

structures; (v) affected crops and trees; (vi) dismantlement and transportation, and livelihood restoration assistances; and (vi) relocation and re-installation of public utilities. Budget for RAP2 implementation is covered by PMU. The compensation for PAHs will be paid to the PAPs/PAHs via PAPs' bank account to ensure transparency and security. Relocation and reconstruction of the public infrastructure and utilities will be undertaken through separate arrangements and agreements. These arrangements will be made between the PMU and respective government agencies and utility owners in accordance with government's regulations.

The unit costs of compensation for affected land and assets approved by the Provincial Governor (1105/GOV.ODX, dated 15 September 2020) 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 Oudomxay province (M. Xay) was 30.897%. However, 20% of inflation rate was already added into the compensation rates approved by the Provincial Governor (1105/GOV.ODX, dated 15 September 2020) during the resettlement planning process and therefore only 10.897% additional inflation rate of construction materials was added into the compensation cost in this RAP2. Findings of the market survey are provided in Attachment 15.

1 Introduction

1.1 Purpose of this document

1. This Resettlement Action Plan for ODXLot 2 project activities (RAP2) of the Southeast Asia Disaster Risk Management Project for Lao PDR or SEA-DRM (hereafter ‘the Project’) has been prepared by the Department of Water Ways (DOW) for the Ministry of Public Works and Transport (MPTW) of the Lao People’s Democratic Republic (Lao PDR). This RAP2 covers Lot 2 project activities under Component 1 of the project that will be implemented in Muang Xay, Oudomxay Province. This RAP2 (hereinafter referred to RAP2) has been prepared in line with the national regulatory requirements as well as meeting the World Bank’s Safeguards Policy on Involuntary Resettlement (OP 4/12).
2. This RAP2 complies with the World Bank’s OP 4.12 on Involuntary Resettlement, Decree 84 (2016) of the Lao Government (GOL) on Compensation and Resettlement for People Affected by Development Projects, and the Decree on Environmental Impact Assessment (2019). Where gaps and discrepancies between World Bank’s OP 4.12 and the GOL legislations identified in this RAP2, the former will prevail.
3. The objectives of the RAP2 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 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 RAP2.
4. The RAP2 identifies measures to ensure that APs are, (i) informed about, and consulted on, the proposed project and agree in principle with the Project; (ii) informed about their options and rights pertaining to involuntary resettlement impacts; (iii) consulted on, offered choices among, and provided with suitable compensation and/or resettlement alternatives; and (iv) provided prompt and effective compensation at full replacement cost for loss of assets attributable directly to the Project.
5. Scope of RAP2: RAP2 covers potential social impacts, land acquisition, household resettlement and livelihood and income losses anticipated from the Lot 2 project activities under Component 1 of the Lao DRM project. These include profile improvement, dike, riverbank protection, weir and riverside parks in Muang Xay, the provincial town of Oudomxay Province. Lot 2 project activities are planned to be implemented from February 2022. RAP2 also provides impact mitigation measures and compensation required to be provided PAPs and PAHs for their assets, land, livelihood and income affected and lost in Cheng Villages in Muang Xay Town as a result of project implementation.

1.2 Project Information

6. Lao PDR is frequently impacted by flood which causes extensive damage to properties and impacts people life. Between 1991 and 2013, on average, 200,000 people per year were affected by various floods, which pose a serious threat to wellbeing life and socio-economic development

in Lao PDR. The Muang Xay City also had been highly damaged by serious flood in 2008, 2013 and 2017.

7. Therefore, the Government of Lao PDR is implementing the Lao PDR Southeast Asia Disaster Risk Management Project. The South East Asia Disaster Risk Management Project for Lao PDR (Lao-DRM or the Project) 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 PDR. The Project was approved on 6 July 2017 and became effective on 11 October 2017, with a commitment amount of US\$30 million.

8. The Project consists of 5 components:

- a) Component 1: Urban Flood Risk Management - This component includes a set of structural and non-structural investments designed to strengthen flood resilience in Oudomxay Province, particularly, for the provincial capital of Muang Xay and areas in proximity. Urban flood risk management infrastructure investments proposed for Oudomxay provincial capital and proximity include financing for riverbank protection, dike, drainage canal, flood gates, weirs and riverside parks. Such infrastructure will protect the urban core from flash floods that occur regularly during the rainy season. The designated implementing agency (DIA) for this sub-project will be the DOW under the MPWT.
- b) Component 2: Hydromet Modernization and Disaster Risk Management Systems - This component includes financing for capacity building measures to enhance and strengthen forecasting, early warning and disaster risk management (DRM) systems in the Ministry of Natural Resources and Environment (MONRE). This component is further bifurcated into two sub-components including: (i) weather forecasting and early warning systems to strengthen the Department of Meteorology and Hydrology (DMH) capacity to predict floods and enhance early warning communication systems; and (ii) DRM through enhanced regulatory capacity in the Department of Disaster Management and Climate Change (DDMCC).
- c) Component 3: Disaster Risk Financing and Insurance - This component includes technical assistance to increase financial resilience of Lao PDR against natural disaster and climate risks in terms of the Government of Lao PDR's (GOL) capacity to meet post-disaster funding needs. This component is further segregated into three sub-components including: (i) national-level disaster risk financing technical assistance for the development of a national financial protection strategy building on a combination of national and regional disaster risk financing instruments. The strategy would build on existing GOL capacity and previous WB support to the Ministry of Finance (MOF) and Ministry of Planning and Investment (MPI); (ii) establishment of the Asia Disaster Resilience Insurance Fund (ADRIF) to support activities for the establishment of a regional disaster risk pooling mechanism; and (iii) financing of the GOL contribution to join the ADRIF.
- d) Component 4: Project Management - This component will support management and implementation of the project. It will include technical and fiduciary staff that will be

seconded to the Project Management Unit (PMU) from relevant implementing departments. The project management component will finance institutional support and capacity development for implementation and fiduciary arrangements, including procurement, financial management, management of safeguards issues, internal and external auditing, and the establishment of the project monitoring, evaluation and reporting systems.

- e) Component 5: Contingency Emergency Response - This “zero component” allows rapid reallocation of project proceeds for emergency recovery and reconstruction support in the event of a declared disaster. This component would finance disbursements against a positive list of critical goods and/or the procurement of specific works, goods, services and operation costs required for emergency recovery. An Emergency Response Operational Manual would be developed for this component detailing financial management, procurement, safeguards and any other necessary implementation arrangements to be submitted to and accepted by the WBG prior to the disbursement of project funds.

1.3 Project Proponent

9. The GOL through the MPWT is the Project proponent for Component 1 of the Project. The project will be implemented through existing GOL structures of the line ministries. Component 1 will be implemented by DOW within MPWT, Component 2 by DMH within MONRE, Component 3 and 5 by SRD within MOF, and Component 4 will be overseen by DOP in MPI. National DRFI Working Group has been established, chaired by MOF.

10. MPI is responsible for overall coordination of the project. MPI will procure specialists to provide expertise and support related to procurement, FM, safeguards compliance, and project management (M&E) related to the overall project. Component-specific works and consultants will be procured by DOW, DMH, and MOF

11. 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, An Implementation Unit (PIU) is established in the Water Ways Sector of the Provincial Department of Public Works and Transport (DPWT) in Oudomxay province for day-to-day sub-project management and work supervision. The PIU/DOW is partnered with and supported by Environment and Disaster Prevention Division (EDPD) under the Public Work and Transport (PTI) under MPWT to ensure RAP2 as well as associated safeguard instruments including Environmental and Social Management Plan (ESMP) and Ethnic Group Engagement Plan (EGEP) are prepared, effectively implemented and monitored under the Project in accordance with the national legislations and World Bank Policy 4.12.

12. The contact details for the Project proponent of Component 1 are 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 Project Objectives and Outcomes

13. The Project Development Objective (PDO) is to reduce the impacts of 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.

14. The project will directly provide benefit to communities in the urban area of Muang Xay, which has a population of 98,000, with 50 percent estimated to be female. End users of improved hydro meteorological services and weather information include particularly the population of the Nam Ou River Basin, comprising the Oudomxay (307,622), Luang Prabang (431,889), and Phongsali Provinces (177,989) also benefit from the project. National- and local-level project stakeholders will benefit from capacity and institution-building activities. Indirect project beneficiaries include (a) travelers passing through Muang Xay, as the most important traffic junction in northern Lao PDR; (b) the country's population benefitting from more reliable, actionable, and better communicated weather, climate, hydrological, and early warning information; and (c) the wider population of Lao PDR benefitting from improved institutional capacities for disaster risk finance and integration of DRM into sector strategies

15. The achievement of the PDO will be measured through the following key indicators:

- (i) Percentage of urban population in Muang Xay protected from floods, of which are female (percentage).
- (ii) Satisfaction of weather information end-users increased (Yes/No).
- (iii) Lao PDR has information and capacity to access sovereign disaster risk insurance (Yes/No).

2 Description of Component 1

2.1 Project Location

16. The Oudomxay Province is located in the northwest of Lao PDR and is bordered with China to the north as well as by five other Lao provinces, the Phongsaly Province to the northeast, the Luang Prabang Province to the east and southeast, the Xayabouly Province to the south and southwest, the Bokeo Province to the west, and the Luang Namtha Province to the northwest. The Oudomxay Province consists of seven districts and 471 villages and covers an area of 15,370 km²

17. The Muang Xay City, provincial capital, is situated in the northern part of the province and covers an official area of 399 km² although the majority of the population live within an area of 72.5 km². The Muang Xay City is situated and surrounded by scenic mountains in the Nam Kor River Basin. The town lies in the Muang Xay which borders the Namo District to the northwest, the La District to the northeast, the Nambak District of the Luang Prabang Province to the east and the Beng, Nga and Nalae Districts of the Luang Namtha Province to the west.

18. This project area covers the Nam Kor River and its tributaries in the Oudomxay Province. Accordingly, it is required to understand the characteristics of the Nam Kor River Basin. In this section, therefore, general conditions of the project area including geographical, hydrological,

and socioeconomic conditions of the Nam Kor River Basin and flood characteristics are presented, especially within the Muang Xay City (Figure 2-1).



Figure 2-1 Project Location

2.2 Sub-project Design and Area of Influence

19. Based on the detailed design of the works under ODX: Lot 2 it will include the following: (i) River works for river profile improvement comprising excavation and construction of dike and river bank-protection; (ii) Construction and/or rehabilitation of two Riverside Parks including improvement of existing access roads; (iii) Construction of a movable weir in Nam Kor downstream of Park 2, and (iv) Construction and/or rehabilitation of 17 small flap gates for urban drainage improvement. To mitigate flood damage of T-20-year return period flood, the feasibility study recommended for a total investment of about US\$44 million (Packages 1 and 2) for addressing the flood issues in Muang Xay. However, given limited fund available, only Package 1 (valued about US\$16.2 million with additional budget of US\$7 million from WB fund in March 2020) will be implemented (2 Lots) under the Project and scope of works is identified in Table 2-1 and Figure 2-2. The Project Areas of Influence will cover: (1) 6.42 km of Nam Kor River (from Nam Kor Bridge 5 to Nam Kor Bridge 4 and river bank with more extensive works on the right side including the existing Park 2 and a small riverside road (approximately 950 m), the new areas for development of Park 1 as well as the downstream area of the Nam Kor movable weir down to Muang La; (2) 3.38 km of Nam Moa River and the right bank from Nam Mao Bridge to three rivers junction; (3) areas for the installation of 17 small flap gates in city areas along the 6.42km section of Nam Kor River and the 3.38 km section of Nam Mao River (Figure 2-2); and (4) spoil disposal sites, borrow pits, workers camps, etc.

20. **Lot 1 project activities.** The activities under Lot 1 as described in Table 2-1 are located on the right side of the Nam Kor River starting from the Nam Kor Bridge 2 to the Nam Kor Bridge 4 with a total length of 1.32km (Refer to Table 2-1 and Table 2-2). The Lot 1 works occur in villages of Ban Jeng and Ban Longkordeua in the urban area of Muang Xay (refer to Figure 2-2

below). The corridor of impacts for Lot 1 was prepared and adjusted to minimize impacts particularly on resettlement and compensation cost and the ARAP including EGEP and ESMP for Lot 1 has been submitted to WB and disclosed on the MPWT website on 10 December 2020.

21. Lot 2 project activities. The activities under Lot 2 as described in Table 2-1, Table 2-2 and Figure 2-2 are located on Nam Mao and Nam Kor Rivers. On the Nam Mao River the works are located on the right side of the Nam Mao River (3.38 km starting from the Nam Mao Bridge to 3 Rivers Junction) while on the Nam Kor River the works are located on both sides of the Nam Kor River (3.46km on the left side starting from the Nam Kor bridge 5 upstream to Nam Kor bridge 4 downstream and on the right side starting from the 3 Rivers Junction to Nam Kor bridge 2). The Lot 2 works occur in ten villages including of including B. Nasao, B. Namy, B. Nalao, B. Navannoy, B. Thin, B. Vanghai, B. Pasak, B. Montai, B. Longkordeau and B. Jeng. The corridor of impacts for Lot 2 was prepared and adjusted to minimize impacts particularly on resettlement and compensation.

Table 2-1 Scope of works to address flooding in Muang Xay (Lot 1 and Lot 2)

Scope of Works	COI	Budget (USD)
<u>Lot 1 project activities consists of 5 works as follows:</u> i) River works: Diking, riverbank-protection, and excavation on the river bed and for channel widening: - Nam Kor River (L=1.32km): Right side from Nam Kor Bridge 2 to Nam Kor Bridge 4 (calculated along the centerline of the river channel) ii) Riverside Park 2 (1.18ha): Rehabilitation and upgrading of Park 2 iii) Riverside Road (L=950m): Road improvement near the Riverside Park 2 iv) Nam Kor Movable Weir (1 weir): H=1.5m and L=40.22m located in Nam Kor downstream of the Riverside Park 2 v) Drainage and Flap Gate (1 gate): Construction of one small flap gate to improve effectiveness of urban drainage.	Ranging from m to 30m identified from the river bank alignments. The Lot 1 works occur in two villages including Ban Jeng and Ban Longkordeua.	3.7M
<u>Lot 2 project activities consists of 4 works as follows:</u> i) River works: Dike, riverbank-protection, and excavation on the river bed and channel widening: - Nam Mao River (upstream): Right side =3.38km (from the Nam Mao Bridge to 3 Rivers Junction) - Nam Kor River (upstream): Left	Ranging from 1m to 150m identified from the river bank alignments. The Lot 1 works occur in 10 villages including B. Nasao, B. Namy, B.	12.5M

Scope of Works	COI	Budget (USD)
<p>side=3.46km (from the Nam Kor Bridge 5 upstream to Nam Kor Bridge 4 downstream)</p> <ul style="list-style-type: none"> - Nam Kor River: L=1.64 km, Right side (from the 3 Rivers Junction ~ Nam Kor Bridge 2) ii) Riverside Park 1 (1.3ha): Construction of new River Park 1 iii) Drainage and Flap Gate (16 gates): Construction of 16 small flap gates to improve effectiveness of urban drainage. 	<p>Nalao, B. Navannoy B. Thin, B. Vanghai, B. Pasak, B. Montai, B. Longkordeau and B. Jeng.</p>	
Total		US\$16.2M

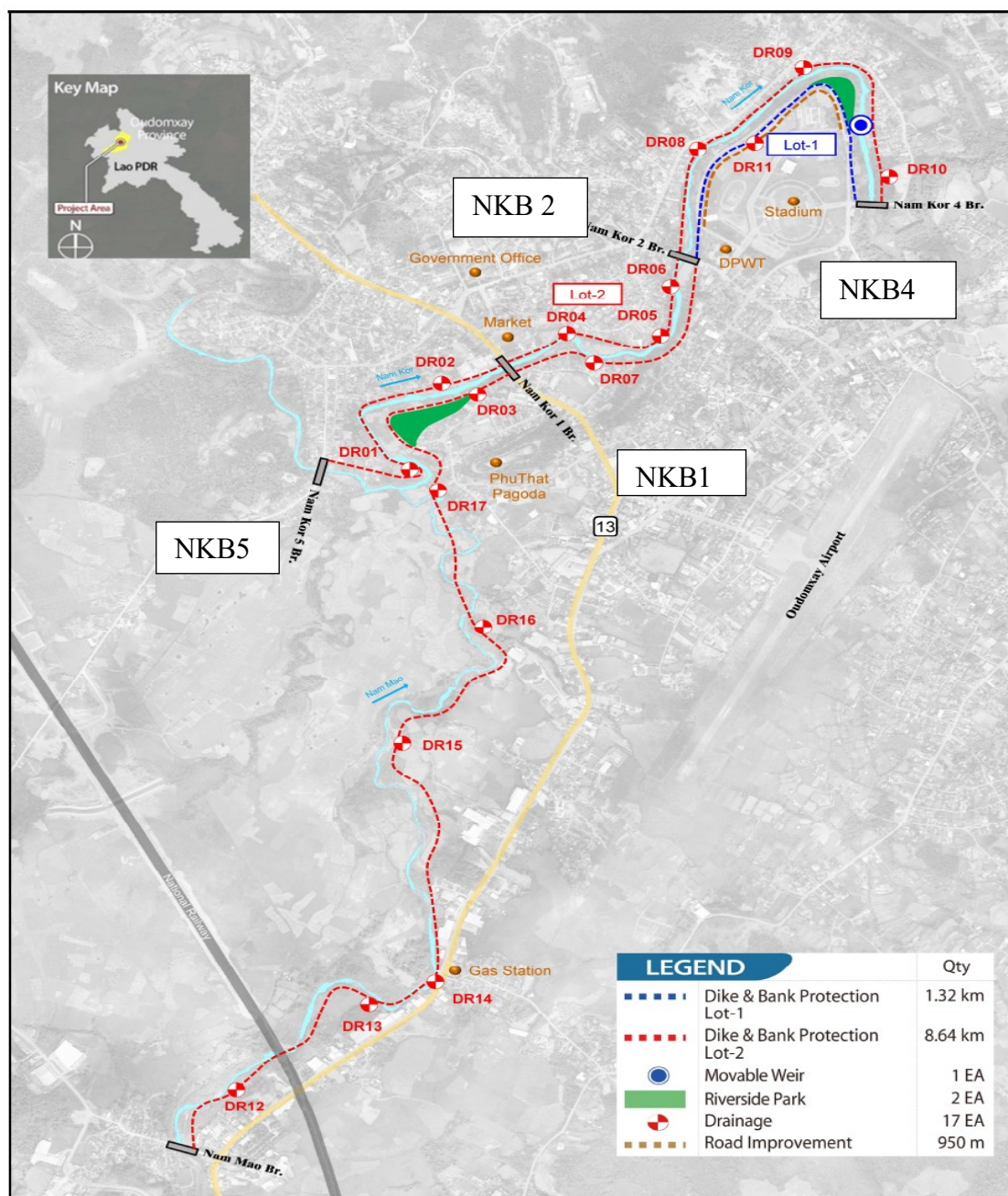


Figure 2-2 General Plan for the total works (Lot 1 and Lot 2 - US\$16.2M)

22. The riverworks design includes river profile improvement comprising widening, excavation/dredging, diking, and river bank-protection in selected sections. These activities have been planned for implementation in a way that minimizes the potential impacts on local transport and local residents as much as possible. Information on types and nature of the river works is briefly highlighted below while more details are provided in Attachment 1 of the updated ESMP.

a) River Profile Improvement

23. River profile improvement has been designed for improvement of river channel capacity through excavation on the river bed and for channel widening based on profile and cross-sectional plan. Excavated soil will go through soil investigation and laboratory test to check if it

is suitable for construction of the dike/embankment and/or for filling up in selected low land area. Unsuitable soils (spoil) will be transferred to the disposal area that have been identified and showed in Section 2.4.

b) Dike

24. The existing riverbank along the Project area will be elevated, and the design standards of similar project in VTC have been mainly employed for the flood embankment because there is no existing design standard for dike in Lao PDR. Details are as follows:

- The dimension of dike for this proposed project is determined in response to the probable flood with 20-year frequency, which the design discharge is 1,440 m³/s, and the range of the design water level high is from EL. 634.36 m to EL. 644.81 m in the Nam Kor River and from EL. 639.95 m to EL. 650.01 m in the Nam Mao River.
- The width of bank crest is planned from 5.0 m including 3.0 m walk path, and the freeboard of 0.5 m is employed with consideration of compensation, social impact, economic feasibility and surrounding conditions.
- Slope of the dike has been designed 1:1.5, 1:2.0 and 1:3.0 at the riverside and 1:2.0 at the landside of the dike, and the sodding has been planned for the slope at landside to prevent soil erosion from rainfall during the rainy season.
- Meanwhile, the dike crest without walk path plan is to be sprayed by small rubble stone to prevent the surface from possible damages caused by the rainfall in the rainy season. In section of the walk path, brick pavement with good permeability was recommended; however, it will be reviewed in aspects of the project cost and maintenance in the next stage.

c) Riverbank-protection

25. The riverbank-protection consists of slope protection and toe protection aiming to protect the bottom part of the riverbank from scouring and erosion due to tractive force of flow. The length and location of the riverbank-protection have been decided considering hydraulic characteristics and the present status of bank erosion of the project site. At this stage, the Nam Kor River and Nam Mao River have been divided into semi-rapid flow section and meander section considering the hydraulic characteristics such as river morphology, flow velocity and tractive force. The riverbank-protection was also designed with consideration on these factors. Key design principles are as follow:

- For the riverbank-protection design, the rip-rap, environmental block and masonry structure have been proposed as the main methods taking into account the stability of the riverbank, flow capacity, economic feasibility, maintenance, social impact and eco-friendly.
- To be cost-effective and minimize potential impacts on local communities, specific methods will be selected for specific sites during the detailed design stage. However, main activities would comprise of the dumping rip-rap, masonry structure,

environmental concrete block and gabion box (see samples in Attachment 1 of the updated ESMP).

26. The detailed design for the embankment and bank protection along the Nam Kor and Nam Mao rivers with its length of 9.80 km (cover Lot 1 and Lot 2) was carried out with a focus on providing efficient flood and erosion mitigation measures. For establishment of design criteria and dimensions for the riverbank, the various design standards including rich experiences gained from similar projects previously performed in Lao PDR such as “Mekong River Integrated Management Project in Vientiane (2008~2013, EDCF)” were employed by the design team.

27. Major considerations adopted for riverbank design are as follows:

- Present conditions of existing riverbank along the Project area,
- Efficient protection of the Project area from flood and erosion hazards,
- Technical stability of proposed riverbank,
- Minimization of construction costs, social and environmental impacts,
- Availability of construction materials around the Project area,
- Maintenance and operation aspects of proposed riverbank, and
- Potential development of the Project area.

Table 2-2 Section for the Dike and Riverbank-protection

Lot	Riverside	Location	Length (km)
Lot 2	Left	Nam Kor Br. 5~ Nam Kor Br. 1	1.06
	Left	Nam Kor Br. 1 ~ Nam Kor Br. 2	0.86
	Left	Nam Kor Br. 2 ~ Opposite Side of Park 2	0.80
	Left	Opposite Side of Park 2 ~ Nam Kor Br. 4	0.74
	Right	3 Rivers Junction ~ Nam Kor Br. 1	0.76
	Right	Nam Kor Br. 1 ~ Nam Kor Br. 2	0.88
	Right	Nam Mao Br. ~ Gas Station	1.50
	Right	Gas Station~ 3 Rivers Junction	1.88
Lot 1	Right	Nam Kor Br. 2 ~ Nam Kor Br. 4	1.32
		Total	9.80

d) Riverside Parks

28. The main objectives of river parks are as follows:

- To promote the tourism business based on development of the riverside park and to improve life quality of local resident. Lao people may need an open space to improve the physical and emotional well-being and health. Therefore, it is important to set and develop appropriate riverine park areas to make provision for enough recreation.

- To secure water control stability as well as to promote tourism industry and to upgrade life quality of local resident by riverside park construction.
- To make an eco-friendly riverside park, this can inspire the city with energy. Ecological capacity was taken seriously to construct the park for connection of organic network of river and greens with open space and to construct diverse and energetic water friendly riverside space.

29. The location, design concept, spatial planning and master plan of river parks are summarized below while more details are provided in Attachment 1 of the updated ESMP.

- Park 1: RIVERSIDE PARK: 1.3 ha located on the right side of the Nam Kor River near by Na-Warnoy Village;
- Park 2: RIVERTERRACE PARK: 1.18 ha located on the right side of the Nam Kor River nearby Jeng Village.

Table 2-3 Design Concept of Riverside Parks

Park	Design Concept
Park 1: NAM KOR RIVERSIDE PARK	<ul style="list-style-type: none"> • The riverside park will provide a natural environment for urban people to rest. This concept design will be implemented for preventing the ecosystem from the environmental damage; • The Space composition of the Riverside Park is based on five themes: culture, leisure, pleasure, mature and nature; • This will be the water-friendly area or place for riverside events such as relaxation, prospect and activity; • It will be the key attraction of tourism industry in Oudomxay Province.
Park 2: NAM KOR RIVER TERRACE PARK	<ul style="list-style-type: none"> • This will be the open space with the terrace land in which small events and water friendly activity could be held; • We consider the continuity, diversity and vitality, and try to promote environmental working process; • The Space composition of the River terrace Park is based on three themes: culture, landscape, and nature; • The practical plan is set up in consideration of characteristic and environment of target place.

e) Movable Weir

30. Due to the limited budget, improvement of the concrete weir at the Nam Mao River proposed by the province is not included in the Project. However, installation of a new movable weir in Nam Kor downstream of the River Park 2 has been included in the Package 1 in connection with river profile improvement and dike construction.

31. The Nam Kor weir is located downstream of Park 2 and about 300 m upstream of Nam Kor Bridge 4 (Figure 2-3). Main objective of the movable weir is to secure water level for water friendly zone and leisure space for residents and people in connection with Riverside Park 2. Details on the proposed Nam Kor weir are provided in Attachment 1 of the updated ESMP.



Figure 2-3 Location of the Movable Weir and Sample

f) Road Improvement

32. The Project also includes the improvement of existing road (located along the Nam Kor Riverside Park 2) as a flood protection measure and to strengthens the connection between the downtown area and the river and performs the human traffic line role for a walk. The road improvement (with a length of 950m) will begin from the entry point to the new Stadium of Muang Xay to Riverside Park 2 (Figure 2-4).

33. The existing road to be improved is the dead-end road with unpaved and little traffic conditions, in addition the estimation of the future traffic demand performed in the preliminary design may have increase of traffic due to operation the road connection the downtown area and the river park. The existing one lane road will be improved to two lanes with 3.5 m wide (with shoulder) for each side and a ditch lining along the right sides of the road. Meanwhile, other elements such as sidewalk, median strip, and slow lane for motorbike have not been adopted for road cross section design (Figure 2-5).



Figure 2-4 Location of the Road Improvement

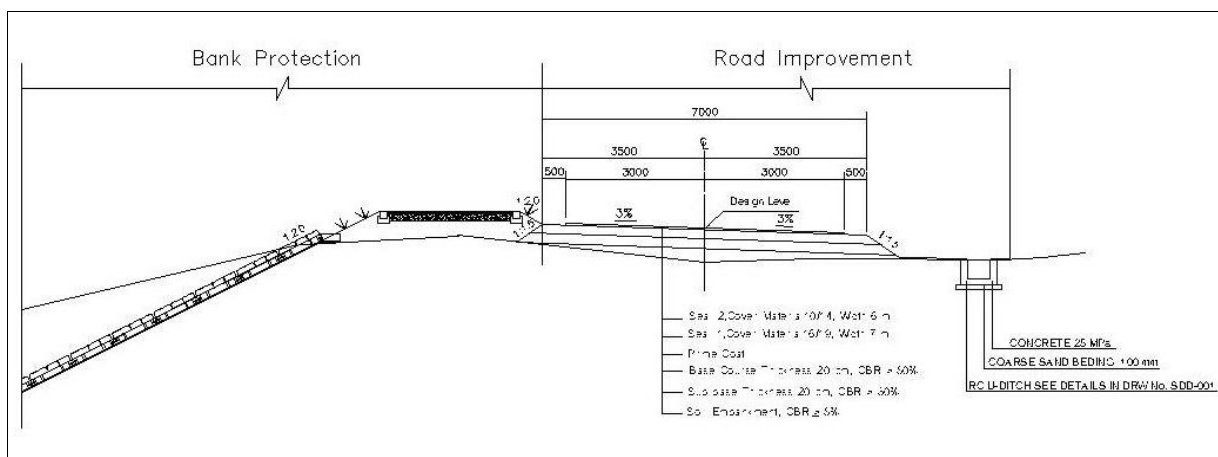


Figure 2-5 Typical Cross Section of Road Improvement Section

1. The double bituminous surface treatment (DBST) will be employed for the pavement of the road improvement section considering various conditions, which DBST is a common type of pavement surfacing construction that involves two applications of asphalt binder material and mineral aggregate. After completion, the various traffic signs will be installed to ensure safe and smooth traffic flow in the improvement road (see Figure 2-6).

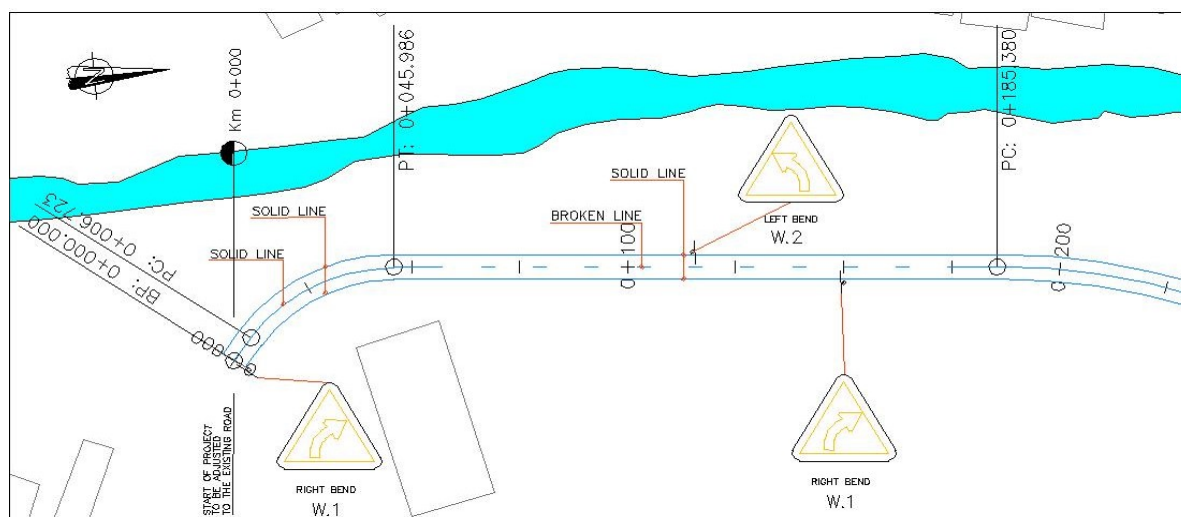


Figure 2-6 Some Sample of Traffic Sign Plan

g) Detour Line of the Walk Path

34. For the peoples' walking along the river, walk path will be installed along the right side of the Nam Kor River as agreed with DPWT of ODX Province. Most of the walk path has been designed to be installed on the dike, levee berm on the bank-protection in some areas. There are 32 local stupas located near the Project boundary (Figure 2-7). After consultation with local communities, it has been agreed not to remove the stupas but to install the walk path as a detour line across the local temple for connectivity (see yellow and green line in Figure 2-7).



Figure 2-7 Detour Line of the Walk Path

h) Urban Drainage Improvement

35. There are no existing drainage structures operating (including gate) in Nam Kor and Nam Mao as river sections flowing through the downtown (Muang Xay). As presented in the feasibility study and preliminary design, the number of drainage structures by catchment area, runoff coefficient and rainfall intensity were investigated to be 17 drainages in the Project area. Location of 17 new drainages to be installed in Muang Xay as part of Lot 1 and Lot 2 project activities are presented in Figure 2-2 with more details described in Attachment 1 of the updated ESMP. The frequency of design rainfall was adopted for 20 years frequency in consideration of flood safety. The flow velocity was 2.5m/s, and it was estimated that 12 hours of rainfall was flowed out. One small flap gate under the Lot 1 and 16 flap gates under the Lot 2 will be

installed (pipe culvert D = 1,000 mm, Fiberglass Reinforced Plastic (FRP) Flap gate body and stainless steel frame).

i) Non-structural Measures

36. Based on the TOR for the design consulting services (ISAN), it is expected that the non-structural investment will include, but not limited to, recommendations including bidding document, for the water-sensitive urban design and landscape architecture interventions to complement the proposed structural investments for flood risk management in Muang Xay, with an aim to maximize opportunities for generating environmental and socio-economic co-benefits. It is expected that key outputs from this TA will include:

- A qualitative assessment of Muang Xay's urban elements and opportunities for sustainable/green urban planning, and increasing socio-economic opportunities (leveraging tourism sites, cultural heritage sites, etc.), using past reports and/or government plans, site observations, consultation workshops, interviews with relevant government counterparts and community stakeholders (including women's organizations, special interest community groups, and ethnic groups if present). This rapid assessment should cover urban elements that are important to Muang Xay, such as aesthetics, cultural heritage, tourism development potential, and accessibility (including universal access).
- A Landscape Concept Design for Muang Xay aiming to improve the environment and green view of the city through landscape design interventions that are context-specific, evidence-based, and developed in consultation with stakeholders. The proposed design interventions may be related to comfort/livability aspects (e.g. shade, seating, refuge) greenery and water features (e.g. water play areas) public recreational and economic activities (markets with key facilities, sports & recreation facilities, outdoor playground, urban furniture), programming, safety (lighting, informal surveillance), urban form, and way finding.
- Designs that promote healthy lifestyle are preferred. In particular, the following outputs should be incorporated in the landscape concept design: (i) landscaping and public space designs are to be developed for the embankments, to be constructed under the project, and their adjacent areas; (ii) locations for at least two multi-functional parks should be identified and complemented by recreational features and amenities that are relevant to the integrated urban flood management strategy. Where there are deficiencies or improvements to be made in the location, size or design of riverside parks identified by the provincial government or past studies, the TA will propose suitable alternatives; (iii) locations for key community activity nodes should be identified and complemented by programs and facilities for place making. (iv) The design concept should be in line with local culture; (v) The design concept should explore integration of small smart-city elements facilitates by modern information communication technologies; and demonstrate that a balancing of 'gray' (i.e. hard engineering) and 'green and blue' (i.e. nature-based and water-sensitive designs), socio-

economic benefits, gender-specific needs/interest/equity, flood risk reduction, disaster resilience, etc. have been adequately addressed.

- A number of communications materials are also expected to be produced.

2.3 Borrow Pits and Quarry Site

37. The major construction materials on embankment for dike and 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.

38. **Borrow Pits:** The detailed design consultant (ISAN) has identified a borrow pit with a quantity of 925,000 m³ which can provide the necessary quantity of materials for the Project. The pit is located in village land in Ban Viengsa and Longkordeua with 2km to 6km distances from the Project site (Table 2-4 and Figure 2-8). The borrow pit is an old pit which was previously used for road maintenance in Oudomxay Province and it is mountainous areas. DPWT of ODX has made an agreement with village authorities (land owner) to level or improve the pit to be residential land before returning back to the village after the use (Please refer Attachment 2, A2-2 of the updated ESMP).

39. **Quarry sites/concrete plants:** The rip-rap to be mainly used for the foundation of bank protection, and toe protection will be provided from quarry sites and will be tested to see if the major material properties such as unit weight, uniaxial compressive strength, and etc. are suitable for the construction materials. The quarry site and batch plant will be sourced from existing concession sites located in Ban Houytong with 13km distance from the Project site (Table 2-4, Figure 2-8 and Attachment 2, A2-3 of the updated ESMP).

Table 2-4 List of Construction Material

No.	Location	Area (Ha)	Available Quantity (m ³)	Remarks
BP1= Borrow Pit 1	Viengsa Village	2.25	675,000	Existing borrow areas is located about 15km from the nearest protected area and 15km to the project site. The Borrow Pit # 1 located on the village land while the Borrow Pit # 2 is on private land. Both borrow pits have obtained agreement with land owners with condition that the sites shall be restored and stabilized or improved to be residential land before returning back to the village and private owner after the use (See Attachment 2, Figure A2-2 of the updated ESMP).
BP2= Borrow Pit 2	Longkordeua Village	1ha	30,000	
QP1= Quarry Area/Gravel , Sand	Houytong	3	2,250,000	Existing quarry operated by a private company licensed by the provincial government. The site is not located in

No.	Location	Area (Ha)	Available Quantity (m3)	Remarks
				the protected area with about 10km distance to the nearest protected area and about 12km to residential area and project site. Attachment 2, Figure A2-3 of the updated ESMP.

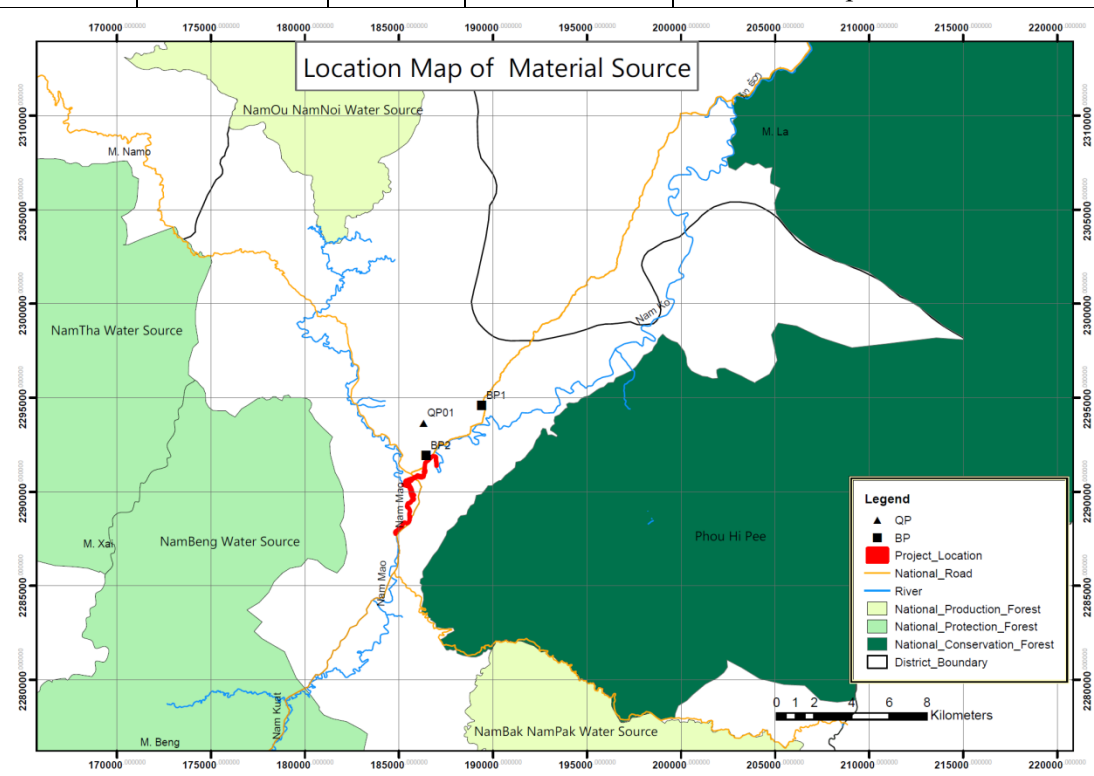


Figure 2-8 Location of Construction Materials for both Lot 1 and Lot 2

2.4 Excavated Soil Utilization Plan

40. For the flood damage mitigation on the Nam Kor River basin, it needs to widen the river channel up to 60 m as well as to construct the proposed dike for a safe drainage of T-20 year design flood for the Nam Kor River basin as presented in the feasibility study report. The river profile improvement will involve the river widening of some sections which will produce a large quantity of excavated soils (Table 2-5 and Figure 2-9).

41. Based on the recent information from the detailed design team, about 1.49 million m³ of excavation soil will be generated of which 0.43 million come from the Lot 1 and 1.06 million come from the Lot 2. About 59% (from Lot 1) and 86% (from Lot 2) of usable soil (common excavation and structural excavation) will be utilised for not only the embankment material of the dike construction but also soil covering material for the planting and greening on the bank-protection (Table 2-5 and Figure 2-9 to Figure 2-11 below).

Table 2-5 Quantity of Excavated Soil

	Description ²	Quantity (m ³)
--	--------------------------	----------------------------

² Unsuitable soil: Unsuitable soil to embank the proposed dike section under the typical cross section.

		Lot 1	Lot 2
201-3	Unsuitable Soil	175,296.34	147,146.00
203-1	Common Excavation (usable)	213,924.31	658,010.00
207-1	Structural Excavation (usable)	17,000.00	4,568.00
204-1	Embankment from Excavated Materials (Compaction) (usable)	21,021.46	254,615.00
Total		427,242.11	1,064,339.00

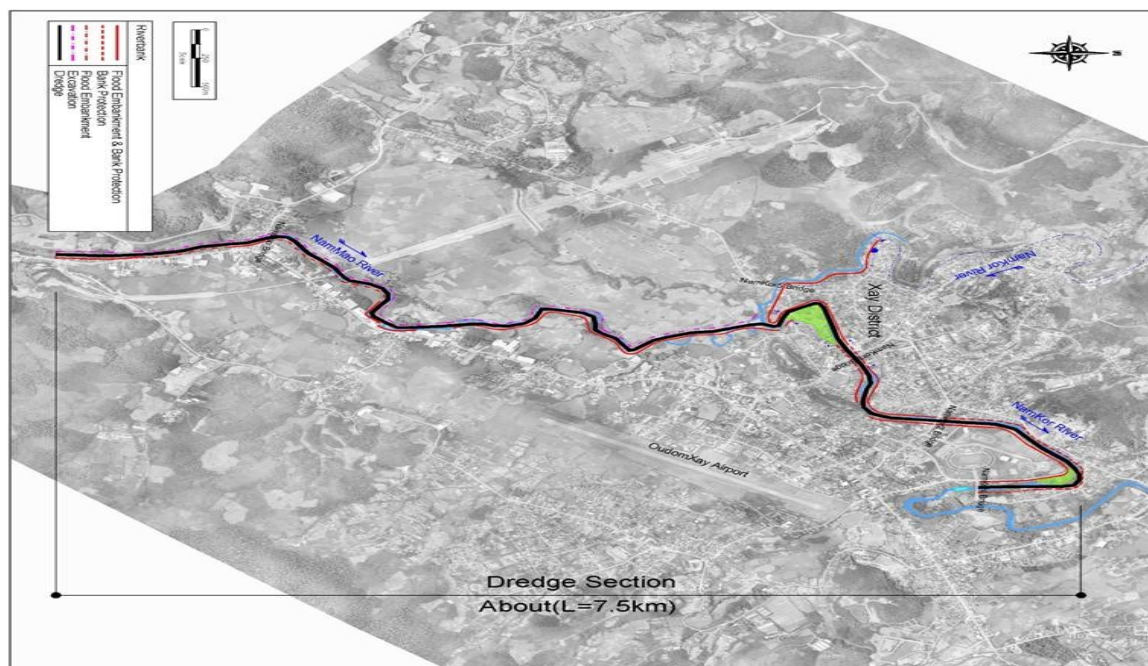


Figure 2-9 Excavation Section

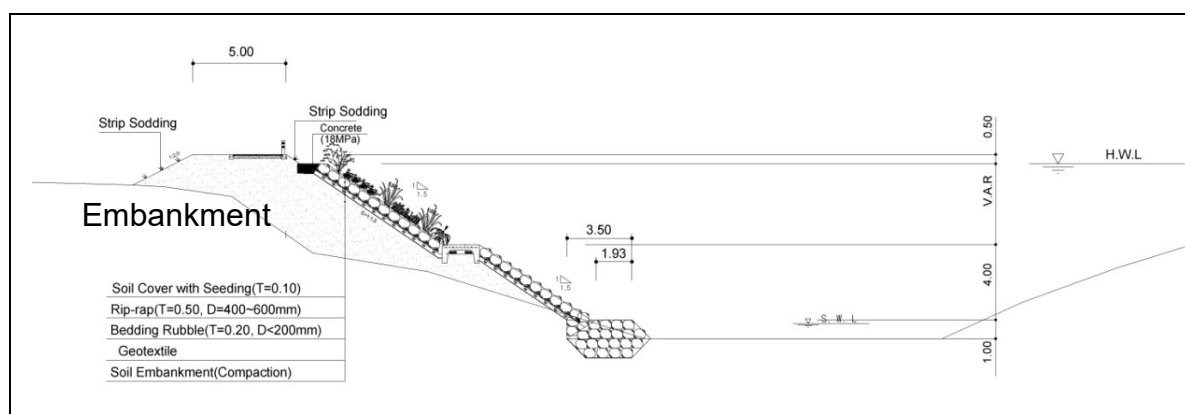


Figure 2-10 Embankment on the proposed dike

Common excavation: soil will be excavated from the existing ground under the design.
Structural excavation: soil excavation method will be excavated on the existing ground under the structure (BOX and pipe culvert, etc.)

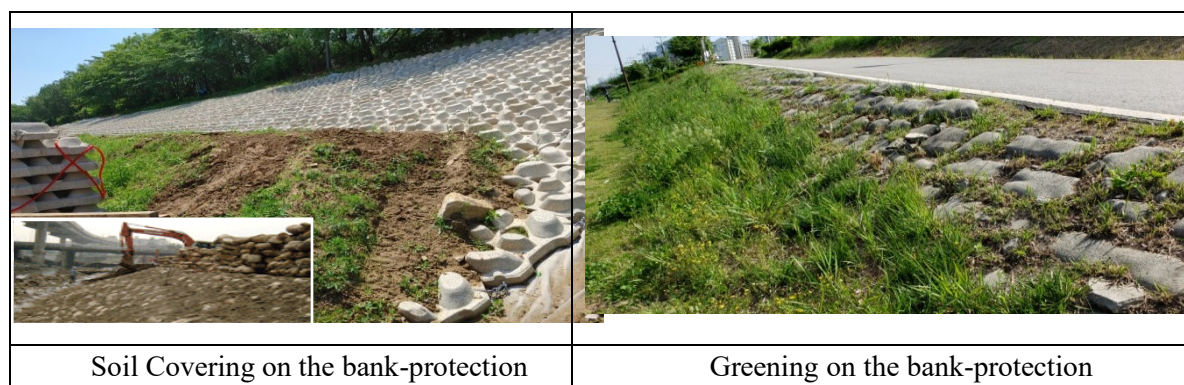


Figure 2-11 Embankment and Soil Covering

2.5 Disposal of Surplus Soils

42. As presented in Table 2-5 above, about 322,442m³ (about 41% or 175,296m³ from Lot 1 and 14% or 147,146m³ from Lot 2) 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 ODX 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.

43. PIU has established key criteria for selection of soil disposal site as follows: (a) The site will be located within the 2km distance to site or not more than 3km if no any suitable location within 2km distance; (b) The project affected households will be priority to receive the surplus soil for leveling up or filling their empty lands for future use as residential land; and (c) the following areas should be avoid: mountainous, high slope areas prone to erosion, environmentally sensitive areas such as water sources, wetland, sensitive forest. Also, removal of tree should be avoid and minimize; (d) consultation and negotiation has been conducted with the land owners and the local village where the soil disposal site is located; (e) a written agreement have been made with the land owners (see Attachment 2 of the updated ESMP); and (f) further site-specific impact assessment will be carried out to identify potential environmental and social risks and impacts associated with disposal and transport of the spoil soil to the disposal site. Site-specific measures will be developed and adopted by the contractor before the disposal site is put into use.

44. The following terms were used to make an agreement between PIU and the land owner during consultation and negotiation process:

- Reserve 5m from each side of drainage channel for potential development and improvement;
- The land owner will provide access to the disposal area including clearing any barriers such as some trees, firewood storage, animal hut, etc. without compensation. Any issue occurred during the implementation of the disposal activities, the PIU will conduct regular consultations with the land owner to ensure compliance with the Project implementation procedures.
- An agreement will be provided to the contractor to comply with the agreed terms with the land owners.

45. There are local people requested for the surplus soil to fill or level up their land. So far PIU, through the Project Resettlement Committee (PRC), has conducted a consultation with two land owners between 16th – 17th August 2021 in Longkordeua, Jeng, Nongmengda, Donkeo and Nalao villages and two agreements have been reached with 5 land owners and this effort will be continued (Please refer to Table 2-6, Figure 2-11 and Attachment 2-Figure A2-4 of the updated ESMP for the agreements with land owners). All sites are located in the semi-urban area which are covered by bushes and shrubs and are about 24km away from the nearest protected area.

46. In general, the land owner and the PIU agreements follows the criteria established above. The land owner will provide access to disposal area including clearing any barriers such as some trees, firewood storage, animal hut, etc. without claim for compensation while the PIU will conduct regular consultations with the land owner and local villages to ensure compliance with the agreement and/or solve any potential conflicts during actual disposal of the spoil.

47. The Table 2-6 shows that altogether nine sites identified can receive a volume 455,404m³ which is enough the unsuitable surplus soil to be excavated from Lot 1 and Lot 2. Impact assessment and consultation with villagers and village authorities to be directly and indirectly affected by the project was conducted. All sites are private land and located nearby the project area (urban area) on an empty land which covered by grasses and bushes. Agreements with land owners were obtained and provided in Attachment 2 of the updated ESMP. During the consultation with villagers and village authorities, the villagers were concerned on the community health and safety, noise and dust due to the transportation of the disposal materials (surplus soil) and requested the project to implement mitigation measures such as speed control and spraying the water to control the dust. These concerns and recommendations were included in Attachment 5 of the updated ESMP. Additional consultations with nearby households will be conducted by PMU and site-specific impacts and mitigation measures will be submitted to at the WB Task Team before the disposal takes place.

48. In addition, the disposal site will be restored and stabilized for a safe use and verified by the land owner before handover the site to the land owner. The supervision consultant is also required to monitor and verify before handover the site to the land owner. DOW/PMU and CSC/FE will conduct regular compliance monitoring of disposal sites. The contractor is required to prepare a site closure report for each site with verified signature of the land owner and submit the report to DOW/PMU via CSC/FE.

49. Transportation of surplus soils: the sites for disposal of surplus soils listed in Table 2-6 below are located with a distance ranging from 0.15km to 1.9km; therefore, temporary onsite storage of the excavated soils is not required. The excavation will be carried during the dry season by using backhoe and will be directly placed in the dump trucks with a capacity vary from 15m³ to 20m³. Due to the short distance from the project site to the disposal sites, it is estimated that one dump truck will make 15-20 trips per day and the transportation will be not carried during peak hours (commuting times to work or school). All dump trucks carrying out surplus soils will have to be fully covered while the drivers will be required to respect driving speed and avoid using horns in area sensitive to noise and vibration such as hospitals, schools, and temples.

Table 2-6 List of Disposal of Surplus Soils Sites

Site No.	Quantity (m ³)	Location	Distance to the Project Site (km)
DA01	160,000	B. Longkordeau	1.4
DA02	7,200	B. Jeng	1.5
DA03	14,400	B. Nongmangda	1.7
DA04	36,750	B. Donkeo	1.8
DA05	19,200	B. Donkeo	1.9
DA06	12,600	B. Nalao	1.4
DA07	29,040	B. Nalao	1.4
DA08	600	B. Longkordeau	0.2
DA09	180,000	B. Longkordeau	0.15
Total	455,404		

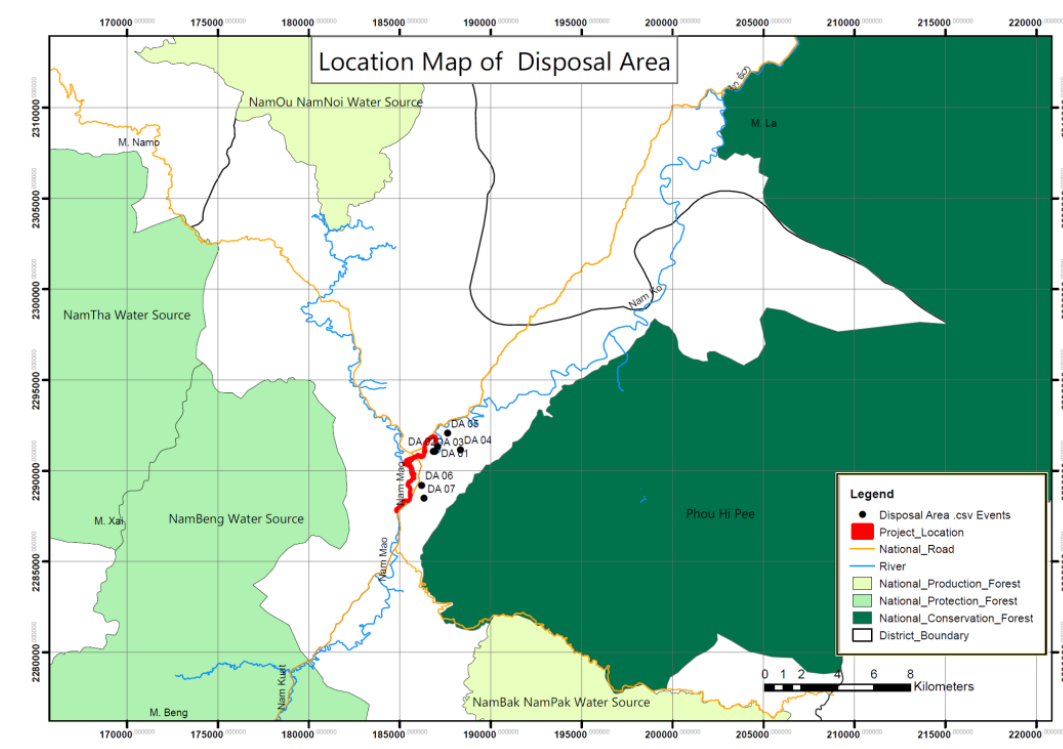


Figure 2-12 Location of Unusable Soil Disposal Sites

2.6 Construction Worker Camps

50. It is expected to have three worker camps and all are located with the project area as shown in the Table 2-7 and Figure 2-13. Contractor is required to prepare a worker camp management plan during the preparation of C-ESMP (see also Section 5.6.2 of the updated ESMP). All camp sites are located nearby the project site on the empty land with about 24km distance to the nearest protected area. The two camp sites for the Lot 1 are private land with an agreement (WC # 1) for 15 months with a condition that the site shall be cleaned up and restored as the original condition (Attachment 2 of the updated ESMP, Figure A2-4). The Lot 2 camp site is located on a public land.

51. Establishment of worker camps with quality health services and sanitary equipment and all required supporting facilities and workshop/material storage area in compliance with section on Labor Management Procedure, Workers' Camp and Storage Area below (Section 5.6.2 of the updated ESMP). Worker camps and storage areas will be checked and approved by DPWT and PONRE before use. Contractor will be required to prepare a Workers' Camp Management Plan (WCMP) to manage potential E&S risks associated with the operation of the Workers' camp. Risks may include communicable and non-communicable diseases, SEA/SH, solid waste management, and etc as part of the Contractor's Environmental and Social Management Plan (CESMP) (See Section 5.6.2 and Attachment #6: ECOP of the updated ESMP).

Table 2-7 – List of Workers' Camp Sites

No.	Location	Area (m ²)	# of Workers	Land	Remarks
1	B. Jeng	2,091 m ²	30	Private land – land lease agreement for 15months	1
2	B. Jeng	1,500 m ²	35	Private land – agreement will be provided later as part of C-ESMP.	1
3	B. Na-Warnoy	7000m ²	45	Public land	2

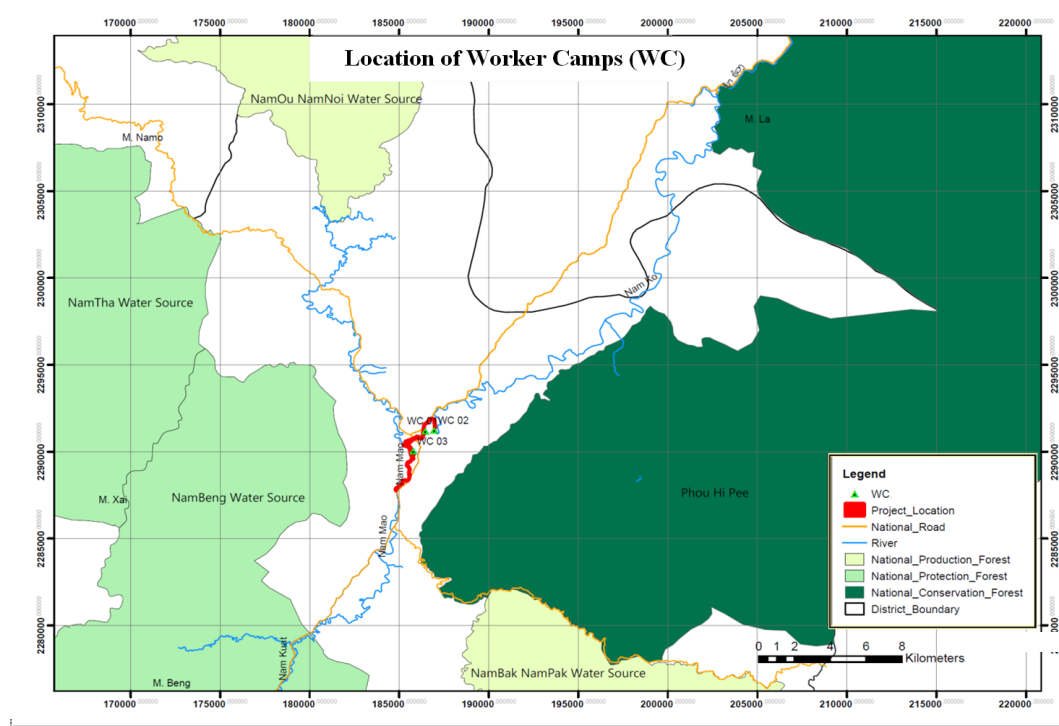


Figure 2-13 Location of Worker Camps

2.7 Construction Plan and Schedule

52. It was expected that indicative construction schedule for the Lot 2 is 30months starting from October 2022 (Table 2-8). An Environmental Compliance Certificate (ECC) for the Project (both Lot 1 and Lot 2) from the Ministry of Natural Resources and Environment (MONRE) has been obtained on 27 October 2021 (see Attachment 5B of the updated ESMP). The workplan

implementation will be strictly followed by the contractors and closely supervised by ISWS/CSC consultant to ensure timely work completion and avoid further adverse impacts on the local people and communities. In case adverse impact arise as a result of delayed construction progress, additional compensation may be provided based on the consultation with the affected households/individuals.

Table 2-8 Construction Plan Schedule

Activity	Start Date	End Date
Lot 2 (30 months)		
1. Mobilization	2023-01-01	2023-02-01
2. Earthworks (Dike, Excavation)	2023-02-01	2023-11-01
3. Riverbank Protection Works	2023-04-01	2023-12-01
4. Structure Works (Drainage)	2023-06-01	2023-09-01
5. Riverbank Appurtenance	2023-07-01	2023-12-01
6. Riverside Park	2023-08-01	2023-11-01
Tests on Completion / Taking-over	2023-12-01	2024-01-01

3 Potential Impacts Identified

3.1 General Impacts

53. Positive Impacts: It is expected that investments in Muang Xay urban flood risk management will have both positive and negative impacts that could ensue as a result of sub-project implementation of the proposed riverbank protection, drainage canal reparation, dike and flood gates, and riverside park(s) infrastructure. The urban flood risk management sub-project activities will be beneficial for the majority of Muang Xay residents whose properties and livelihoods will be largely unaffected due to the proposed infrastructure investments. It is expected that construction and installation of urban flood risk management infrastructure investment will bring socioeconomic, health and ecological benefits, such as, protecting the river from siltation and sedimentation as a result of runoff and riverbank erosion, and reducing the loss of lives and/or livelihoods caused by flooding. The project will help create an environment of safety, health and well-being for the majority of people who have suffered from the effects of flash flood events in the past.

54. Negative Impacts: for construction of new infrastructure (dike, riverbank protection, movable weir, riverside parks, and riverside road, drainage and flap gates) in Oudomxay’s provincial capital, Muang Xay, and vicinity, it is likely that for most people, the potential negative (adverse) impacts will be temporary and localized, although cumulative effects cannot be discounted. However, for people living in the areas identified for the construction of two riverside park(s), adverse impacts due to resettlement and/or the loss of riverine land are anticipated. During the preliminary community consultations in the provincial capital conducted on 31 March 2021 to discuss on the project impacts and mitigation measures, it was determined that some living in the areas identified for the riverside park(s) are from Khmu and Hmong ethnic groups. The Project Corridor of Impacts (COIs) identified at 1m to 150 m, it was determined that 256 households (with 1,470 PAPs including 726 females) in ten villages would be affected by civil work under the Lot 2 that would include impacts on the HHs assets and income losses, land acquisition, household resettlement, livelihood from the Lot 2 project activities. The Inventory of Losses (IOL) has been conducted in ten (10) villages within the offset line ranging from 1m to 150m from river bank alignment as detailed in Table 3-1 below. It

is determined that the private-owned land and assets in ten (10) villages will be affected by the Lot 2 project activities. These project activities with an estimated cost of 12.5 million US\$ will affect an appropriate **109,268m²** of private-owned land. This includes 8,482m² (78 PAHs) of residential land, 21,407m² (10 PAHs) of paddy field land, 79,380m² of garden land, 46 housing structures with 3,316m² (total of 40 PAHs), 10 shops/restaurants with 1,101m² (7 PAHs), 170 secondary structures with **5,152m², 520m (fence) and 21 (poles)**, and **5,097 trees**. In addition to this RAP for Lot 2 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

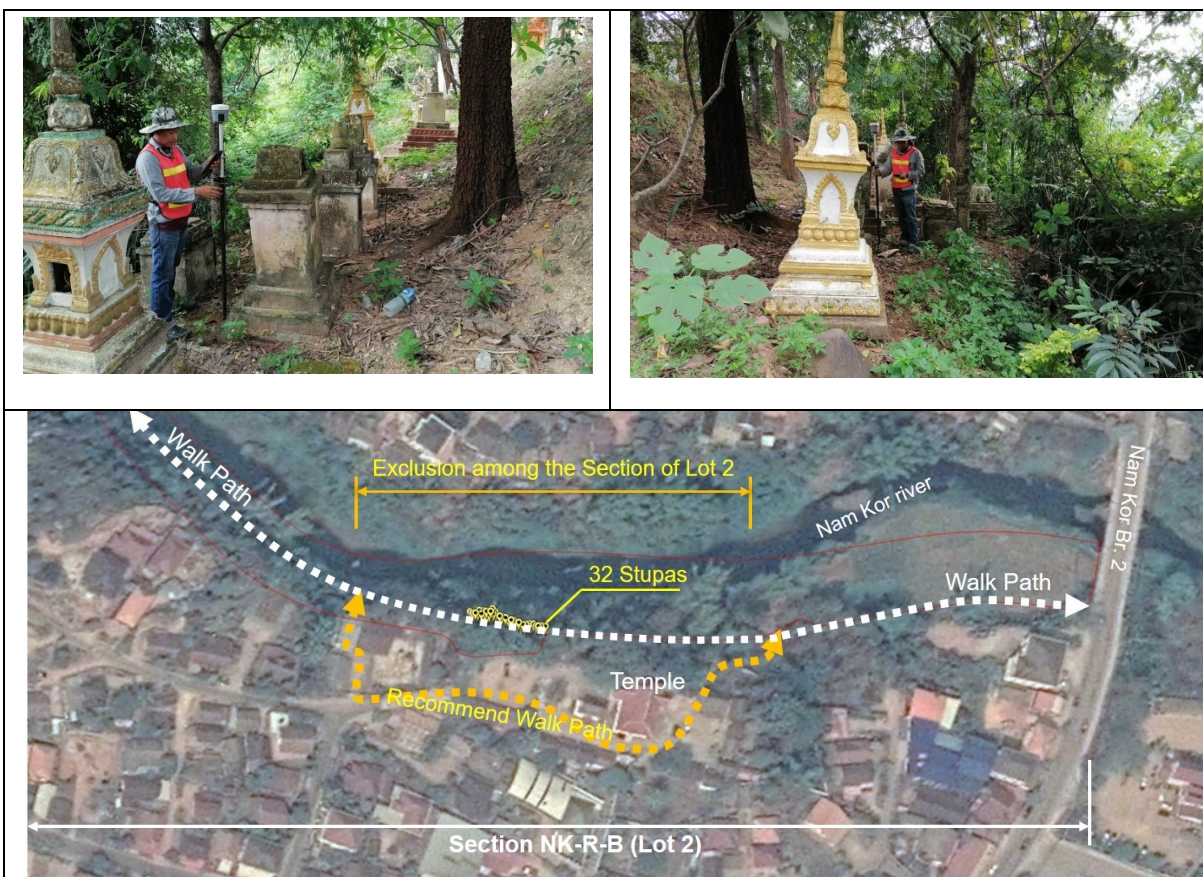
55. Ethnic Groups: The Lot 2 project activities also will have an impact on ethnic groups (EGs) such as 62 Khmu households and 4 Hmong households. Khmu and Hmong are considered to be indigenous people as they meet the World Bank definition of Indigenous People Policy (OP 4.10). An EGEP has been prepared as a standalone document to comply with EGEF. This EGEP provides procedures, process, implementation and monitoring arrangements and budget to ensure that mitigation measures are implemented to address and minimize negative impacts on ethnic groups. EGEP also ensures that they receive necessary support to engage in and benefit from the project investments in an inclusive and culturally appropriate manner

56. Physical Cultural Properties and Sensitive Areas: The COI also indicate that local hospitals, schools, temples and markets are outside the Lot 2 project activities (Figure 3-1). However, there is one temple and cemetery with 32 local stupas in B. Jeng located near the Project boundary (Figure 3-2). After consultation with local communities, it has been agreed not to remove the stupas but to install the walk path as a detour line across the local temple for connectivity. For the peoples' walking along the river, walk path will be installed along the right side of the Nam Kor River as agreed with DPWT of ODX Province. Most of the walk path has been designed to be installed on the dike, levee berm on the bank-protection in some areas (Figure 3-2). During the construction phase, constructors will be required to coordinate with local authorities and temple to conduct spiritual ceremony request for approval from land and river spirits before commencement of construction activities. In addition, working on the big Buddha Day (Full Moon) will not be allowed.



Figure 3-1 Location of Sensitive Areas

57. The IOL conducted in ten villages found that there is



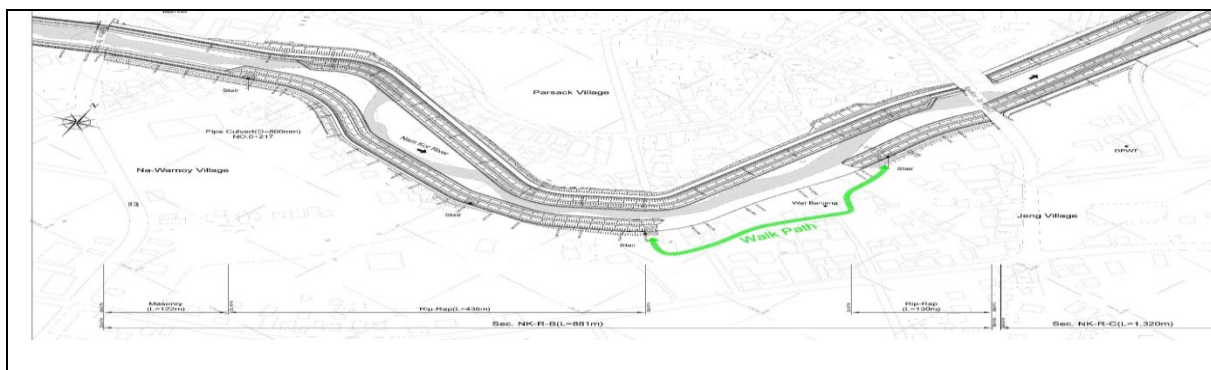


Figure 3-2 Detour Line of the Walk Path

3.2 Land and Displacement Impacts

58. The Lot 2 is expected to cause physical relocation as a result of the proposed sub-project related to the urban flood risk management infrastructure investments in Oudomxay's provincial capital, Muang Xay. Urban flood risk management infrastructure initiatives may require the permanent use of some areas for riverside protection, dike, drainage canal and flood gates, weir, riverside park(s) and riverside road under the Lot 2. These project activities with an estimated cost of 12.5 million US\$ will affect an appropriate **109,268m²** of private-owned land. This includes 8,482m² (78 PAHs) of residential land, 21,407m² (10 PAHs) of paddy field land, 79,380m² of garden land, 46 housing structures with 3,316m² (total of 40 PAHs), 10 shops/restaurants with 1,101m² (7 PAHs), 170 secondary structures with **5,152m², 520m (fence) and 21 (poles)**, and **5,097 trees**. The compensation will be made for all affected land, structures and crops and trees will be made based on the Decision of Provincial Governor, No. 1105/GOV.ODX, dated 15 September 2020. 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 signed³. 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 Oudomxay province (M. Xay) was 30.897%. However, 20% of inflation rate was already added into the compensation rates approved by the Provincial Governor (1105/GOV.ODX, dated 15 September 2020) using the resettlement planning process therefore only 10.897% additional inflation rate of construction materials was added into the compensation cost in this RAP2. Further detail of market survey is provided in Attachment 15.

59. In addition, temporary use of some areas will be required for borrow pits and soil surplus disposal sites that requires about 925,000 m³ and 322,442m³ respectively hitch may result in

³ The signed document with individual households is maintained at the PMU/PIU office given that it contains personal data.

unexpected low-level impacts, including disruption of access or damage to property (i.e., land and buildings). Urban flood risk management infrastructure initiatives may also require the relocation of temporary structures, temporary occupation of plots of land or may cause damage to crops and trees within the dike construction zone, other footprint (i.e., drainage canal and flood gates, weir and riverside parks) or RoI. Please refer to Section 2.3 to Section 2.5 for more details.

60. 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 of 12 February 2020, 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.

61. PAPs were notified by the provincial government, PIU-DPWT of the Lot 2 project implementation schedule and consulted regarding the principles of land acquisition and loss of, or damage to, assets. Damages to assets, such as, structures, village infrastructures, standing crops, trees, fences, and loss of income, including loss of harvest 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 (see Table 7-1).

62. A market survey has been conducted for Lot 1 and 2 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 Oudomxay province (M. Xay) was 30.897%. However, 20% of inflation rate was already added into the compensation rates approved by the Provincial Governor (1105/GOV.ODX, dated 15 September 2020) during the resettlement planning process and therefore only 10.897% additional inflation rate of construction materials was added into the compensation cost in this RAP2. Findings of the market survey are provided in Attachment 15. This was to ensure to communities and PAPs will be able to purchase equivalent value replacement land and 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

63. Due to phasing strategy and the engineering design currently available for the Lot 2 project activities with an estimated cost of 12.5 million US\$, the IOL has been conducted in ten villages within the offset line ranging from 1m to 150m from river bank alignment as summarized in Table 2-1 above. Further detail is in Attachment 14 Compensation Offset Line. Detailed

measurement survey and land and asset valuation have been conducted during the RAP2 preparation. The current design results in loss of private land, housing structures, shops/restaurants, secondary structures and trees as summarized in Table 3-1 below.

64. During the preparation of this RAP2 for the Lot 2 project activities, the survey team has completed the inventory of loss (IOL) in ten affected villages. Table 3-1 below summarizes the results of inventory of loss in this village. The Lot 2 project activities will affect an appropriate **109,268m²** of private-owned land. This includes 8,482m² (78 PAHs) of residential land, 21,407m² (10 PAHs) of paddy field land and 79,380m² of garden land. The data shows that there are 46 housing structures with 3,316m² (total of 40 PAHs); 10 shops/restaurants with 1,101m² (7 PAHs); 170 secondary structures with **5,152m², 520m (fence) and 21 (poles)**; and **5,097 trees** will be affected by the Lot 2 project activities. The 46 housing structures of 40 PAHs and 10 shops of 7 PAHs will entirely be affected by the Lot 2 project activities, leading to physical relocation of these households. Some of these structures are located within public land (Government managed land for the purpose of river bank protection and all 40 PAHs with 46 houses reported that they have land in other places to rebuild their new houses within the same district. The owners agreed to do self-relocation subject to receiving acceptable and agreeable compensation rates and amounts. For affected shops, shop owners will relocate and rebuild construct their new shops in the same land plots but within the area covered in the land title/certificate. Please refer to Table 3-1 to Table 3-6 below and Attachment 1A for Master List of Affected PAHs and Attachment 1B for IOL forms for more details.

Table 3-1 Summary of all Losses for Lot 2

No.	Type of Loss	# of PAH	# of Affected Structure	Affected #	Unit
1	Land	157		109,268	
1.1	Residential land	78		8,482	m ²
1.2	Paddy land	10		21,407	m ²
1.3	Garden land	69		79,380	m ²
2	Housing Structures	40	46	3,316	m ²
2.1	Two-story house		10	850	m ²
2.2	One-story house (wooden and concrete)		36	2,467	m ²
3	Shops and Restaurants	7	10	1,101	m ²
3.1	Shops and Restaurants	7	10	1,101	m ²
4	Secondary Structures	157	170	5,152m²+520m (fence)+21(poles)	
4.1	Kitchen and stove	27	28	745	m ²
4.2	Bathroom/toilet	31	32	257	m ²
4.3	Porch of house/shop, balcony & window	29	34	1,052	m ²

No.	Type of Loss	# of PAH	# of Affected Structure	Affected #	Unit
4.4	Huts	9	10	306	m ²
4.5	Garage and storage	9	10	1,011	m ²
4.6	Animal coops (pig, chicken, duck and bird)	22	26	1,543	m ²
4.7	Concrete yard and soil filled	4	4	194	m ²
4.8	Water and flog/fish tanks	4	4	43	m ²
4.9	Wall/fence	19	19	520	m ²
4.10	House&electricity pole	3	3	21	pole
5	Tree	338		5,097	
5.1	Fruit tree	182		4,241	tree
5.2	Industrial tree	47		440	tree
5.3	Bamboo and grass	109		416	tree

Sources: Field Survey, July 2021

3.3.1 Affected Land

65. Table 3-2 summaries the private-owned land to be affected in nine villages (out of 10 affected villages). The Lot 2 project activities will acquire **109,268m²** of private-owned land. This includes 8,482m² (78 PAHs) of residential land, 21,407m² (10 PAHs) of paddy field land and 79,380m² of garden land.

Table 3-2 Summary of Affected Land

No.	Village Name	Residential Land		Paddy Field Land		Garden Land	
		# of PAHs	Affected Area (m2)	# of PAHs	Affected Area (m2)	# of PAHs	Affected Area (m2)
1	B. Nasao			1	1.441	5	4.308
2	B. Namy	1	212	3	9.130	12	12.289
3	B. Nalao	1	176	2	1.641	8	19.074
4	B. Navannoy	16	1,493			17	25.403
5	B. Thin	2	422	4	9.196	20	15.303
6	B. Vanghai	-	-	-	-	4	2.434
7	B. Pasak	14	1,249	-	-	1	59
8	B. Monetai	14	2,173	-	-	-	-
9	B. Longkordeua	30	2,757	-	-	2	509
	Total	78	8,482	10	21.407	69	79.380

Sources: Field Survey, July 2021

3.3.2 Affected Housing Structure

66. The Lot 2 project activities will require displacement of 46 houses with 3,316m² belong to 40 PAHs in six villages (out of 10 affected villages) as presented in Table 3-3. It is expected that

these houses and its ancillary structures (e.g. extended shades) will be entirely affected and require relocation. The majority of house type includes 36 single story houses and 10 two-story houses. Some of these structures are located within public land (Govt-owned land for river bank protection) and all 40 PAHs reported that they have land in other places to rebuild their new houses. The owners agreed to do self-relocation subject to receiving acceptable and agreeable compensation rates and amounts.

Table 3-3 Summary of Affected Housing Structures

No.	Village Name	Total Affected #			One Story House		Two Story House	
		# of PAH	# of Structures	Area (m ²)	# of Structures	Area (m ²)	# of Structures	Area (m ²)
1	B. Namy	1	1	112	1	112		
2	B. Navannoy	5	5	308	5	308		
3	B. Thin	5	6	328	3	132	3	196
4	B. Pasak	1	3	332	3	332		
5	B. Monetai	12	13	828	9	554	4	274
6	B. Longkordeua	16	18	1,408	15	1,028	3	380
Total		40	46	3,316	36	2,467	10	850

Sources: Field Survey, July 2021

3.3.3 Affected Shop

67. Table 3-4 provides the number of shops to be affected by either river works or riverside parks. There are 10 shops/restaurants with 1,101m² in five villages (out of 10 villages) that will be severely or completely affected and require relocation. Most of these shops are relatively small and were built with wooden or steel structure, wooden or bamboo wall, and zinc roofing sheets. These home businesses were common in the project area as well as across Lao PDR where households sell food and non-food products. These affected shops can be rebuilt in the existing land plot but within the area covered in the land title/certificate. Due to small number businesses (10 shops and one school), overall impacts are considered temporary and localized, but impacts for these houses are significant.

Table 3-4 Summary of Affected Shop/Restaurant

No.	Village Name	# of PAHs	# of Structures	Affected Area (m ²)
1	B. Navannoy	1	1	270
2	B. Thin	1	1	60
3	B. Vanghai	1	2	496
4	B. Monetai	1	2	48
5	B. Longkordeua	3	4	227.2

No.	Village Name	# of PAHs	# of Structures	Affected Area (m2)
	Total	7	10	1.101

Sources: Field Survey, July 2021

3.3.4 Affected Secondary Structures

68. **Affected secondary structures:** the current design of the project will also affect other or secondary structures in seven villages (out of 10 affected villages) such as kitchens, toilets, porch of house and shops, garage, storage, hut, animal husbandry, fence, wall, and concrete yard. Table 3-5 outlines secondary structure to be affected by the project in seven villages. Many houses were constructed with extended porches mostly at the back yard to provide additional shades and rain protection for household uses.

Table 3-5 Affected Secondary Structures

No.	Village Name	1. Kitchen & Stove	2. Bathroom	3. House Porch	4. Hut/ Rice Hut	5. Garage & Storage	6. Animal coop	7. Concrete yard	8. Water and flog/fish tank	9. Fence & wall	10. House&electricity pole
	Unit	m ²	m ²	m ²	m ²	m ²	m ²	m ²	m ²	m	pole
1	B. Nasao				12,00		940,00			107,00	
2	B. Namy		6,00		72,00	192,00				4,00	
3	B. Navannoy	139,57	30,37	185,40	97,85		41,95	158,25		45,50	20,00
4	B. Thin	55,4	37,00	129,31			211,75		29,20		
5	B. Vanghai		43,46			21,20					
6	B. Pasak	142,25	66,26	28,00		610,00	128,90			75,40	
7	B. Monetai	75	45,50	244,35	38,72	81,25	140,15	20,40		122,00	
8	B. Longkordeua	333,14	28,52	464,80	85,50	106,50	80,40	15,00	14,00	166,59	1,00
	Total	745	257	1.052	306	1.011	1.543	194	43	520	21

Sources: Field Survey, July 2021

3.3.5 Affected Crops and Trees

69. Affected fruit and industrial trees: the Lot 2 project activities will affect industrial trees in 10 villages identified as teak trees, rubber trees, and rosewood. In addition, the Lot 2 will also affect some fruit trees but does not have significant impact linking to income of villagers those selling fruit from those fruit trees. These fruit trees include mango, grape fruit, coconut, lemon, guava, dragon fruit, durian, jack fruit, tamarind, jujube, avocado, papaya, star gooseberry, etc.

70. Within the completed inventory of loss in ten villages, a total of **5,097 trees** were identified with varying stages of maturity, **4,241 fruit trees**, **440 industrial trees** (rosewood, teak and rubber trees) and **416 bamboo trees** (Table 3-6). These plantation assets were identified within the project development areas and will require removal. Compensation rates for tree will be based on tree maturity and on the Agreement on Compensation Rates for DRM Project which was approved by the Governor of Oudomxay Province. In general, all standing commercial trees (teak, rubber and rosewood) are between one to five years old.

Table 3-6 Summary of affected Trees

No.	Village Name	# of PAH	Total # of Trees	# of Fruit Tree	# of Industrial Trees	# of Bamboo Tree
1	B. Nasao	11	104	89	7	8
2	B. Namy	57	1,097	911	100	86
3	B. Nalao	25	453	361	51	41
4	B. Navannoy	88	1,218	1,121	11	86
5	B. Thin	36	362	196	97	69
6	B. Vanghai	5	544	532	0	12
7	B. Pasak	44	520	449	22	49
8	B. Monetai	33	302	264	19	19
9	B. Longkordeua	54	476	297	133	46
10	B. Cheng	1	21	21		
	Total	354	5,097	4,241	440	416

Sources: Field Survey, July 2021

3.3.6 Affected Public Public Utilities

71. Table 3-7 shows that public utilities to be affected by the Lot 2 activities.

Table 3-7 Affected Public Utilities

No.	Type of Loss	Village	Affected #	Unit
1	Electricity pole and electric transformer	B. Navannoy and Long Kor Deua	2	Unit
2	Telecommunication	B. Navannoy	1	Pole
3	Water Supply	B. Thin and	5	Unit

No.	Type of Loss	Village	Affected #	Unit
		Longkordeua		
Total	Total		08	

Sources: Field Survey, July 2021

3.4 Labor Influx and Core Labor Standards

72. Because this project involves civil works, it is likely that it will require a portion of the labour force to be brought in from outside the area. The likely overall size of the labour force to be deployed during project implementation is anticipated to be less than 50 people. The number of workers from outside of the community will depend upon the location of the contractor's main office. It is anticipated that the outside workforce will be recruited nationally, as such will have a similar socio-economic and cultural background to that of the local community. The project will ensure to prevent the use of all forms of forced labour and child labour in accordance with the Lao Labor Law 2013. Other potential risks and impacts associated with labor influx including communicable diseases like HIV/AIDS and transmission of virus such as COVID19. The temporary labour influx of workers, which might increase the risk of substance abuse SEA/SH and VAC and risks management measures are provided in ESMP and EGEP.

3.5 Gender Considerations

73. A gender-responsive social assessment has been considered during consultation of the RAP and EGDP 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.

74. Gender mainstreaming and integration has been promoted in the planning 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. A gender specialist was mobilized while training and capacity building are being conducted since project planning throughout the project construction and operation.

4 Socio-Economic Information of Affected Villages

75. The census and socioeconomic information and data collection was carried out in March 2020 using the village census survey data collection form and in July 2021 for affected households using household census survey data collection form. Data processing and analysis were implemented by the expert team in Vientiane Capital. This Section provides overall socio-economic census of total affected villages under the 16.2 million US\$ project activities and overall socio-economic census of total affected households in ten villages under the Lot 2 project activities (12.5 million US\$) as indicated in Section 2.2. The results of census and

socio-economic survey are summarized in the following sections. The data collection form is in Attachment 2 for PAV.

4.1 Population and Households

76. From the field data collection, the project (both Lot 1 and Lot 2) will cover 10 villages, with total population of 12,399 people (6,313 females). The top two villages that have highest number of populations are Thin and Nawarnnoy villages. Similarly, number of households and family in the two villages is also higher than other. This demonstrates the household density in these two villages is likely higher as well. Please see table 4-1 below for more detail information.

Table 4-1 Number of Households and Population in Project Affected Villages

No.	Village Name	Year of Village established	Total No. of Houses	Total No. of HH	Total Population	Female
1	B. Nasao	-	123	118	625	321
2	B. Namy	-	133	172	732	346
3	B. Nalao	1905	269	288	1,298	706
4	B. Nawarnnoy	1991	238	328	1,577	783
5	B. Thin	1780	408	372	2,086	1,044
6	B. Vanghai	1990	286	301	1,360	736
7	B. Pasak	-	174	192	1,033	527
8	B. Montai	-	212	219	1,191	586
9	B. Longkordeua	-	251	280	1,361	699
10	B. Jeng	1904	206	235	1,136	565
Total			2,300	2,505	12,399	6,313

Sources: Field Survey, March 2020

4.2 Ethnic Groups

77. The ethnic groups are scattering across the project alignment. Table 4-2 below the population of ethnic groups in the affected villages. Lao Tai is the largest group, making up 76% of the total population of the ten villages (9,414 people; 4821 females). Khmu accounts for 20% of the total population in ten villages. The Hmong ethnic group occupies 4% of the total population in ten villages⁴.

78. A Lao language is the main languages using by Lao Tai. It has recognized as an official language of the country. Lao Tai lives in the lowland area of the province and believes in Buddhism. Khmu traditionally lives in the middle hill areas. They are animist and tend to practice swidden agriculture. They utilise forest products as main sources of food and income.

⁴ The Khmu and Hmong ethnic groups are considered Indigenous Peoples as per definition of the WB's OP 4.10 on Indigenous Peoples. The Khmu and Hmong ethnic groups identify themselves as members of a distinct social and cultural group. They have their own language which is different from the Lao official language, and have cultural unique cultural characteristics, and have collective attachment to land in the project areas.

They are relatively isolated from the dominant lowland culture - although there has been assimilation and integration for centuries. Their language links them to the Mon and the Khmer.

Table 4-2 Ethnic Groups in Project Affected Villages

No.	Village Name	Total Pop.	Lao Tai	Female	Khmu	Female	Hmong	Female
1	B. Nasao	625	602	307	23	14	-	-
2	B. Namy	732	636	303	96	43	-	-
3	B. Nalao	1,298	1,261	692	12	3	25	11
4	B. Nawarnnoy	1,577	926	493	583	259	68	31
5	B. Thin	2,086	1,905	951	181	93	-	-
6	B. Vanghai	1,360	816	447	444	234	100	55
7	B. Pasak	1,033	725	364	277	147	31	16
8	B. Montai	1,191	620	295	325	170	246	121
9	B. Longkordeu	1,361	873	441	461	245	27	13
10	B. Jeng	1,136	1,050	527	86	38	-	-
Total		12,399	9,414	4,820	2,488	1,246	497	247

Sources: Field Survey, March 2020

4.3 Religions

79. The main primary religion in the project area is Buddhism, covers more than 59% of total population. As people in ten villages present combination ethnic groups, some of them have specific traditional and culture as well as believe in spirit. In general, Buddhism encompasses a variety of traditions, beliefs and spiritual practices largely based on the Buddha's teachings and resulting interpreted philosophies. See table 4-3 below for more information.

Table 4-3 Religions in Project Affected Villages

No	Village Name	No. of HH	Buddhism (HH)	Animism (HH)
1	B. Nasao	118	110	8
2	B. Namy	172	125	47
3	B. Nalao	288	252	36
4	B. Nawarnnoy	328	158	170
5	B. Thin	372	183	189
6	B. Vanghai	301	131	170
7	B. Pasak	192	111	81
8	B. Montai	219	128	91
9	B. Longkordeua	280	187	93
10	B. Jeng	235	87	148
Total		2,505	1,472	1,033

Sources: Field Survey, March 2020

4.4 Infrastructures and Facilities

80. 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.

81. The survey shows that all affected villages have relatively good infrastructure and public utilities. Significant number of businesses and enterprises were found to be common. Table 4-5 shows that population in the affected village have good condition of infrastructures and facilities. Among them, there are a total of 123 major companies, 2 main markets, 71 hotels/guesthouses occurred in the project villages. In addition, there are more than 776 cars/pickup trucks and 361 smaller shops were identified within the project areas. 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

Type of infrastructure and facilities	Abbreviations	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. Tractor	T	Tractor
11. Rice mill	RM	Number
12. Electricity Household	EH	HH
13. Industrial factory	ID	Number
14. Water well	WW	Well
15. Drilled bore	DB	HH/tap
16. Gravity fed water	GW	HH/tap
17. Pipe water	PW	HH
18. River and lake	R-L	River

Table 4-5 Infrastructure and Facilities in Project Affected Villages

No.	Village Name	# of Households															
		1	2	3	4	5	6	8	9	10	11	12	13	15	16	17	18
		L	M	BC	SS	HG	AR	PB	PT	T	RM	EH	IF	DB	GW	PW	RL
1	B. Nasao	123	0	7	7	1	3	0	65	14	0	123	0	1	0	123	1
2	B. Namy	133	0	2	9	0	1	0	35	16	2	133	0	0	16	117	1
3	B. Nalao	269	1	97	81	24	10	15	253	30	2	269	0	0	0	269	1
4	B. Nawarnnoy	238	0	11	22	11	6	0	191	0	5	238	0	0	0	238	2
5	B. Thin	408	0	0	44	0	4	0	23	11	5	408	0	0	0	372	2
6	B. Vanghai	286	0	0	99	8	6	0	57	5	3	286	0	0	0	286	1
7	B. Pasak	174	1	1	26	1	2	2	20	1	1	174	0	0	0	192	1
8	B. Montai	212	0	3	5	0	3	10	2	0	0	212	0	0	0	219	1
9	B. Longkordeua	251	0	1	25	23	7	0	60	0	2	251	0	0	5	251	1
10	B. Jeng	206	0	1	43	3	5	0	70	11	0	206	1	0	0	206	1
Total		2,300	2	123	361	71	47	27	776	88	20	2,300	1	1	21	2,273	12

Sources: Field Survey, March 2020

4.5 Current School and Health Center Conditions

82. There are 9 primary schools, with a total of 50 classrooms, and oversight by 60 teachers. The total number of secondary school and high school together is 4 schools, 63 classrooms and 132 teachers are available to provide the service to the public (see Table 4-6). However, those schools are not affected in term of land requisition. Nalao and Nasao villages do not have higher primary or secondary school within the village. Children in both villages have to travel to attend school located nearby their village. They have to travel about 2.5 km to schools. Table 4-7 provides statistics on the current school infrastructure in the project villages.

83. There are 7 health centres and clinics located in the affected village. The health care facilities have a total of 317 rooms and are staff with 276 people, including doctors, nurses, and health officers. Affected villages are located approximately 200 meters to 6 kilometers away from district and provincial health center (See Table 4-6 and Table 4-7 below for more information).

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

No.	Village Name	No. of Primary School			No. of Secondary/High school			No. of health centre			Remarks
		School	Class room	Teacher	School	Class room	Teacher	Health centre	Room	Doctor	
1	B. Nasao	1	5	6	0	0	0	0	0	0	
2	B. Namy	1	5	5	0	0	0	0	0	0	Buddha secondary School
3	B. Nalao	0	0	0	1	25	30	2	4	6	Clinic
4	B. Nawarnnoy	1	4	4	0	0	0	1	2	3	Clinic
5	B. Thin	1	7	8	0	0	0	1	10	15	Health center district
6	B. Vanghai	1	5	8	0	0	0	1	1	2	Clinic
7	B. Pasak	1	3	0	0	0	0	0	0	0	Kindergarten
8	B. Montai	1	7	12	0	0	0	1	100	150	Mangkone health center
9	B. Longkordeua	1	9	11	1	35	75	1	200	100	Health center province
10	B. Jeng	1	5	6	1	3	27	0	0	0	Buddha high School
Total		9	50	60	4	63	132	7	317	276	

Sources: Field Survey, March 2020

Table 4-7 Distances from Each Village to School and Health Center/Hospitals

No.	Village Name	School		Hospital	
		Primary School	Secondary and High school	District	Province
1	B. Nasao	2.5 km		4 km	
2	B. Namy	1 km		4 km	5 km
3	B. Nalao	200 m		1 km	
4	B. Nawarnnoy	1 km		1 km	2 km
5	B. Thin	34 m		1 km	
6	B. Vanghai	3 km		2 km	
7	B. Pasak	500 m	5 km	3 km	5 km
8	B. Montai	1 km		2 km	
9	B. Longkordeua	500 m		2 km	150 m
10	B. Jeng	500 m		1 km	

Sources: Field Survey, March 2020

4.6 Level of Education in Affected Villages

84. Findings from the socio-economic data survey indicated that the population in the affected villages are well educated. Their family could ensure that at least their children could enroll and finish the primary, secondary and high school. There is an indication of higher level of education in all ten villages. The statistic collected from the survey informed that villagers are capable to share their views and able to understand topics presented during the consultation meetings with them. See Table 4-8 for more information on number of students at different school grades and level of education of population in each village. The statistic also informs high number of youth in the affected villages.

Table 4-8 Level of Education in Affected Villages (Persons)

No.	Village Name	Uneducated		Primary school		Lower secondary school		High school degree		Higher diploma		Bachelor's degree	
		Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
1	B. Nasao	16	5	228	133	135	76	170	80	68	24	8	3
2	B. Namy	0	0	179	97	233	110	240	115	65	18	15	6
3	B. Nalao	20	9	439	255	295	153	378	176	116	87	50	26
4	B. Nawarnnoy	45	15	616	316	429	223	353	166	99	42	35	21
5	B. Thin	48	1	585	304	482	267	450	237	306	181	215	54
6	B. Vanghai	18	12	447	241	459	239	330	160	66	49	40	35
7	B. Pasak	0	0	313	137	210	115	275	137	140	65	95	73
8	B. Montai	0	0	465	235	255	175	286	91	150	75	35	10
9	B. Longkordeu	1	0	301	188	362	180	450	220	212	100	35	11
10	B. Jeng	2	0	502	272	329	160	113	65	170	60	20	8
Total		150	42	4,075	2,178	3,189	1,698	3,045	1,447	1,392	701	548	247

Sources: Field Survey, March 2020

4.7 Disease and Treatment Practices

85. According to the field survey, there are no malnutrition issues and there is no pandemic disease in the last two years. When people feel sick, they use service from public hospital and health center nearby. Some of them may buy medicine from clinic and pharmacy to treat their illness. The current situation of COVID-19 pandemic has impact on the socio-economic as a whole. There is no case found in Oudomxay Province. The province health authorities as well as provincial authorities from other sectors have been implemented the mitigation measures based on the relevant Prime Minister Instructions and Orders such as PM Order No.06 and so on.

4.8 Labor Migration

86. Very few people migrate to work in other places. Migration is mainly for sale their labors in larger cities in other provinces. The finding from the field survey documented that last year there are about 29 people migrate to work in other place including villagers from Nawarnnoy (27 people), Vanghai (2 persons) Villages. About 50% of migrant people are females.

4.9 Land Use

87. Land use in the project area has been used for different purpose and classify for residential, rice paddy, upland rice paddy, industrial tree plantation and village forest land. The majority of land in the village is used for upland rice cultivation. Villagers have land registered with titles and land use certificates received.

88. Table 4-9 provides information on the main types of agriculture practiced in the project villages. B. Navannoy, B. Nalao and B. Namy have the higher number of rice paddy areas compared to others among the ten villages. Meanwhile, Pasak and Montai villages do not have land area for rice farming.

Table 4-9 Land Use in Project Affected Villages

No.	Village Name	Total area of village (Ha)	Residential land (Ha)	Rice paddy (Ha)	Industrial tree plantation (Ha)	Garden Land (Ha)	Used forest of village (Ha)	Cemetery (Ha)
1	B. Nasao	236.9	47	135.9	5	15	34	1
2	B. Namy	1,845.13	119.60	26.21	0	0	0	0.9
3	B. Nalao	2,208	1,386	34.59	0	0	0	0
4	B. Nawarnnoy	16,500	12,449	2,511	0	0	0	0
5	B. Thin	174.20	11.23	177.13	0	0	0	0
6	B. Vanghai	24	24	32.5	25	0	0	0
7	B. Pasak	350	15	0	0	0	0	0
8	B. Montai	30	25	0	0	3	0	0
9	B. Longkordeua	252	12	10	5	0	30	0
10	B. Jeng	53.42	53.42	17.	0	0		1
Total		21,674	14,142	2,945.1	35	18	64	3

Sources: Field Survey, March 2020

4.10 Domestic Animal

89. Table 4-10 below shows the number of domestic animals in affected villages. The majority of people in the ten affected villages raise poultry and cow as main sources of food and incomes. This is similar with the PAHs. The PAHs raise poultry at their home for consumption and sale.

Table 4-10 Domestic Animals in Project Affected Villages

No.	Village Name	Cow		Goat		Pig		Poultry	
		# of animal	# of HH	# of animal	# of HH	# of animal	# of HH	# of animal	# of HH
2	B. Nasao	20	2	10	2	0	0	0	0
3	B. Namy	7	1	0	0	0	0	5.000	172
4	B. Nalao	34	3	40	6	0	0	700	13
5	B. Nawarnnoy	0	0	0	0	0	0	0	0
7	B. Thin	40	5	0	0	25	6	3.128	15
8	B. Vanghai	0	0	0	0	0	0	0	0
9	B. Pasak	0	0	0	0	0	0	1.000	192
11	B. Montai	0	0	0	0	0	0	800	150
12	B. Longkordeua	100	3	80	2	70	4	500	50
10	B. Jeng	0	0	0	0	0	0	0	0
Total		201	14	130	10	95	10	2,009	592

Sources: Field Survey, March 2020

4.11 Gross Income and Expense per Year

90. Table 4-11 shows the annual gross income and expenditure of affected households in 10 affected villages. The data was provided by PAHs during the DMS. The main income sources are from family business, farming, private company employees and state officials. However, the expenditure accounts for 70% of the total gross income. The expenditure can be divided into different categories including expenditure for food, education of their children, health care, social events, cloths and housing.

Table 4-11 Gross Income and Expense per Year of Project Affected Households

No.	Village Name	Gross Income per Year (LAK)	Expenses per Year (LAK)	Main Sources of Income
1	B. Nasao	308,400,000	215,880,000	Family business, farming, private company employees and state officials,
2	B. Namy	664,200,000	464,940,000	Family business, farming, private company employees and state officials
3	B. Nalao	1,078,800,000	755,160,000	Family business, farming, private company employees and state officials
4	B. Nawarnnoy	398,400,000	278,880,000	Family business, farming and private company employees
5	B. Thin	96,000,000	67,200,000	Family business, farming and private company employees
6	B. Vanghai	789,400,853	552,580,597	Business, family business, farming, salary and wage
7	B. Pasak	828,600,000	580,020,000	Family business, farming, private company employees and state officials
8	B. Montai	4,385,400,000	3,069,780,000	Family business, farming, private company employees and state officials
9	B. Longkordeua	3,079,100,000	2,155,370,000	Family business, farming, private company employees and state officials
10	B. Jeng	4,099,800,000	2,869,860,000	Family business, farming, private company employees and state officials
Total		15,728,100,853	11,009,670,597	

Sources: Field Survey, July 2021

4.12 Cultural and Historical Infrastructure

91. The IOL conducted in ten villages found that there is a temple and cemetery with 32 local stupas in B. Jeng located near the Project boundary (Figure 3-2 above). After consultation with local communities, it has been agreed not to remove the stupas but to install the walk path as a detour line across the local temple for connectivity. For the peoples' walking along the river, walk path will be installed along the right side of the Nam Kor River as agreed with DPWT of ODX Province. Most of the walk path has been designed to be installed on the dike, levee berm on the bank-protection in some areas

4.13 Poverty Groups

92. 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.

4.14 Vulnerability Groups (VG)

93. 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 with low income or unstable income and occupation and with dependents to take care, 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.

94. 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;

95. 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. In the ten surveyed villages, approximately 27 vulnerable households (13 Khmu HHs and 14 Lao Tai HHs) in B. Navannoy, B. Monetai and B. Longkordeua. This includes one elderly household (Lao Tai); two households with disabled people (Lao Tai HHs); and 24 female-headed households (13 Khmu HHs and 11 Lao Tai).

5 Socio-Economic Information of Affected Households

96. The census and socioeconomic information and data collection was carried out in March 2020 using the village census survey data collection form and in July 2021 for affected households using household census survey data collection form. Data processing and analysis were implemented by the expert team in Vientiane Capital. This Section provides overall socio-economic census of total affected villages under the 16.2 million US\$ project activities and overall socio-economic census of total affected households in ten villages under the Lot 2 project activities (12.5 million US\$) as indicated in Section 2.2. The results of census and socio-economic survey are summarized in the following sections. The data collection form is in Attachment 1B.

5.1 Population and Households

97. The Lot 2 project activities will affect 256 project affected households (PAHs) and 1,470 project affected people (PAP) with 726 females by various forms of losses (Table 5-1). Out of 256 PAHs, there are 40 PAHs (with 222 PAPs including 115 females) and 7 PAHs (48 PAPs including 10 females) will severely or completely loss their housing structures and shops respectively (Table 5-2 and Table 5-3).

Table 5-1 Number of Project Affected Households and People

No.	Village Name	Total # of Affected HH	Total Pop.	Female
1	B. Nasao	10	50	28
2	B. Namy	26	146	74
3	B. Nalao	16	112	57
4	B. Nawannoy	68	410	186
5	B. Thin	30	169	90
6	B. Vanghai	5	27	13
7	B. Pasak	25	145	61
8	B. Monetai	29	139	70
9	B. Longkordeua	46	267	144
10	B. Cheng	1	5	3
	Grant Total	256	1,470	726

Sources: Field Survey, July 2021

Table 5-2 Number of Households and People with Affected Housing Structures

No.	Village Name	Ethnic	# of HH	# of Affected Houses	# of Pop.	Female	Remarks
1	B. Namy	Lao Tai	1	1	6	4	One-story house
2	B. Navannoy	2 Lao Tai HHw and 3 Khmu HHw	5	5	26	10	All are one-story houses
3	B. Thin	Lao Tai	5	6	23	11	4 one-story houses and 2 two-story houses
4	B. Pasak	Lao Tai	1	3	4	2	All are one-story houses
5	B. Monetai	11 Lao Tai HHs and 1 Khmu HH	12	13	72	37	7 one-story houses and 4 two-story houses
6	B. Longkordeua	12 Lao Tai HHs and 4 Khmu HHs	16	18	91	51	13 one-story houses and 3 two-story houses
Total			40	46	222	115	

Sources: Field Survey, July 2021

Table 5-3 Number of Households and People with Affected Shops/Restaurants

No.	Village Name	Ethnic	# of HH	# of Affected shops	# of Pop.	Female	Remarks
1	B. Navannoy	Lao Tai	1	1	6	4	Retail Shop
2	B. Thin	Laotai	1	1	3	2	Noodle shop
3	B. Vanghai	Lao Tai	1	2	7	3	Restaurant
4	B. Monetai	1 Lao Tai HH and 1 Khmu HH	1	2	6	1	Restaurant
5	B. Longkordeua	2 Lao Tai HHs and 1 Khmu HH	3	4	26	10	Retail Shops
Total			7	10	48	10	

Sources: Field Survey, July 2021

5.2 Ethnic Groups

98. The ethnic groups are scattering across the project alignment. A Lao language is the main languages using by Lao Tai. It has recognized as an official language of the country. Lao Tai lives in the lowland area of the province and believes in Buddhism. Khmu traditionally lives in the middle hill areas. They are animist and tend to practice swidden agriculture. They utilise forest products as main sources of food and income. They are relatively isolated from the

dominant lowland culture - although there has been assimilation and integration for centuries. Their language links them to the Mon and the Khmer.

99. Table 5-4 below shows that the largest affected ethnic groups are Lao Tai⁵ (190 PAHs, 1,045 people), followed by Khmu (62 PAHs, 387 people), Hmong (4 PAHs, 38 people). Both Hmong and Khmu ethnic groups have been living in the area for a long time and they are well integrated into Lao mainstream population.

Table 5-4 Ethnic Groups of Project Affected Households

No.	Village Name	Lao Tai			Khmu			Hmong		
		HH	Pop.	F	HH	Pop.	F	HH	Pop.	F
1	B. Nasao	10	50	28						
2	B. Namy	25	133	69				1	13	5
3	B. Nalao	16	112	57						
4	B. Nawarnnoy	36	203	98	30	189	80	2	18	8
5	B. Thin	30	169	90						
6	B. Vanghai	4	21	10	1	6	3			
7	B. Pasak	13	71	29	12	74	32			
8	B. Montai	21	88	44	8	51	26			
9	B. Longkordeua	34	193	101	11	67	40	1	7	3
10	B. Jeng	1	5	3						
Grant Total		190	1,045	529	62	387	181	4	38	16

Sources: Field Survey, July 2021

5.3 Religions

100. Table 5-5 below shows number of affected household religion, which about 74% or all affected Lao Tai people practice Buddhism while affected Khmu and Hmong people believe in animism. As the project located in the city and three ethnic groups are well integrated into Lao society; therefore, a combination of spiritual and traditional practices is a common religion practice such as ceremony (Basi), asking for protection and luck from Buddha, and belief in life after the death and next life and so on.

Table 5-5 Religions of Project Affected Household

No.	Village Name	Buddhism (Lao Tai)			Animism (Khmu and Hmong)		
		HH	Pop.	F	HH	Pop.	F
1	B. Nasao	10	50	28			
2	B. Namy	25	133	69	1	13	5
3	B. Nalao	16	112	57			
4	B. Nawarnnoy	36	203	98	32	207	88
5	B. Thin	30	169	90			
6	B. Vanghai	4	21	10	1	6	3
7	B. Pasak	13	71	29	12	74	32

⁵ Which are not considered as IPs (none IP) under the WB policy (OP/BP 4/10).

No.	Village Name	Buddhism (Lao Tai)			Animism (Khmu and Hmong)		
		HH	Pop.	F	HH	Pop.	F
8	B. Montai	21	88	44	8	51	26
9	B. Longkordeua	34	193	101	12	74	43
10	B. Jeng	1	5	3			
Grant Total		190	1,045	529	66	425	197

Sources: Field Survey, July 2021

5.4 Infrastructures and Facilities

101. 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 5-6 below.

102. Water, sanitation and hygiene in the affected households are good. All affected households have access to pipe water supply. They have enough clean water to wash and clean. 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 5-7 for more details.

Table 5-6 Abbreviations of Infrastructure and Facilities in the Villages

Type of infrastructure and facilities	Abbreviations	Unit
19. Latrine	L	HH
20. Market	M	Number
21. Big Company	BC	Number
22. Small shop	SS	Number
23. Hotel and Guesthouse	HG	Number
24. All weather land road	A-R	Number
25. Boat transportation	BT	Number
26. Public bus	PB	Public transport
27. Pick-up and Truck	P-T	Car
28. Tractor	T	Tractor
29. Rice mill	RM	Number
30. Electricity Household	EH	HH
31. Industrial factory	ID	Number
32. Water well	WW	Well
33. Drilled bore	DB	HH/tap
34. Gravity fed water	GW	HH/tap
35. Pipe water	PW	HH

Type of infrastructure and facilities	Abbreviations	Unit
36. River and lake	R-L	River

Table 5-7 Summary of Infrastructure and Facility of Project Affected Households

No.	Village Name	1	4	5	9	10	12	17
		L	SS	HG	PT	T	EH	PW
1	B. Nasao	10			3		10	10
2	B. Namy	26			12		26	26
3	B. Nalao	16			15	1	16	16
4	B. Nawarnnoy	68	2		31	5	68	68
5	B. Thin	30			13	1	30	30
6	B. Vanghai	5	1	1	6		5	5
7	B. Pasak	25	1		18	1	25	25
8	B. Montai	29	2		23	2	29	29
9	B. Longkordeua	46	4		33	1	46	46
10	B. Jeng	1				1	1	1
Total		256		1	154	12	256	256

Sources: Field Survey, July 2021

5.5 Level of Education in Affected Villages

103. Table 5-8 shows overall level of education of affected people. Majority of affected people are in primary school. The data shows that the number of students was dropped from the lower secondary school level to the higher degree.

Table 5-8 Level of Education of Affected Households (Persons)

No	Village Name	Uneducated		Primary school		Lower secondary school		High school degree		Higher diploma		Bachelor's degree and beyond	
		Total	Female	Total	Female	Total	Female	Total	Female	Total	Female	Total	Female
1	B. Nasao	3	1	21	14	7	6	9	3	7	2	3	2
2	B. Namy	3	1	58	25	42	24	22	14	21	10		
3	B. Nalao	6	2	40	20	25	16	30	13	11	6		
4	B. Nawarnnoy	12	3	153	69	114	43	89	48	38	22	4	1
5	B. Thin	2	1	63	41	50	24	39	18	10	4	5	2
6	B. Vanghai			11	3	5	4	6	5	5	1		
7	B. Pasak			33	14	49	23	39	14	23	10	1	
8	B. Montai			48	25	42	19	34	17	14	9	1	
9	B. Longkordeua			85	49	90	46	69	38	23	11		
10	B. Jeng					2	1	2	2	1			
Total		26	8	512	260	426	206	339	172	153	75	14	5

Sources: Field Survey, July 2021

5.6 Land Use

104. Land use in the project area has been used for different purpose and classify for residential, rice paddy, upland rice paddy, industrial tree plantation and village forest land. The majority of land in the village is used for upland rice cultivation. Villagers have land registered with titles and land use certificates received.

105. Table 5-9 summarizes total land categories in the project villages. Data provided by the local authorities during village surveys indicated that the main type of land use in the project villages is garden land (29ha) followed by paddy field area (27 ha) and 16ha of residential land.

Table 5-9 Land Use of Project Affected Households

No.	Village Name	Residential land (Ha)	Paddy Field (Ha)	Garden Land (Ha)
1	B. Nasao	0,22	2	2,16
2	B. Namy	3,64		0,13
3	B. Nalao	1,58	20,97	3,5
4	B. Nawannoy	2,38	2,70	7,89
5	B. Thin	1,58		2,8
6	B. Vanghai	2,4		1
7	B. Pasak	1,67		5,33
8	B. Monetai	0,94	1,05	4,1
9	B. Longkordeua	2,04		1,62
10	B. Cheng	0,03		0,05
Total		16	27	29

Sources: Field Survey, July 2021

5.7 Domestic Animal

106. Table 5-10 below shows the number of domestic animals of PAHs. The majority of PAHs raise poultry and cow as main sources of food and incomes.

Table 5-10 Domestic Animal of Project Affected Households

No.	Village Name	Buffalo		Cow		Goat		Pig		Poultry		Fish pond	
		# of animal	# of HH	# of animal	# of HH	# of animal	# of HH	# of animal	# of HH	# of animal	# of HH	# of animal	# of HH
1	B. Nasao									30	6		
2	B. Namy	27	5	63	13	72	13			433	15		
3	B. Nalao			45	3					341	8		
4	B. Nawarnnoy			41	2	12	1			117	25		
5	B. Thin									20	4		
6	B. Vanghai	3	1			15	1	15	2	230	5		
7	B. Pasak			5	1	5	1			344	7		
8	B. Monetai	7	1	34	3	26	1			373	10		
9	B. Longkordeua	10	2	50	5	24	2			1172	21		
10	B. Cheng	9	1	8	1					90	6		
Total		56	10	246	28	154	19	15	2	3,150	107		

Sources: Field Survey, July 2021

5.8 Poverty Groups

107. Table 5-11 indicated that there are 4 poor PAHs with 22 PAPs (8 females) will be directly affected by the Lot 2 project activities. This includes 2 Lao Tai PAHs (7 PAPs including 3 females) and 2 Khmu PAHs (15 PAPs including 5 females). Their losses will include garden lands, crops, fruit and residential land as presented in Table 5-12. Also, special assistances and livelihood restoration measures for those affected poor households are provided in Section 7.8.

Table 5-11 Affected Poor Households

No.	Village Name	Total			Lao Tai			Khmu		
		HH	Pop.	F	HH	Pop.	F	HH	Pop.	F
1	B. Nawannoy	4	22	8	2	7	3	2	15	5
Total		4	22	8	2	7	3	2	15	5

Sources: Field Survey, July 2021

Table 5-12 Losses and Compensation Costs of Affected Poor HHs

No.	Village Name	Residential Land		Garden Land		Crops and Fruit Trees	
		Affected Area (m ²)	Compensation Cost (LAK)	Affected Area (m ²)	Compensation Cost (LAK)	# of Tree	Compensation Cost (LAK)
1	B. Nawannoy	64,2	38.520.000	3294,25	118.593.000	300	28.902.000
Total		64,2	38520000	3294,25	118593000	300	28902000

Sources: Field Survey, July 2021

5.9 Affected Vulnerability Groups (VG)

108. Table 5-13 indicates that the Lot 2 will directly affect 5 female headed households (27 people including 14 females) in three villages. Their losses will include chicken coop, residential land, garden lands, and crops/fruit trees as presented in Table 5-14. Also, special assistances and livelihood restoration measures for those affected poor households are provided in Section 7.8.

Table 5-13 Affected Vulnerable Households

No.	Village Name	Total			Lao Tai			Khmu		
		HH	Pop.	F	HH	Pop.	F	HH	Pop.	F
1	B. Thin	1	3	2	1	3	2			
2	B. Pasak	1	10	5	1	10	5			
3	B. Monetai	3	14	7	1	4	3	2	10	4



No.	Village Name	Total			Lao Tai			Khmu		
		HH	Pop.	F	HH	Pop.	F	HH	Pop.	F
Total		5	27	14	3	17	10	2	10	4

Table 5-14 Losses and Compensation Costs of Affected Vulnerable Households

No.	Village Name	Chicken coop		Residential Land		Garden Land		Crops and Fruit Trees	
		Affected Area (m ²)	Compensation Cost (LAK)	Affected Area (m ²)	Compensation Cost (LAK)	Affected Area (m ²)	Compensation Cost (LAK)	# of Tree	Compensation Cost (LAK)
1	B. Thin	-	-			150	5,400,000	3	336.000
2	B. Pasak	-	-	36	21,600,000			28	792.000
1	B. Montai	25	8,317,325	155.6	93,360,000			86	5,160.000
Total		25	8,317,325	192	114,960,000	150	5,400,000	117	6,288,000

Sources: Field Survey, July 2021

6 Legal Framework

109. The main objective of compensation policy under this RAP2 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 and 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 ARAP1/RAP2 have been prepared and implemented in accordance with the policies.

110. This RAP2 for ODX 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 Resettlement Strategy and Eligibility

111. 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

112. 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:

- 1) 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;
- 2) Ensure design standards minimize the need to impose land use restrictions on adjoining areas;
- 3) 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;
- 4) 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;
- 5) 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;
- 6) 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;
- 7) 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;
- 8) All PAP and PAH, without regard to legal status of property, will receive compensation and required 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 RAP2 is developed;

- 9) 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
- 10) 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 Matrix illustrated in this report.

7.1.1 Cash Compensation Approach

113. 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, land of at least the same 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.

114. 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

115. The project has completed the inventory of loss and the estimation of the compensation cost. Based on the current design, resettlement will not be required. The survey indicates that there are 46 houses belong to 40 households will be affected by the Lot 2 project activities. However, all 40 PAHs prefer for self-relocation as they plan to rebuild their houses in other place with accessible social services. Also, cash compensation will be made for their affected structures and trees with assistance from the Project on dismantlement and transportation to the new place.

7.1.3 Additional Livelihood Restoration Measures

116. The detailed approach to livelihood restoration is outlined in Section 7.8. 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 will 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. A livelihood restoration plan including the measures will be developed for severely affected households/peoples. This includes those who are vulnerable. The livelihood restoration plan will be submitted to the Bank for review prior to physical relocation of the affected people.

7.1.4 Compensation Principles

117. 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 provided 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 Compensation Categories

118. The compensation categories defined below identify the compensation scenarios that the Project and affected persons will experience:

- Permanent Loss;
- Temporary Loss; and
- Temporary Disturbance.

7.2.1 Permanent Loss

119. Permanent loss occurs when land and/or assets are permanently transformed from their pre-Project use. This also applies to land permanently alienated by the Project – e.g. land within the Project Development Area where, for safety reasons, residents will not be permitted to cultivate and / or use land regardless of whether it is directly affected by the Project. When permanent loss of land is less than 10% of a household’s productive assets, in-kind compensation should be the preferred compensation (from the perspective of the Project), but cash could be allowed if households prefer. When permanent loss is 10% or greater of a household’s productive assets, the land and/or asset owner should be offered in-kind compensation of land and assets of equal or greater productivity at the time that the property is appropriated by the Project. In case suitable replacement land is not available, alternative livelihood restoration strategies may need to be designed.

120. The “replacement land” will need to be sufficient to actually replace lost land and assets with land of equal productivity, or assets of equal value/quality/size. The “replacement option” should also be sufficient to incorporate transaction costs at local market value at the time of compensation (i.e. market value plus an appropriate percentage or lump sum to account for such costs and inconvenience). Provision of a “productivity allowance”, may be required, to compensate for any differences in productivity of the replacement land. The Project will also provide livelihood support to prepare the land and bring it to the level of productivity of land lost.

7.2.2 Temporary Loss

121. Temporary loss may occur when land is temporarily used for Project activities (e.g. construction area) or temporarily alienated, where the owner does not have access to the land during the period it is utilized for the Project. Land and/or assets should be returned to the affected household as close to their original condition as possible or as agreed by both parties.

122. In such instances, landowners (including village administration and custom owners) are offered a “rental (or subsistence) allowance” for the period of loss sufficient to cover the economic / livelihood loss incurred by the temporary loss of access to this land. The “rental allowance” is equivalent to the lost productive value of the land at the local market value for the year in which the loss occurred.

123. At the end of the “rental period” the productivity of the land is assessed against the productivity prior to the “rental period”. If the productivity of the land has not been adversely impacted the land will be returned to the Landowner. However, if the land has been adversely impacted, landowners can be offered either:

- a. In-kind compensation in the form of replacement land (hectare for hectare, quality for quality) of equal productivity; or
- b. Assistance to restore the productivity of the land.

124. Temporary Loss entitlements are discussed in further detail in the Entitlement Matrix (Table 7-1).

7.2.3 Temporary Disturbance

125. Temporary disturbance will occur in areas adjacent to Project activities, that, while the owner will still have access and use of their property, that access and use may be disturbed by Project activities (e.g. land disturbed for temporary construction access road). Depending on the severity of disturbance, the landowner may be offered a “disturbance allowance” for the period of disturbance. The “disturbance allowance” would be sufficient to cover the economic loss incurred by the disturbance as following:

- a) For affected house and shop with no proof of income (such as income tax payment receipt) will receive allowance of 3 month supply of rice per person in the household with the allowance equivalent to 16 kg 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.

126. At the end of the “disturbance” period, the productive value of the land (or other livelihood stream) should be assessed against the value prior to the “disturbance” period. If the land (or other livelihood stream) has been adversely impacted, landowners will be offered:

- a. Replacement land or compensation for productivity loss; or
- b. Assistance to restore the productivity of the land.

127. Temporary Disturbance. For temporary disturbance due to delayed construction, if adverse impacts arise as a result of delayed construction progress, work related accidents and technical errors that may be made by the contractors, additional compensation may be provided based on the consultation with the affected households/individuals. When this is the case, a supplementary compensation/support plan will be prepared by the pertinent Contractors in

consultation with the affected households. The supplementary compensation/support plan will be submitted to the World Bank for review. Progress and outcome of the supplementary compensation/support plan will be reported to PIU and the World Bank on a monthly basis. The workplan implementation will be strictly followed by the contractors and closely supervised by ISWS/CSC consultant to ensure timely work completion and further adverse impacts on the local people and communities are avoided. For other type of temporary disturbance such as temporary use of land (to facilitate construction process), see Table 7.1 (below) – subsection on Temporary Use of Land.

7.3 Eligibility Policy

7.3.1 Categories of Displaced Persons

128. The Lao PDR sub-projects will have both positive and adverse (negative) impacts on people in Oudomxay's provincial capital, Muang Xay, 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.

129. 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

130. At greater risk of impoverishment when their land and other assets are affected. During the RAP2 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.

7.3.2 Displaced Persons Eligibility Criteria

131. 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.
132. 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.
133. 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.
134. 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 house/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.⁶
135. 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.

⁶ 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.

136. 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.).

7.3.3 Eligibility Cut-Off Date

137. The eligibility cut-off date should be the date of completion of the census and assets inventory of 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, birth). Similarly, fixed assets (such as built structures, crops and fruit trees) established after the date of completion of the assets inventory, or an alternative mutually agreed on date, should not be compensated, unless they are considered to be a part of the community's natural growth.

138. 'If adequate public notice of the cut-off date has been given, persons who settle in the project site after that date are not entitled to compensation for lost assets or any other form of resettlement assistance' (World Bank Group's Handbook for Preparing a Resettlement Action Plan, 2002).

139. In addition to the Letter of Cut-Off-Date issued by the Governor of Muang Xay on 6 July 2016, the DPWT of Oudomxay Province has recently issued new Cut-Off Date letter on 12 February 2020 to notify Government departments, organizations, people's army, public security, village authorities and other line agencies within the Muang Xay City that between 2020 and 2022, the DPWT of Oudomxay Province will implement the Flood Risk Management Project (Urban Flood Protection) in Nam Kor, Nam Mao and Nam Hin Rivers (Attachment 7). The letter emphasises the project activity will require land acquisition on Nam Mao and Nam Kor Rivers, and therefore the DPWT notifies all stakeholders who are currently managing Nam Mao, Nam Hin and Nam Kor Rivers to provide cooperation and follow the notification as follows:

- Do not construct any structure such as house, restaurant, services shop, animal pen/coop, riverbank protection, and other buildings on preserved areas of Nam Mao, Nam Hin and Nam Kor Rivers;
- Do not excavate soil, gravel, sand, fill or cut the river channel without permission from relevant authorities;
- For existing houses, restaurants, shops and other buildings within riverbank areas of Nam Mao, Nam Hin and Nam Kor that have been constructed previously shall not be upgrade or extended until the project has completed the survey – design, inventory of land and assets. Buildings or structure occurred outside the project development areas can be improved but it will require obtaining permission based on relevant regulations.

140. The Governor of Oudomxay Province has recently established a Provincial Resettlement Committee (PRC) (No. 039/PG.UDX, dated 09/01/2020) (please see Attachment 5). 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 applicable international standards.

141. More recently, the Provincial Governor of Oudomxay Province has established an ad hoc committee (No. 518/PG.UDX, dated 20/5/2020) responsible for development of compensation rates for DRM project (please refer to Attachment 6). 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.

7.4 Entitlements

142. The Project entitlements presented in the Entitlement Matrix and summarized below will address the various types of losses that may potentially occur due to Project implementation, as identified and presented in this RAP2. As set out above, the absence of legal or formal title to land is not a bar to compensation. Both male and female members of Project Affected Households should be equally consulted, and their rights recognized. Negotiations, compensation payments, and livelihood restoration, should be with both male and female head/s of each household.

143. 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 agricultural land loss at equivalent at full replacement cost. The option should also be provided for agricultural land-for-land replacement of equal productive capacity acceptable to Project Affected Households;
- Cash compensation for residential land and asset loss at equivalent at full replacement cost. The option should also be provided for DOW to provide replacement of residential land and assets of equal size acceptable to Project Affected Households;
- Community land-for-land replacement of equal value acceptable to the affected people will need to be provided, or cash equivalent at full replacement cost if there is no community land available;
- Cash compensation for renters, crops, trees and other productive assets lost due to the Project;
- Replacement or re-installation of like for like utilities and facilities, such as wells, sanitation facilities, and road networks where these are impacted by the Project; and
- Compensation for relocation of public works and other collective assets through in-kind replacement of structures to equivalent or higher standard.

144. The actual compensation entitlements should be finalized and agreed upon in consultation with PAHs, affected communities, the provincial and district authorities. DOW

should formalize outcomes of this consultation in a Compensation Agreement and liaise with the local authorities to determine compensation rates.

7.4.1 Rates for Compensation

145. The value of compensation for assets should be based on replacement cost, 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.

146. The Provincial Resettlement Committee (PRC) has been established as per the Agreement of the Provincial Governor (No. 518/PG.UDX, dated 20th May 2020). The Committee was established specifically for Project to oversee the compensation activities associated with the Project. This committee has also confirmed the compensation rates to be used so they are fair and acceptable for all Project Affected Households. Please refer to Attachment 3 the Decision of Provincial Governor, No. 1105/GOV.ODX, dated 15 September 2020 on the compensation unit rates.

147. Further details on the intended compensation for affected structures and industrial trees are provided in the entitlement matrix below.

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

- Lowland rice paddy: compensation = (loss land area x market price of land in each zone) + compensation for crops, whereas:
Compensation for crop = crop yield (tonne/ha/year) x area x price of crop (Kip/tonne) x 5 (years). The calculation is based on actual crop yields and open market prices.
- Agriculture land: Compensation = (loss land area x price of land in each zone) + tree/crop compensation.
- Residential land: Compensation = (loss land area x price of land in each zone) + damage cost of structure (if applicable).
- Trees and Crops: Compensation = (land clearance cost + seedling cost) + maintenance cost x number of trees maintained).
- For annual crops: there will be no compensation provided for annual crops as prior to the commencement of the project, the contractor will allow the farmers to harvest their produces at least six months in advance. If the farmers are not formally informed and the project is required to use the land where crops are not ready for harvest, the project then will provide compensation for annual crops as per the valuation of the PRC.

149. 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 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 Oudomxay province (M. Xay) was 30.897%. However, 20% of inflation rate was already added into the compensation rates approved by the Provincial Governor (1105/GOV.ODX, dated 15 September 2020) during the RAP preparation and therefore only 10.897% additional inflation rate of construction materials was added into the compensation cost in this RAP2.

7.4.2 Compensation Matrix

150. 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 Entitlement Matrix.

Table 7-1 Entitlement Matrix

Type of Losses	Entitled Persons	Entitlements	Implementation Issues/concerns
A. Loss of Land			
Residential Land	Legal owner or occupant identified during census and tagging.	<p><u>With</u> remaining land sufficient to rebuild houses/structures: (i) Cash compensation at replacement cost which is equivalent to the current market value of land of similar type and category, and free from transaction costs (taxes, administration fees) and (ii) PIU to improve remaining residential land at no cost to PAP/PAH (e.g., filling and leveling) so PAP/PAH can move back onto a plot.</p> <p><u>Without</u> remaining land sufficient to rebuild houses/structures: (i) Replacement of land equal in area, same type and category, without charge for taxes, registration and land transfer, with land title (assuming Land Titles are available in the area); if not, land survey certificate, OR (ii) cash compensation at replacement cost which is equivalent to the current market value of land of similar type and category, free from transaction costs (taxes, administration fees) plus assistance to purchase and register</p>	As per WB's OP 4.12 on Involuntary Resettlement, legal status of land use/tenure is not a barrier to compensation for affected households.

Type of Losses	Entitled Persons	Entitlements	Implementation Issues/concerns
		land.	
B. Loss of Structures			
Totally Affected Houses/Shop s, and Secondary Structures (kitchen, rice bins) Partially Affected Houses/Shop s but no longer viable (Will require relocation)	Owners of affected houses whether land is owned (regardless of legal status).	Cash compensation at replacement cost for the entire structure equivalent to current market prices of (i) materials, with no deduction for depreciation of the structure or salvageable materials; (ii) materials transport; and (iii) labor cost to cover cost for dismantling, transfer and rebuild; and	The cash compensation for the entire structures may not be based on the current market price at the time. Thus, second market survey is carried out for cost adjustment before submission of this revised RAP. Concern that the compensation may not be released before the dismantling and before their transfer, thus affected owners may advance these costs.
		Timely provision of trucks for hauling personal belongings at no cost to the PAP.	The trucks that will haul the personal belongings shall have enough laborers The personal belongings shall be itemized and ensure that its secured and safe during the actual transfer Transfer and hauling shall not be during rainy season
Partially Affected Houses and Shops and secondary structures (Will not require relocation)	Owners of affected houses whether or not land is owned.	Cash compensation at replacement cost for the affected portion of structure equivalent to current market prices of (i) materials and labor, with no deduction for depreciation of the structure or for salvageable materials (ii) materials transport, and (iii) cost of repair of the unaffected portion.	Cash compensation may not be based on the current market prices. Thus, second market survey is carried out for cost adjustment before submission of this revised RAP. Cash compensation may not be release timely or delayed in available of

Type of Losses	Entitled Persons	Entitlements	Implementation Issues/concerns
			funds.
Electricity Poles	Electricity Companies.	Cash compensation for cost to dismantle, transfer and rebuild.	Possible brown-out in the village due to the possible delay in the installation of electricity because of the compensation payment to EDL Company.
C. Loss of Livelihoods Activities Including Crops, Trees and Ponds			
Productive Land (paddy, garden, and Teak Plantation)	Legal owner or occupant identified during census and tagging.	For marginal loss of 10% (or less) of land, cash compensation at replacement cost which is equivalent to the current market value of land within the village, of similar type, category and productive capacity, free from transaction costs (taxes, administration fees).	Legal owners are those who received land utilization certificates or land titles from the Land Titling Project.
		Replacement land of similar type, category and productive capacity of land within or nearby the village, with land title.	The replaced land may not be suitable for agricultural activities and may be very far away from their village.
		If the impact on the total productive land is 10% or more, as a priority, replacement land of similar type, category and productive capacity of land within or nearby the village, with land title (assuming Land Titles are issued in the area). If not, land use certificate to be issued. Alternatively, at the request of PAP or PAH, cash compensation at replacement cost plus assistance to purchase and register land.	
	Crops and Trees	Cash compensation at replacement cost for the affected trees, crops.	Cash compensation may not be release timely or delayed in available of funds.
Other livelihood impacts	Poor and Vulnerable people	PAPs or households whose livelihoods is based on the service sector or in hunting, fishing, gathering or otherwise exploiting natural resources that are lost or adversely affected by the Project shall receive training support for economic restoration in alternative sustainable livelihoods.	Transparant process of identifying vulnerable PAPs/PAHs during surveys and payment of compensation. The timing of the conduct of trainings to support

Type of Losses	Entitled Persons	Entitlements	Implementation Issues/concerns
		<p>During the construction phase, about 10 shops will suffer certain amount of income losses, as they may lose their customers due to construction work and access constraints. These shops will receive compensation of 3 months net income calculated based on their actual monthly net income. For the informal business, the calculation will be based on their income-tax paid monthly.</p> <p>Livelihood assistance or to have access to the work associated with the construction work of the Project.</p> <p>The measures focus on avoiding potential 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 (such as an allowance of 1 month supply of rice per person in the household with the allowance equivalent to 16 kg of rice at current market price and increased security of tenure).</p> <p>Other special assistances to the poor HHs and vulnerable groups are provided in Section 7.8</p>	<p>their alternative livelihood.</p> <p>Poor and vulnerable people limited opportunity to work during construction due to required labour skills for civil works</p>
D. Loss of Common Property Resources			
Permanent loss of physical cultural resources/ public structures/ village or collective ownerships	Villagers or village households.	Compensation at replacement cost for present/existing structures based on its present value.	No implementation issues raised by the PAPs/PAHs
Graves	Owners of graves.	Compensation for the removal,	

Type of Losses	Entitled Persons	Entitlements	Implementation Issues/concerns
located in the affected areas		excavation, relocation, reburial and other related costs will be paid in cash to each affected family.	
<i>E. Temporary Impacts Due to Sub-Project Construction or Maintenance</i>			
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 within 1 month after closure of the by-pass route or removal of equipment and materials from contractor's working space subject to the conditions agreed between the landowner and the 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	Relocating households – to other sites.	Provision of dump trucks to haul all old and new building materials and personal possessions.	PAP/PAH may also opt for cash assistance. The amount (cost of labor and distance from relocation site) to be determined during implementation.

7.5 Resettlement Measures

151. Displaced persons will be entitled to the following types of compensation and rehabilitation measures. The proposed package here will be consulted with affected people during the field survey data collection:

(1) Displaced persons losing agricultural 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) *Displaced persons losing residential land and structures*

- a) Loss of residential land and structures will be compensated either in-kind (through replacement of house site and garden area of equivalent size, satisfactory to the displaced person, or in cash compensation at replacement cost.
- b) If after partial land acquisition the remaining residential land is not sufficient to rebuild or restore a house of other structures of equivalent size or value, then at the request of the displaced person the entire residential land and structure will be acquired at replacement cost.
- c) Compensation will be paid at replacement cost for fixed assets.
- d) Tenants, who have leased a house for residential purposes 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 alternative accommodation.

(3) *Displaced persons losing business*

- 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 displaced business operator; (ii) cash compensation for lost business structures; and (iii) transitional support for loss of income (including employee wages) during the transition period.

(4) *Infrastructure and access to services*

- a) Infrastructure (such as water sources, roads, sewage systems or electrical supply) and community services (such as schools, clinics or community centers) will be restored or replaced at no cost to the affected communities. If new resettlement sites are established, infrastructure and services consistent with local standards will be provided at no cost to the relocated persons.

7.6 Site Selection, Site Preparation, and Relocation

152. The project has completed the inventory of loss and the estimation of the compensation cost. Based on the current design, resettlement will not be required. The survey indicates that there are 46 houses belong to 40 households will be affected by the Lot 2 project activities. However, all 40 PAHs prefer for self-relocation as they land to rebuild their houses in other place with accessible social services.

153. In case of relocation will happen to the site selections, site preparation and relocation plan will be designed, and report will cover information about the selected site and below information, but not limited to:

- 1) Institutional and technical arrangements for identifying and preparing relocation sites, whether urban or rural, for which a combination of productive potential, locational advantages, and other factors is at least comparable to the advantages of the old sites, with an estimate of the time needed to acquire and transfer land and ancillary resources;
- 2) Any measures necessary to prevent land speculation and influx of ineligible persons at the selected sites;
- 3) Procedures for physical relocation under the sub-projects; including timetables for site preparation and transfer; and
- 4) Legal arrangements for regularizing tenure and transferring titles to resettle.

7.7 Housing, Infrastructure, and Social Services

154. The project has completed the inventory of loss and the estimation of the compensation cost. Based on the current design, resettlement site with housing, infrastructures and social services will not be required. The survey indicates that there are 46 houses belong to 40 households will be affected by the Lot 2 project activities. However, all 40 PAHs prefer for self-relocation as they land to rebuild their houses in other place with accessible social services.

155. 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).

7.8 Livelihood Restoration Measures

156. All eligible APs are entitled to income restoration measures sufficient to assist them to improve or at least maintain their pre-project living standards, income earning capacity and production levels.

157. In case the vulnerable and poor households are affected by the project activity. They are the following groups of households:

- a) Divorced or widowed female headed households with dependents and low income between 240,000 to 500,000 Kip per month per capita;
- b) Households with disabled or invalid persons and with low income between 240,000 to 500,000 Kip per month per capita;
- c) Households with persons falling under the government poverty line of 240,000 Kip per month per person; and
- d) Elderly households with no means of support and with low income between 240,000 to 500,000 Kip per month per capita.

158. These vulnerable households will need support for livelihood assistance or to have access to the work associated with the construction work of the Project. Thus, special measures, additional to the compensation entitlements, aimed to improve their status to bring them up to an acceptable level above the poverty line will be applied for the vulnerable group.

159. The measures focus on avoiding potential 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.

160. For affected house and shop with no proof of income (such as income tax payment receipt) will receive allowance of 3 month supply of rice per person in the household with the allowance equivalent to 16 kg of rice at current market price). The allowance cost is provided in Table 13-1.

161. 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.

162. 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.

163. 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 Arrangement

164. The implementation framework of this RAP2 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

165. The institutional structures has been put in place for the implementation of the RAP2 for the Project which was consistent with national guidelines and included:

- 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 Muang Xay Oudomxay, the Sub-Project Owner;
- Public Works and Transport Institute (PTI) partnered to support preparation of safeguard instruments (ESMF, CRPF, EGEF and ESMP, RAP2, EGEP), monitoring and reporting on implementation of the safeguard instruments including RAP2;
- Provincial Resettlement Committee (PRC, Oudomxay Province) led by the Provincial Vice-Governor and comprises of relevant provincial departments in charge of oversight and review of RAP2 preparation, compensation and GRM;
- District Compensation and Resettlement Units (Muang Xay) by the District Vice-Governor of Muang Xay and comprises of relevant district offices which serves as a secretariat of PRC) in charge of supervision, review and report on RAP2 implementation, compensation and handling with GRM;

8.2 Provincial Resettlement Committee (PRC)

166. A Provincial Resettlement Committee (PRC) has been established for the Project in Oudomxay Province. PRC members have been appointed by the Governor of the Province. The PRC's main role will be to oversee the implementation of RAP2 for the project, and the committee will meet at least quarterly or more regularly if required.

167. The PRC has been recently established with an Agreement of the Provincial Governor (No. 039/PG.UDX, dated 09/01/2020) 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 was the Vice-Governor. Representatives of the PRC should include:

- Vice-Governor of Oudomxay 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.

168. 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

169. 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) 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.

170. The members of the DRC included representatives from all districts potentially affected by the project. The DRC was chaired by the Vice-Governors of the relevant districts. The representatives from district required to provide full and balanced advice on RAP2 implementation include:

- Vice-Governor Muang Xay;
- 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.

171. Village Authority is responsible for facilitating RAP2 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 (See Attachment 13), 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

172. 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 ODX project.

173. The PMU with the support from EDPD/PTI will have a supervisory role in planning, capacity building and monitoring the implementation of RAP2 to ensure that provisions contained in the RAP2 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 had 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 RAP2. 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 Community Participation, Consultation and Information Disclosure

9.1 Information Disclosure

174. Both English language and Lao language versions (executive summary) of RAP2 were posted on the MPWT official government website and distributed to national and local governments, key stakeholders and civil society organizations, and different stakeholders two weeks prior to the public consultation meeting. Consultation indicated that consulted stakeholders, including affected households supported implementation of the proposed subproject.

175. Once the RAP is cleared by the World Bank for implementation, the RAP2 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 RAP2 will be disclosed on the World Bank's website.

9.2 Consultation Process

176. 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 held to understand their perspective and inform project design as well as overall impact mitigation approach.

177. PAP and PAH has been and will be involved in various process, including the grievance redress process to ensure their participation in the decision-making process throughout various stages of the RAP2 process, including preparation and implementation.

9.3 Consultation during preparation of RAP2

178. Representative of PAHs were invited to participate in public meetings in the early stages of the RAP2 preparation. They were provided with reliable information on the proposed ODX project, its impacts and proposed mitigation measures and economic restoration activities. Information publicly disclosed include cut-off dates for each sub-project, eligibility criteria and entitlements, modalities of compensation, complaints and grievance redress procedures. The PAP and PAH and various groups of project stakeholders were provided with opportunities to present their ideas and suggestions as inputs into the RAP2 and process of establishing unit costs of compensation for affected land and assets 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. The consultation meetings and FGD were delivered in local language.

179. During the preparation of compensation unit rates and EIA, ESMP, ARAP1/RAP2 and EGEP, consultations have been undertaken at various levels with the district and village authorities and the representative of the affected people and directly with the PAHs. This process will continue throughout the Project. Table 9-1 below provides list of the meetings jointly attended by the consultant team, PMU, PIU and resettlement comminitess while the Table 9-2 provides list of the meetings with local communities and PAPs/PAHs. List of participants are in Attachment 8, 10 and 11.

Table 9-1 Locations and Participants of Consultation Meetings

Dates	Meeting Locations	Male	Female	Total
22 Nov 2019	Oudomxay Province	34	7	41
21 Jan 2020	Oudomay Province	30	7	37
11 Mar 2020	Oudomxay Province	14	7	21
31 March 2021	Oudomxay Province	31	13	44
	Total	109	34	143

180. During 13-22 May 2020, opening meetings and focused group discussions (FGD) with local communities and PAPs/PAHs were conducted with a total number of 747 participants, of which 287 are females (see Table 9-2). Participants were from affected households (men, women, ethnic minorities, and disadvantaged people), village authorities, and representatives from Muang Xay Women's Union, Lao National Front for Development and Provincial Public Work and Transport. The summary of consultation results and list of participants are in **Attachment 9 and 10**. The objectives of consultation were:

- To disseminate information on project: positive and negative impacts and mitigation measures;
- To obtain opinions, concerns and recommendations of community people about implementation of the project;
- To conduct Inventory of Loss (IOL);
- To collect data and information for ARAP1/RAP2, ESMP and EGEP.

Table 9-2 Number of Participants in May 2020

No.	Village	Date	No. of participants	
			Total	Female
1	Houaykhoun	21/5/2020	51	21
2	Nasao	21/5/2020	59	28
3	Namy	22/5/2020	16	7
4	Nalao	22/5/2020	22	11
5	Nawarnnoy	13/5/2020	55	23
6	Thin	13/5/2020	51	16
7	Nongmaengda	19/5/2020	107	33
8	Vanghai	14/5/2020	83	39
9	Pasak	14/5/2020	34	10

No.	Village	Date	No. of participants	
			Total	Female
10	Monetai	15/5/2020	32	14
11	Cheng	18/5/2020	20	8
12	Viengsa	20/5/2020	69	23
13	Homsouk	18/5/2020	35	22
14	Laksi	19/5/2020	53	11
15	Donekeo	20/5/2020	21	8
16	Longkordeua	15/5/2020	39	13
Total			747	287

181. Brief results from these consultation events are summarized in the following Table 9-3 while Attachment 9 provides results of consultation in each village.

Table 9-3 Summary Results of Consultation Meetings during Nov 2019-March 2021

Meeting date	Method and Objectives	Results from the meetings
22 Nov 2019 21 Jan 2020	Open meeting with resettlement committee: To discuss project's compensation unit price; to present unit price data collection form, affected people data collection form	<ul style="list-style-type: none"> The field mission aimed to complete at less 80% of data collection, especially data on affected assets; Data to be used for the analysis should be a combination of data from the survey and secondary data collected from village and district authorities; Composition of the Grievance Redress Mechanism members should be improved. GRM committee at provincial and district level should be the lead and assigned technical staff to coordinate and implement together with the project team at the field level; The unit prices should be adjusted to ensure it is in line with the WB policy on Involuntary Resettlement (OP/BP 4.12) as provided in the project's RPF; Unit price for rubber plantation tree has to adjust to market price; The land title for the affected land should be used based on the land title to be provided by the land owner; To avoid any issues in the future regarding conflict on land, no new land title to be issued from December 2019 onward, for the land located in the project area; In the future, more consultation meetings to be organized with the affected people; Muang Xay authority issued a notification of prohibits to do permanent construction in the project area, effective

Meeting date	Method and Objectives	Results from the meetings
		<p>from beginning of August 2017;</p> <ul style="list-style-type: none"> Detail name of affected people is not yet available, as this is a preliminarily data collection. <p>All recommendations are integrated and responded in the project design and this RAP2.</p>
11 Mar 2020	<p>Open meeting with resettlement committee:</p> <p>To discuss compensation unit price that consolidated the market prices; to present and discuss numbers and types of affected asset; follow up on data collection; present work plan.</p>	<ul style="list-style-type: none"> Agreed to apply market price; Compensation to be provided to the affected people who use form 01, following rule and regulation; Residential land that has minutes will not allowed to do any construction on the land, but not following the minutes, that land will not be compensated; More than 90% of affected people constructed structural infrastructures along the river side, which before defined the right of way along the riverside 20 meters. The compensation should be provided to them based on the current situation; Compensation for trees and bamboo trees shall be made for the big trees only; Vegetable growth along the riverside shall be compensated according to effect of annual sale volume/amount; Upon approval of the compensation unit price, dissemination of this information and all attachments will be made and announced to affected household; Types of land and assets affected by the project will be applied to those that their livelihood affected by the project. <p>All recommendations are integrated and responded in the project design and this RAP2.</p>
13-22 May 2020	<p>Focused group discussion with villagers and village and local authorities:</p> <p>To discuss and obtain concerns and recommendations on the project activities,</p>	<ul style="list-style-type: none"> All participants supported the project and agreed that the project will help reduce potential floods, boost economic growth, beautiful urban environment with more attractive sites, urban landscape is cleaner and nicer, local people have suitable area for selling their goods along the riverbank that will then increase incomes; Concerns on land acquisition and compensation issues such as the project will take their land without

Meeting date	Method and Objectives	Results from the meetings
	potential impacts and proposed mitigation measures.	<p>compensation;</p> <ul style="list-style-type: none"> Request for compensation of losses with reasonable unit price and equal value and before construction activities begin; Request for the project to provide them new land in case PAPs have no land; Consultation and verification with PAPs on the their losses and compensation amount; Concerns on the community health and safety, noise, dust, solid wastes, wastewater, sediment, spillage of hazardous materials and other social issues during the construction phases; Request to recruit local people as skilled or unskilled labours for the construction works. <p>More details are provided in Attachment 9 and all relevant concerns and recommendations were addressed in this RAP2 and the updated ESMP. List of Participants is in Attachment 10.</p>
31 March 2021	<p>Open meeting with representative of PAPs/PAHs and authorities from village, district, provincial and local and central levels:</p> <p>To discuss on draft EIA, ESMP, ARAP1/RAP2 and EGEP.</p>	<ul style="list-style-type: none"> The project design shall be consulted and agreed with local authorities; To discuss and consult with temple and local authorities on the project design not to affect the local stupas; To confirm and verify the loss and compensation with PAPs clearly during the ARAP1/RAP2 implementation; Pay high attention on community health and safety including noise and dust control, management of solid wastes and waste water, construction wastes, sedimentation and turbidity during the construction phase as well as rehabilitation of borrow areas and camp sites after use; Identify road for transportation of construction materials and pay high attention on road safety and community safety; Strictly implement the mitigation measures specified in the ESMP, ARAP1/RAP2 and EGEP; Compensate for affected land, structures and trees at

Meeting date	Method and Objectives	Results from the meetings
		<p>reasonable price to PAPs' bank account directly and before commencement of construction activities;</p> <ul style="list-style-type: none"> Allocate sufficient monitoring budget to involve line sectors at each level in the monitoring of the ESMMP (ESMP, ARAP1/RAP2 and EGEP) implementation. <p>All recommendations are integrated and responded in this RAP2 and the updated ESMP. List of Participants is in Attachment 11.</p>

9.4 Consultation during implementation of RAP2

182. The summary of RAP will be disclosed in local languages in the village common spaces. During RAP2 implementation, monthly meetings will be held face-to-face with PAH to garner their feedback on how the RAP2 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 RAP2 implementation process. Upon completion of RAP2 implementation, a survey will be undertaken by the MPWT/DOW/PMU/PTI to assess their level of satisfaction of PAP/ PAH as to RAP2 implementation process and result.

183. The consultation with affected communities will be implemented and undertaken continuously throughout the construction phase. Consultation report of each consultation will be made with minutes of meeting along with attendance records and the signatures of all participants. The future consultations are listed in Table 9-4 below.

Table 9-4 Future Consultations

No.	Consultation	Objectives	Methods	Implementing Body	Timeline
	Construction Phase				
1	RAP2 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	September - October 2022
2	Consultations with affected communities on project activities, impacts,	To inform PAP on project construction	Open meeting	Contractor, CSC, DPWTs	Throughout construction phase

No.	Consultation	Objectives	Methods	Implementing Body	Timeline
	construction schedule and work plan.	activity and schedule and potential risks as well as community health and safety			
3	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
4	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
5	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					
6	Consultation on the preparation and development of an emergency action plan (EAP) for Muang La and establishing a water user groups (WUG) for Nam Kor	To obtain opinion of water user groups (WUG) and to develop EAP	Open Meeting, Focused Group Discussion and In-depth Interview	PTI/EDPD and DPWT/PIU	O&M Phase
7	Consultation on Green, Clean and Beautiful (GCB) community network on waste management in ODX (Moving towards GCB for ODX)	To obtain opinion of local community on participatory GCB community network on waste	Open Meeting, Focused Group Discussion and In-depth Interview	PTI/EDPD and DPWT/PIU	O&M Phase

No.	Consultation	Objectives	Methods	Implementing Body	Timeline
		management			

10 Grievance Redress Procedures

184. 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 comprise 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 function, for the benefit of PAP and PAH during the entire life of the sub-projects, including the defects liability period.

185. 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 has been developed that is easy to understand and to fill in for anyone who wishes to issue a complaint. All PAPs/PAHs will be exempted from all administrative and legal fees incurred pursuant to the grievance redress procedures if required. 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.

186. The EGEP has established the means for members of affected ethnic group communities to bring complaints to the attention of relevant project authorities. Grievance procedures 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) Oudomxay Waterway Sector, is responsible for setting up the grievance redress mechanism and to take actions to resolve issues.

187. The ESMF contained details on the grievance redress mechanism for the project. Grievances related to environmental and social issues from directly or indirectly [PAPs/PAHs](#) 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 9-1 below.

188. 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 Oudomxay 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.

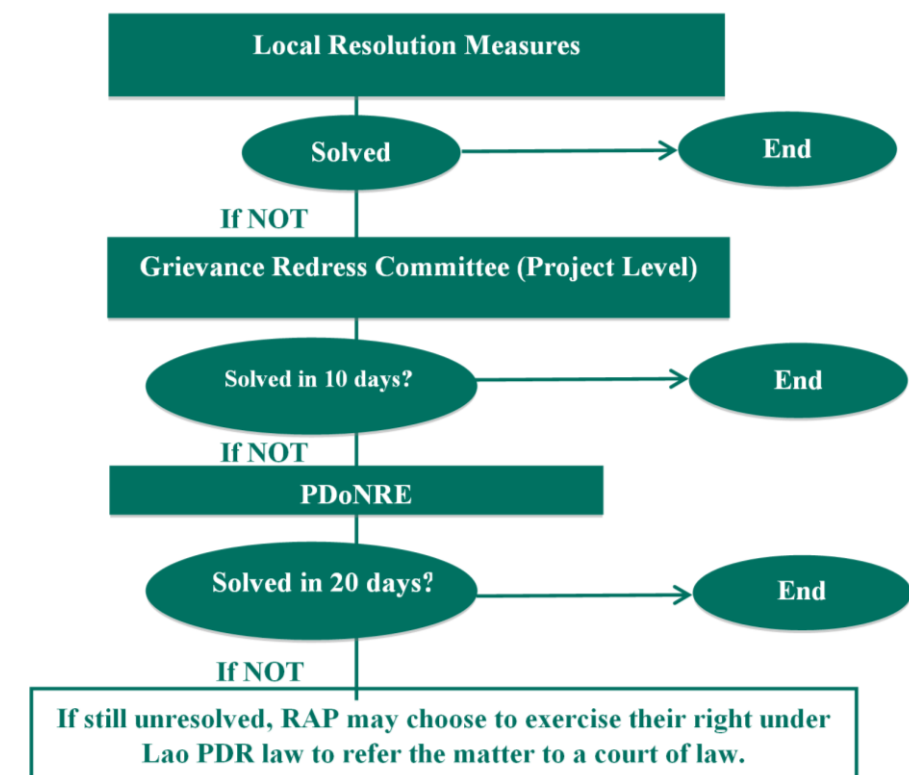


Figure 10-1 GRM Procedure

189. All PAPs/PAHs 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 Oudomxay’s provincial capital, Muang Xay, 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.

190. All PAPs/PAHs 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. PAPs and PAHs 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.

191. 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.

192. 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:

Table 10-1 GRM Contact Persons

No.	Name and Surname	Position	Organization	Contact Number
1	Mr. Somchith Panyasack	Provincial Deputy Governor ,Economic Work Leader	Steering Committee	020 918 73334
3	Mr. Phommasouk Monechandy	Muang Xay Deputy Governor	Head of the Secretariat	020 999 80669
4	Mr. Khamdam Phongmany	President of Muang Xay Lao Front for National Development Office	Deputy Head of the Secretariat	020 566 43633
5	Mr. Somsanith Inthavong	Chief of village	Thin Village	020 55139636
6	Mr. Phonekeo Sisongkham	Chief of village	Nawarnoy Village	030 92092041
7	Mr. Mounsy Phommachanh	Chief of village	Vanghai Village	020 55198494
8	Mr. Chainga	Chief of village	Pasak Village	020 99644443
9	Mr. Sonephet Duangboubpha	Chief of village	Monetai Village	020 55781982
10	Mr. Vanxay Bountapha	Chief of village	Longkordeua Village	020 56526501
11	Mr. Sisongkham	Chief of village	Cheng Village	020 59336455
12	Mr. Khamsao Xaythana	Chief of village	Nasao Village	020 22379291
13	Mr. Khamsang Phatthala	Chief of village	Namy Village	020 58971770
14	Mr. Bounhom Yordbounhak	Chief of village	Nalao Village	020 55581118

11 Action Plan and Implementation Schedule

193. 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 the following Table 11-1.

Table 11-1 RAP2 Implementation Schedule

No.	Task	Description	Responsibility	Schedule
1	Establishment of PRC	The PRC will oversee the implementation of the RAP2	PRC and MPWT/DOW	January 2020

No.	Task	Description	Responsibility	Schedule
		including the preparation phase.		
2	Notify Cut-Off-Date	PIU disseminate Cut-Off Date letter issued by DPWT of Oudomxay Province.	PIU	Mar 2020
3	Establishment an ad hoc 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	May 2020
4	Government capacity building	Capacity building for key Government stakeholders e.g. members of PRC.	MPWT/DOW	May 2020
5	Conduct the Detailed measurement survey	conduct the DMS and Social Economic Survey for those who will be affected by the project area in nine (10) villages (Lot 2)	PRC and the Consultant	November 2021
6	Prepare a draft Resettlement Action Plan	Draft RAP2 will follow review and update of draft RAP2	Consultant in association with DOW/MPTW	December 2021
7	Conduct the meeting of the Post DMS with the affected households	Public consultations to disclose project impacts, and entitlements for those who will be affected by the project area	PRC and the Consultant	January-February 2022
8	Update and Submission a final draft RAP2 to WB	Submission the draft RAP2 to WB for Approval	DOW/PTI	December 2022
9	Consultation with Affected Households	House-to-house visit of AHs for distribution of the results of the DMS and signing of compensation agreement form	MPWT/DOW and DPWT and PRC	December 2022
10	Posting the RAP2 on the Website	Disclosed the approved RAP2 on MPWT and DPWT website including the Laos translation	DOW/PTI	December 2022
11	Compensation payment to Affected Households	Compensation and allowance payment will be transferred to PAH's bank accounts	MPWT/DOW and DPWT and PRC	December - January 2022

No.	Task	Description	Responsibility	Schedule
12	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	January 2022
13	Delivery of livelihood restoration support for severely affected PAPs/PAHs (expected to lose >10% of productive assets and physical resettlement) and the vulnerable people	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. Where needed, technical support will be provided to enhance the expected outcome of livelihood restoration program.	MPWT/DOW and DPWT and PRC	January-March 2022
14	New resettlement of PAPs	Land registration and titling for affected/deducted land parcels and for new land parcels compensated or purchased by PAPs/PAHs (if requested) as well as associated costs to be also included in RAP2	PoNRE, PRC and DOW	February 2023
15	Relocation of public utilities and infrastructure	Relocation of public utilities (electricity, telephone lines and water supply system)	EDL and concern agencies	December 2022 – January 2023
16	Inspection and verification of RAP2/compensation completion by supervision	All structures and assets compensated have to be removed before hand over the project site to contractor. Social safeguard specialist of	Social safeguard specialist of Supervision (ISWS) consultant	January 2023

No.	Task	Description	Responsibility	Schedule
	consultant to recommend site handover to PIU and contractor to start work	Supervision (ISWS) 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.		
17	Monitoring the implementation of RAP2 with GRM continue to be active until the end of the project works	Follow up/monitoring RAP2 during and after resettlement including GRM and include the results in the safeguard monitoring report	MPWT/DOW and DPWT and PRC	From January 2023
18	Completion audit	A completion audit will be undertaken once all mitigation measures have been completed to assess whether the RAP2 provisions have been met.	WB, Consultant	Early Feb 2023
19	Reporting	Completion Report Preparation for Resettlement and Compensation	MPWT/DOW and DPWT and PRC	February 2023

12 Monitoring and Evaluation

194. Monitoring is a key component of the project implementation. MPWT DOW will appoint adequate full-time staff as part of the internal monitoring process. These staff will monitor the process of RAP2 implementation, land acquisition or land donation in collaboration with local village or district authorities. If necessary, capacity building will likely need to be given on the monitoring process for designated GOL staff at the onset.

195. Internal Monitoring:

- 1) Contents of the internal monitoring reports that will be issued on a monthly basis include:
 - a) Payment and use of the funds for land acquisition compensation and restoration;
 - b) Support to the vulnerable groups;
 - c) Land readjustment and reallocation;
 - d) Quality and quantity of newly reclaimed land;
 - e) Schedule of the above activities;
 - f) Implementation policies and rules in the resettlement plan;

- g) Participation and consultation of the affected people during the RAP2 implementation; and
 - h) Staffing, training, work schedule and resettlement operation at various levels.
- 2) Quarterly monitoring visits will be undertaken as per specific activities 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.
- 3) With regard to the sub-project implementation, the PMU of the DOW-MPWT will conduct monitoring activities during the feasibility studies and ESMP to determine the extent to which mitigation measures are successfully implemented. Monitoring will focus on three key areas: (i) compliance monitoring; (ii) impact monitoring; and (iii) cumulative impact monitoring.

196. External Monitoring:

- 1) In conjunction with internal monitoring by MPWT DOW staff, it will be important to include procedures for external monitoring and evaluation (M&E). The external M&E function aims to provide regular monitoring and evaluation of land acquisition and land donation for the project to assess whether objectives were achieved or not. Through formal surveys, interviews with PAP and PAH, focus group discussion (FGD) and other information collection methods, the external M&E function would look at the whole process of land acquisition or land donation for PAP and PAH. The external monitoring will also provide an early alarm function for the project management department and a complaint and grievance channel for PAP and PAH. External monitoring indicators will include:
- a) Progress: including the preparation of the ARAP1/RAP2, and implementation of compensation;
 - b) Quality: including to what extent PAP and PAH are satisfied with compensation and restoration;
 - c) Compensation Fund: including the payment and use of the funds for land acquisition compensation;
 - d) Affected People: including PAP and PAH socio-economic situation before and after the project and economic restoration of the affected people;
 - e) A qualified external monitoring entity will come from an independent organization, such as a civil society organization (Non-Profit Associations [NPA], CBO), academic research institute or consultancy in Lao PDR. The major responsibilities of the external monitoring organization will include:
 - Develop the RAP2 in conjunction with the internal monitoring team;

- Observe all the aspects of the RAP2 and its implementation; provide M&E reporting to the World Bank through the PRO; and
- Provide technical consulting services to the PRO in terms of information investigation and processing.

13 Compensation Budget

197. A compensation unit rates for the OUX Project was prepared by PRC in consultation with concerned departments and PAPs and approved by the Governor of Oudomxay Province (1105/GOV.ODX, dated 15 September 2020). Indicative rates for a single concrete houses range between 2,700,000 Kip/m² and 4,200,000 Kip/m² depending on its structure and construction materials. Compensation rates for one-floor wood house are significantly lower and were initially set between 816,000 Kip/m² and 2,640,000 Kip/m² reliant on structures and construction materials. Similarly, the compensation rates for double storey concrete houses vary between 2,680,000 Kip/m² and 4,340,000 Kip/m² determining by its primary construction materials. 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 Oudomxay province (M. Xay) was 30.897%. However, 20% of inflation rate was already added into the compensation rates approved by the Provincial Governor (1105/GOV.ODX, dated 15 September 2020) during the RAP2 preparation and therefore only 10.897% additional inflation rate of construction materials was added into the compensation cost in this RAP2.

198. Based on the inventory, estimation of the compensation and income restoration for each affected asset such as residential land, structure or building and trees was calculated based on the Unit Rate for Compensation Costs approved by the Governor of Oudomxay Province as referred above. The results of these give a total compensation amount of **LAK 24,294,831,736 (USD1,449,659)** for compensation and income restoration as summarized in Table 13-1 below. This includes compensation for (i) affected land; (ii) affected housing structures; (iii) affected shops and restaurants; (iv) affected secondary structures; (v) affected crops and trees; (vi) dismantlement and transportation, and livelihood restoration assistances; and (vi) relocation and re-installation of public utilities. The compensation for PAHs will be paid to the PAPs/PAHs via PAPs’ bank account to ensure transparency and security. Relocation and reconstruction of the public infrastructure and utilities will be undertaken through separate arrangements and agreements. These arrangements will be made between the PMU and respective government agencies and utility owners in accordance with government’s regulations.

199. The compensation amount of budget for RAP2 implementation excludes operational costs including perdiems, 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.

200. Monitoring is a key component of the project implementation. MPWT/DOW will appoint adequate full-time staff as part of the internal monitoring process. These staff will monitor the process of RAP2 implementation, land acquisition or land donation in collaboration with local village or district authorities. If necessary, capacity building will likely need to be given on the monitoring process for designated GOL staff at the onset.

Table 13-1 Total Compensation Budget

No.	Type of Loss	# of PAH	# of Affected Structure	Affected #	Unit	Original Unit Price (LAK) ⁷	Unit Price (LAK) ⁸	Compensation Amount (LAK)
1	Land	157		109,268				9,723,523,645
1.1	Residential land	78		8,482	m ²	600,000	600,000	5,089,089,000
1.2	Paddy land	10		21,407	m ²	83,000	83,000	2,857,662,360
1.3	Garden land	69		79,380	m ²	36,000	36,000	1,776,772,285
2	Housing Structures	40	46	3,316	m ²			9,620,280,584
2.1	Two-story house		10	850	m ²	1,453,000-4,700,000	1,611,341-5,212,183	2,651,952,655
2.2	One-story house (wooden and concrete)		36	2,467	m ²	816,000-4,200,000	904,924- 4,657,695	6,968,327,928
3	Shops and Restaurants	7	10	1,101	m ²			817,997,869
3.1	Shops and Restaurants	7	10	1,101	m ²	300,000-1,020,000	399,231- 1,131,155	817,997,869
4	Secondary Structures	157	170	5	m ²			2,341,362,079
4.1	Kitchen and stove	27	28	745	m ²	160,000 -420,000	332,693 – 598,847	301,927,653
4.2	Bathroom/toilet	31	32	257	m ²	420,000 – 1,000,000	465,770 -1,108,975	153,747,698
4.3	Porch of house/shop, balcony & window	29	34	1,052	m ²	300,000 - 384,000	332,693 – 425,846	434,222,556
4.4	Huts	9	10	306	m ²	390,000 – 540,000	432,500 – 598,847	134,158,703
4.5	Garage and storage	9	10	1,011	m ²	300,000 – 1,800,000	332,693 – 1,996,155	579,162,298

⁷ Original unit price with 20% inflation and approved by the Governor of Oudomxay Province (1105/GOV.ODX, dated 15 September 2020)

⁸ New unit price with 30.897% inflation rate of construction materials.



No.	Type of Loss	# of PAH	# of Affected Structure	Affected #	Unit	Original Unit Price (LAK) ⁷	Unit Price (LAK) ⁸	Compensation Amount (LAK)
4.6	Animal coops (pig, chicken, duck and bird)	22	26	1,543	m ²	300,000 – 360,000	332,693 – 399,231	538,815,544
4.7	Concrete yard and soil filled	4	4	194	m ²	160,000 – 384,000	250,000 – 425,846	145,240,089
4.8	Water, flog and fish tanks	4	4	43	m ²	160,000-384,000	228,000 -425,846	37,575,000
4.9	Wall/fence	19	19	520	m ²	15,000-1,500,000	266,154 – 1,663,463	5,197,237
4.10	House electricity pole	3	3	21	pole	150,000 – 550,000	332,693-700,000	11,315,302
5	Tree	354		5,097				386,708,521
5.1	Fruit tree	198		4,241	tree	24,000 – 180,000	24,000 – 180,000	296,873,521
5.2	Industrial tree	48		440	tree	12,000 – 120,000	12,000 – 120,000	47,883,000
5.3	Bamboo and grass	110		416	tree	60,000 – 120,000	60,000 – 120,000	41,952,000
Total Compensation Amount								22.889.872.698
6	Livelihood Restoration Assistancess							754,000,000
6.1	Rice supports for affected HH with affected houses and shops/restaurants	47	56	270	person	person x16kgx3monthsx19000 LAK	person x16kgx3monthsx190 00LAK	246,240,000
6.2	Assistance for affected poor and vulnerable HHs	9		49	person	240.000	240.000	11,760,000
6.3	Fees for re-issuance of land title	157			plot	lump sum	lump sum	76,000,000



No.	Type of Loss	# of PAH	# of Affected Structure	Affected #	Unit	Original Unit Price (LAK) ⁷	Unit Price (LAK) ⁸	Compensation Amount (LAK)
6.4	Dismantlement and Transportation Costs for Affected Houses and Shops: will be arranged by PMU	47	56	5	5Trip/ House or Shop	1.500.000	1.500.000	420,000,000
7	Relocation and re-installation of public utilities							650,959,038
7.1	Electricity pole and transformer					lump sum	lump sum	375,350,000
7.2	Telecommunication network					lump sum	lump sum	30,047,740
7.3	Water supply piping					lump sum	lump sum	245,561,298
Grand Total Compensation Amount (LAK)								24,294,831,736
Grand Total Compensation Amount (USD)								1,449,659
Exchange Rate BCEL on 2022-10-10, 1USD=16,759 LAK								

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 1A List of PAPs
- Attachment 1B IOL and PAP Census Forms
- Attachment 2 Village and PAHs Social Economic Census Form
- Attachment 3 Decision of Provincial Governor on Unit Rate for Compensation Costs
- Attachment 4 Methodology of Unit Rate Assessment
- Attachment 5 Provincial Agreement on Establishment of PRC
- Attachment 6 Other Agreements issued by the Province
- Attachment 7 Cut-Off-Date
- Attachment 8 List of Participants in November 2019 to March 2020
- Attachment 9 Results of Consultations in May 2020
- Attachment 10 Minutes of Meeting and List of Participants in May 2020
- Attachment 11 Minutes of Meeting and List of Participants in March 2021
- Attachment 12 Photos of Consultation Meetings
- Attachment 13 GRM Monitoring Form
- Attachment 14 Compensation Offset Line for Lot 2
- Attachment 15 Findings of the Market Survey during 2-10 September 2022.