

# Resettlement and Ethnic Development Plan

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## Nam Ngiep 1 Hydropower Project (Lao People's Democratic Republic)

### Resettlement and Ethnic Development Plan Updated Zone 2 Upper Reservoir (REDP-2UR)

Prepared by Nam Ngiep 1 Power Company Limited for the Asian Development Bank

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**NAM NGIEP 1  
POWER COMPANY**

**Nam Ngiep 1 Hydropower Project**

**Resettlement and Ethnic Development  
Plan**

**Update Zone 2 Upper Reservoir**

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## Abbreviations

<i>Abbreviation</i>	<i>Full Name</i>
<b>2LR</b>	Zone 2 Lower Reservoir
<b>2UR</b>	Zone 2 Upper Reservoir
<b>ADB</b>	Asian Development Bank
<b>AIDS</b>	Acquired Immune Deficiency syndrome
<b>APs</b>	Affected People
<b>ARI</b>	Acute Respiratory Infection
<b>ASL</b>	Above sea level
<b>AusAID</b>	Australian Agency for International Development
<b>B.</b>	“Ban” - Village in Laotian Language
<b>BCS</b>	Broad Community Support
<b>BoD</b>	Bord of Directors
<b>CA</b>	Concession Agreement
<b>CDF</b>	Community Development Fund
<b>cent/kWh</b>	Cent per kilo Watt hour
<b>CFRD</b>	Concrete Faced Rock fill Dam
<b>COD</b>	Commercial Operations Date
<b>CPS-NSC,2002</b>	CPS-National Statistical Center,2002
<b>DAFEO</b>	District Agriculture and Forestry Extension Office
<b>DAFO</b>	The District Agriculture Forestry Office
<b>DCC</b>	District Coordination Committee
<b>DEPD</b>	Department of Energy Promotion and Development
<b>DESIA</b>	Department of Environmental and Social Impact Assessment inside MoNRE
<b>DGC</b>	District Grievance Committee
<b>DGRC</b>	District Grievance Redress Committee
<b>DHO</b>	District Health Office
<b>DHPM</b>	Department of Hygiene and Preventive Medicine
<b>DLF</b>	Department of Livestock and Fisheries
<b>DOF</b>	Department of Forestry
<b>PAP</b>	Project Affected Person/s
<b>DPWT</b>	Department of Public Works and Transport
<b>DRWG / DWG</b>	District Resettlement Working Groups / District Working Groups – old terminology; NNP1’s relevant institution is labelled DCC – District Working Group

<i>Abbreviation</i>	<i>Full Name</i>
DS	Downstream
E&S	Environmental and Social
EdL	Électricité du Lao
EDP	Ethnic Development Plan, one component of the REDP
EGAT	Electricity Generating Authority of Thailand
EGATi	EGAT international
EIA	Environmental Impact Assessment
EL.( ) m	Meters above Sea level
EM	Environmental Manager
EMMP	Environmental Management & Monitoring Plan
EMMU	Environmental Management and Monitoring Unit
EMO	Environmental Management Office
EMU	Environmental Management Unit
EOD	Explosive Ordnance Disposal
EPF	Environmental Protection Fund
EPI	Expended Program of Immunization
EPL	The Environmental Protection Law (National Law 02/99)
ERIC	Environmental Research Institute of Chulalongkorn University
ESD	Environment and Social Division
F/S	Feasibility Study
FAO	Food and Agriculture Organization of The United Nations
FIPC	Forest Inventory and Planning Centre
FS, F/S	Feasibility Study
FSL	Full Supply Level
FWL	Flood Water Level
GAP	Gender Action Plan
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GIS	Geographical Information System
GMS	Greater Mekong Sub-region
GoL	Government of Lao PDR
GPS	Global Positioning System
GRID	Gender Resource and Information Development (GRID) Centre

<i>Abbreviation</i>	<i>Full Name</i>
<b>GRM</b>	Grievance Redress Mechanism
<b>GWh</b>	Giga Watt Hour (one million watt hour)
<b>H/H, HH</b>	Household
<b>Ha</b>	Hectare
<b>HC</b>	Head Construction Contractor
<b>HCC</b>	Head Construction Contract
<b>HEPP</b>	Hydroelectric Power Project
<b>HH</b>	Households
<b>HIV</b>	Human Immune Deficiency Virus
<b>HRD</b>	Human Resources Development
<b>HV</b>	High Voltage
<b>IAP</b>	Independent Advisory Panel
<b>IAR</b>	Impacted Asset Registration
<b>IBRD</b>	International Bank for Reconstruction and Development
<b>IDA</b>	International Development Association (a unit of the World Bank groups)
<b>IEE</b>	Initial Environmental Examination
<b>IFC</b>	International Finance Corporation
<b>IMA</b>	Independent Monitoring Agency
<b>IMR</b>	Infant mortality Rate
<b>IOL</b>	Inventory of Loss
<b>IRR</b>	Internal Rates of Return
<b>IRRI</b>	International Rice Research Institute
<b>JBIC</b>	Japan Bank for International Cooperation
<b>JSC</b>	Joint Steering Committee
<b>KANSAI</b>	The Kansai Electric Power CO.,INC.
<b>kV</b>	Kilo volt
<b>kW</b>	Kilo watt
<b>LACP</b>	Land Acquisition and Compensation Plan
<b>LAK</b>	Lao Kip
<b>LAR</b>	Land Acquisition and Resettlement
<b>LFNC</b>	Lao Front for National Construction
<b>LHSE</b>	Lao Holding State Enterprise
<b>LIRP</b>	Livelihood and Income Restoration Plan

<i>Abbreviation</i>	<i>Full Name</i>
<b>LNFC / LFNC</b>	Lao National Front for Construction / Lao Front for National Construction
<b>LRHS</b>	Lao Reproductive Health Survey - 2000
<b>LSHE</b>	Lao Holding State Enterprises
<b>LTA</b>	Lenders' Technical Adviser
<b>LWU</b>	Lao Women Union
<b>MAF</b>	Ministry of Agriculture and Forestry
<b>MAR</b>	Mean Annual Runoff
<b>MCTPC</b>	Ministry of Communication, Transportation, Post and Construction
<b>MDB</b>	Multilateral Development Bank
<b>MEM</b>	Ministry of Energy and Mines
<b>MMR</b>	Maternal Mortality Rate
<b>MOH</b>	Ministry of Health
<b>MOL</b>	Minimum Operation Water Level
<b>MoM</b>	Minutes of Meeting
<b>MoNRE</b>	Ministry of Natural Resources and Environment
<b>MOU</b>	Memorandum of Understanding
<b>MSL</b>	Mean Sea Level
<b>MSY</b>	Maximum Sustainable Yield
<b>MW</b>	Mega Watt (one million watt)
<b>MWL</b>	Maximum Water Level
<b>N/A</b>	Not Applicable
<b>NAFRI</b>	National Agriculture and Forest Research Institute
<b>NBCA</b>	National Biodiversity Conservation Area
<b>NGO</b>	Non-Government Organization
<b>NGPES</b>	Nation Growth and Poverty Eradication Strategy
<b>NNP1</b>	The Nam Ngiep Hydropower Project 1
<b>NNP1PC</b>	Nam Ngiep 1 Power Company
<b>NPA</b>	National Protected Area (the preferred term is NBCA)
<b>NSC</b>	National Statistics Centre (of Lao PDR)
<b>NTFP</b>	Non-Timber Forest Product
<b>NUOL</b>	National University of Laos
<b>NWL</b>	Normal Water Level
<b>OHS</b>	Occupational Health and Safety

<i>Abbreviation</i>	<i>Full Name</i>
PAFO	Provincial Agriculture and Forestry Office
PAI	Project Area of Influence
PAP	Project Affected People
PDA	Project Development Agreement
PDR	People Democratic Republic
PGRC	Provincial Grievance Redress Committee
PHO	Provincial Health Office
PIZ	Project Implementation Zone
PLUP	Participatory Land Use Planning
PM	Prime Minister
PMF	Probable Maximum Flood
PMO	Prime Minister's Office
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
PRLRC	Provincial Resettlement and Livelihood Restoration Committee
PS	Performance Standards
QA	Quality Assurance
RAP	Resettlement Action Plan
RCC	Roller Compacted Concrete
REDP	Resettlement and Ethnic Development Plan
REDP-U2LR	Resettlement and Ethnic Development Plan – Update for Zone 2LR
REDP-U2UR	Resettlement and Ethnic Development Plan – Update for Zone 2UR
REDP-U3	Resettlement and Ethnic Development Plan – Update for Zone 3
RMU	Resettlement Management Unit
RO	Resettlement Office
ROW	Right of Way
RTM	Round Table Meeting
SDP	Social Development Plan
SIA	Social Impact Assessment
SMMP	Social Management and Monitoring Plan
SMO	Social Management Office
SPS	Safeguard Policy Statement
STD	Sexually Transmitted Disease

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<i>Abbreviation</i>	<i>Full Name</i>
<b>STI</b>	Sexually Transmitted Infection
<b>TL</b>	Transmission Line
<b>TA</b>	Technical Assistance
<b>THPC</b>	Theun-Hinboun Power Company
<b>TOR</b>	Terms of Reference
<b>TSS</b>	Total Suspended Solids
<b>UN</b>	United Nations
<b>UNICEF</b>	United Nations International Emergency Children's Fund
<b>US</b>	Upstream
<b>US\$ / USD</b>	United States Dollar (US Dollar)
<b>UXO</b>	Unexploded Ordnance
<b>VDC</b>	Village Development Coordination Committee
<b>VRC</b>	Village Resettlement Committee

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## Executive Summary

1. **Overall situation.** The Nam Ngiep 1 Hydropower Project is located along the Nam Ngiep River in Xaysomboun and Bolikhamxay Province of Lao PDR, downstream of Nam Ngiep 2 Hydropower Project. The Project is set 41 km north of Paksan, the capital of Bolikhamxay Province, which is located 145 km north-east of the national capital, Vientiane.
2. **Schedule of construction.** Main construction activities of NNP1 started as scheduled in October 2014. Reservoir impoundment is scheduled for the rainy season of 2018. Electricity will be generated from Commercial Operation Date (COD), due in January 2019, over a concession period of 27 years.
3. **The Resettlement and Ethnic Development Plan (REDP).** The approved Project REDP was made public and uploaded onto the Project and Asian Development Bank (ADB) websites in June 2014<sup>1</sup>. The REDP provides a comprehensive background to the Project and the legal framework in which the Project functions as well as a description of the applicable social safeguards policies. It further presents all project social and livelihood restoration plans including the Compensation Policy, Zonal Resettlement Action Plans [RAPs], Livelihood and Income Restoration Plan [LIRP], Ethnic Development Plan [EDP], Public Consultation Plans leading to Broad Community Support (BCS), and describes the implementation and monitoring structures for these programs as well as a schedule and budget for their execution.
4. **Zone 2UR REDP Update.** The REDP is organised by Project Implementation Zone (PIZ). The PIZ consists of the areas affected by Project construction or operations, or in which the Project has environmental and social (E&S) commitments with the Government of Lao PDR (GoL). The PIZ crosses two provinces, Xaysomboun and Bolikhamxay. The Project has also identified and described impact sub-zones (see main REDP). This document is an update of Project activities addressing social impacts in Zone 2UR, including the villages of Pou, Piengta and Hatsamkhone, which are located in Thathom District, Xaysomboun Province.
5. **Public Consultations.** This Zone 2UR updated (REDP-U2UR) plan includes more recent details of the consultation process and its methodology with 2UR households. Two thirds of Ban Pou in Zone 2UR belong to the Hmong ethnic group, therefore BCS is required. Documentation of this process is included in Chapter 9. Consultation outcomes are the result of constant interaction with concerned stakeholders over a long period, and this interaction continues as a key Project approach. Information on the project has been disseminated through public consultation with project affected people (or persons - PAPs) and others in the impact area, while information has been gathered from affected people as the base for revising and amending assessments and plans originally outlined in the REDP. A summary of these consultations is included in Table 59, and minutes of recent meetings included as Annex C.
6. The Project addresses special needs of ethnic groups and vulnerable people, including preventing impacts on cultural sites, use of Hmong language during all interactions with Hmong PAPs, and consultations and trainings to enhance peoples' capabilities to cope with project impacts and adjust to life in their environmental conditions.
7. On-going consultations and an established grievance redress mechanism (GRM) ensure constant and meaningful communication between the Project and PAPs. Information dissemination and consultation activities were conducted as outlined in Chapter 9, with further activities planned over

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<sup>1</sup> <http://www.adb.org/projects/41924-014/documents>; <http://namngiep1.com/documents/social-reports/>



the next months. Key issues or concerns raised by PAPs to date are as follows: (i) Fair compensation rates, (ii) replacement land; and (iii) livelihood restoration. During the indicative choice survey conducted in Q2 2016, 100% of the households expressed their preference for cash compensation. Households will be given the opportunity to make the binding choice in Q3 of 2016, with payments to be made after this REDP Update has been approved by the ADB. Households remaining within the Project Area of Influence - PAI (refer to REDP section 5.2.17) will be eligible to participate in Project supported activities.

8. Disclosure of information and ongoing consultations allow concerns to be addressed at an early stage and enable joint planning to find optimal replacement and compensation solutions. The Project's GRM catches remaining problems arising during the compensation process, solving potential conflicts between Project and PAPs.
9. To avoid speculation and claims from people who are not owners of assets, not residing/using or having any legitimate claim to membership in the communities in the PIZ, the Project's Provincial Resettlement and Livelihood Restoration Committee (PRLRC) declared an eligibility cut-off date for all compensation phases on April 11, 2014. However, as it has taken the PRLRC more time than anticipated to finalise unit rates for compensation, particularly with Zone 2UR PAPs, the Project has accepted it will need to include compensation entitlements for all impacted assets established before the declaration and dissemination of the revised cut-off-date issued after PRLRC agreement of unit rates, as well as up to the commencement of the asset registration. The updated cut-off-date for Zone 2UR was declared by the PRLRC as 21<sup>st</sup> of August 2015 and disseminated on 8 and 9 September 2015 in 2UR villages together with the compensation unit rates. This arrangement is re-confirmed by the PRLRC notification No. 695/ PG. XSB, dated 17/06/2016, clearly confirming the cut-of-date for 2UR being 21 August 2015. PAPs have been informed about this PRLRC notification No. 695/ PG. XSB, dated 17/06/2016, when it was disseminated in the 3 communities of 2UR on the 28 and 29 June 2016. This confirmed date does not need a new asset inventory as all impacted assets have been registered. The asset registration for 2UR villages was completed in Q1 of 2016. As of this updated REDP, the scheduled relocation date for 2UR PAPs is confirmed to be early 2017 before the wet season.
10. The updated Zone 2UR REDP (REDP-U2UR) presents the overall entitlement policy (compensation in kind or in cash at replacement value; income restoration, etc.) including eligibility criteria for compensation (including people with customary land rights), the detailed entitlement matrix containing all forms of impacts and resulting entitlements, and further details on the implementation of mitigation measures and provision of entitlements for 2UR villages.
11. All activities will be funded by NNP1PC, with an estimated value of around \$3,375,000 USD. For those activities limited by scope, the budget may be revised upwards to reflect changing needs. Activities to date have been carried out jointly between the PAPs, GoL, and NNP1PC, and this will continue.
12. The REDP U2UR presents the broad institutional framework as well as the operative chart specifically developed for implementation of Zone 2UR Land Acquisition and Compensation Plan (LACP) and support activities. Programmes will be internally and externally monitored over the whole construction period. Land acquisition for Zone 2UR is targeted to begin in Q3 2016 and conclude in early 2017. Construction of replacement housing, pegging of garden plots, and allocation of replacement agricultural land, is due to start in Q4 2016.
13. New residential areas and newly developed agricultural land will be rendered safe from Unexploded Ordnance (UXO).
14. **Impacted Community.** Zone 2UR encompasses lowland areas inundated in the upper part of the

reservoir and with them the villages of Piengta, Hatsamkhone and Pou with a total population of 352 households (source: Census 2014). The Project will permanently impact limited residential areas in Pou (6 PAPs) and approximately half of the households of the villages will be directly impacted through land acquisition of portions of agricultural land, including 40% of the paddy fields in the 3 communities, with a total land area acquired of 495ha. Project impacts have been updated through a detailed asset registration, completed in Q2 of 2016. It covers all land and assets belonging to Zone 2UR PAPs in the inundation area. The scope of land acquisition is fully described in Chapter 4.

15. **Land Acquisition and Resettlement.** Land acquisition in 2UR is required, because many productive lands will be inundated by the main reservoir in 2018. It is scheduled that 2UR households will be relocated in early 2017, one year before reservoir impoundment.
16. **Other Social Impacts.** Social impacts associated with the construction activities of a project of this nature not covered by land acquisition and resettlement will be addressed and mitigated through the implementation of the Social Development Plan (SDP).

This version of the REDP U2UR has been published in October 2016 on Company and ADB Websites and in all Project information centres. This REDP U2UR will be revised whenever major milestones have been reached and/or new information is available to integrate.

## CHAPTER 1 - Introduction

### 1.1 *Project Description*

17. The Nam Ngiep 1 Hydropower Project (Project) encompasses the construction of a hydropower dam, re-regulation dam, two power houses, transmission lines, and necessary supporting infrastructure such as roads, camp sites, quarries, etc.; by the Nam Ngiep 1 Power Company (NNP1PC). The owners of Nam Ngiep Power Co., Ltd. are the Kansai Electric Power Co., Inc. (Kansai Electric) from Japan, EGAT International Co., Ltd. (EGATi) from Thailand, and Lao Holding State Enterprise (LHSE) from the Lao PDR.
18. The Project is situated on the Nam Ngiep River, which is a left bank tributary of Mekong River. The Project will construct a 166-meter high concrete gravity dam on the Nam Ngiep River, including the main power station of 272 MW capacity capable of an annual power generation of 1,546 GWh. Once in operation, the reservoir of the main dam will have maximum surface area of 66.9 km<sup>2</sup>, covering parts of Bolikhamxay and Xaysomboun Provinces. An effective storage of 1,192 million m<sup>3</sup> from the reservoir is designed to drop up to 130 m to the main power station downstream from the main dam.

### 1.2 *Purpose of the REDP U2UR update*

19. The REDP U2UR is an enriched version of the REDP already publicly disclosed. This document further develops the updates of plans outlined in the REDP and other social documents. It is complementary to all these documents, i.e. certain sections of the overall REDP and planning documents will not be repeated in this document but referred to where relevant. A detailed description of the Project can be found in the Social Impact Assessment, Chapter 2<sup>2</sup>.
20. The REDP-U2UR focuses on the affected communities in Zone 2UR: Ban Pou, Ban Piengta and Ban Hatsamkhone.
21. This REDP-U2UR describes the systematic program of all social, economic, and cultural mitigation measures requiring compensation, either in cash or in kind for 2UR communities. Its purpose is to ensure that all DPs impacted by impoundment in the Upper Reservoir area are compensated at full replacement value for losses, and provided with rehabilitation measures so that PAPs will have their livelihood restored. About half of PAPs in 2UR villages will be directly affected and are eligible for the full range of compensation, livelihoods restoration and social support measures.

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<sup>2</sup> <http://www.adb.org/projects/41924-014/documents>

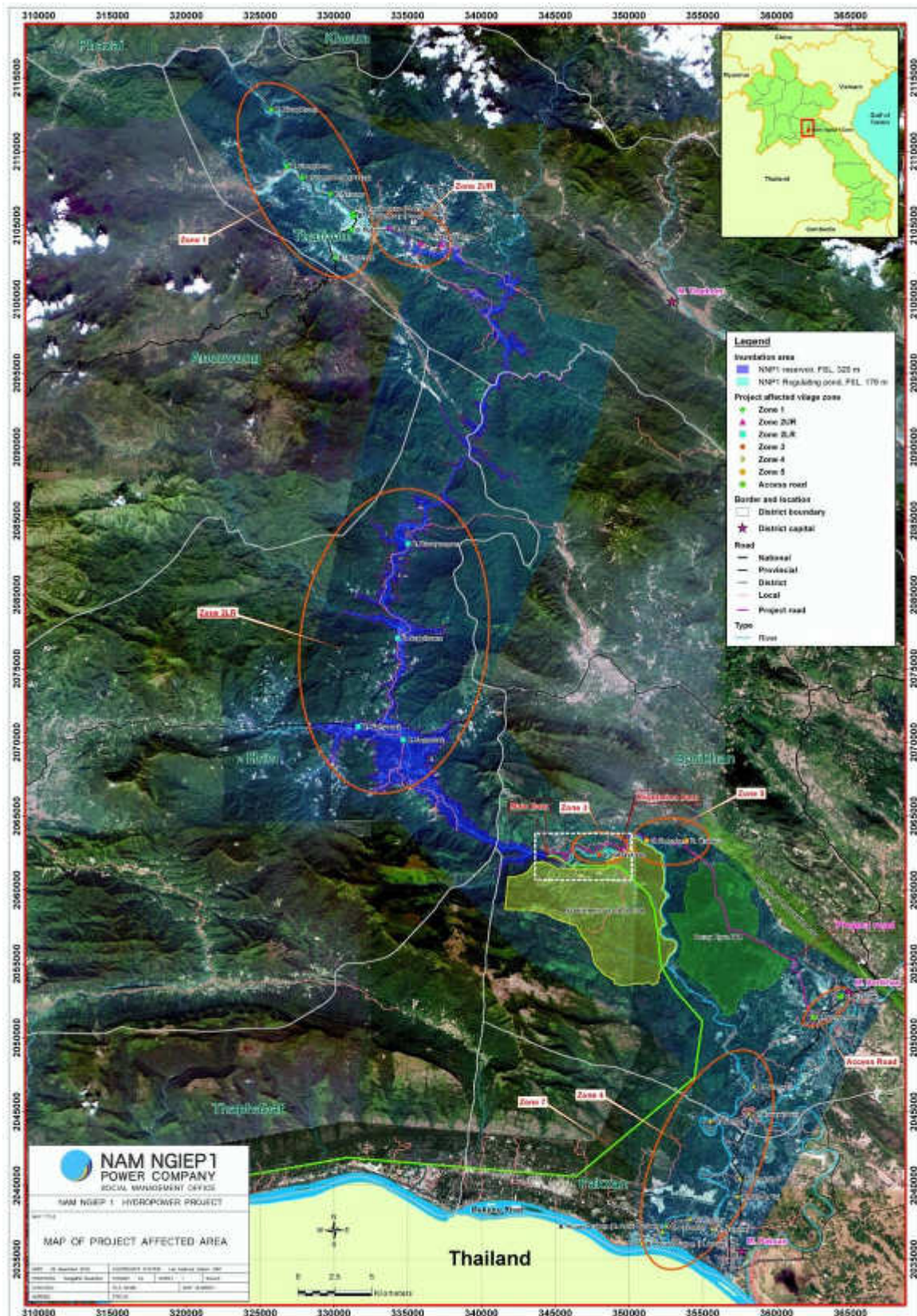


Figure 1 Satellite map of project location

22. Land acquisition and compensation procedures will be conducted through meaningful consultations and with the approval of the PRLRC. The REDP-U2UR:

- summarises the applicable legal and policy frameworks of the Lao Government, appropriate ADB Safeguards Policy Statement (SPS) 2009, Equator Principles (EPs), and International Finance Corporation (IFC) Performance Standards (PS)
  - provides the entitlement matrix for Zone 2UR
  - describes the steps towards income restoration where required
  - presents the methodology of information disclosure and consultation with communities and institutions, and establishment of activities including the GRM
  - sets out procedures and policies for ethnic groups and gender planning
  - outlines the institutional arrangements as well as monitoring and reporting structures and
  - includes an updated budget for implementing the REDP-U2UR programs in the presented timeframe.
23. The REDP-U2UR is consistent with the REDP of the NNP1 Project in the definition of terms, legal framework, project principles, entitlements, roles and responsibilities of payment procedures, reserve fund, internal and external monitoring procedures and reporting. This includes measures for (i) those relocating within village boundaries; (ii) those opting to self-relocate; and (iii) those facing loss of agricultural lands and/or of sources of livelihoods because of the project. Livelihoods of PAPs will be restored by the Project as outlined in the LIRP (see Chapter 8 and overall REDP). The document also includes an Ethnic Development Plan (EDP; see Chapter 8 and overall REDP) as two thirds of PAPs of one 2UR village belong to an ethnic group meeting criteria defined in ADB's SPS of indigenous peoples. The EDP summarizes the Project's policies and programs to mitigate impacts and enhance benefits on culture, livelihoods and other issues specific to PAPs from ethnic groups, and presents details regarding implementation for 2UR villages. The REDP-U2UR contains methodologies and frameworks as well as key summarised baseline social information and assessments of project impacts and their significance. The core of the REDP-U2UR includes the mitigation plans (Compensation Policy and Procedures, Resettlement Plan, LIRP, and EDP) as well as implementation structures (communication strategy, institutions, entitlement matrices, implementing schedule, and budget).
24. Various methods have been used to collect relevant data to prepare the REDP-U2UR, including: population survey, assets registration, and in-depth consultations with PAPs, their local leaders and elders, district and provincial administrators, and other key informants. Information on the project, including proposed entitlements, programs and activities, has been disseminated through public consultation with PAPs and others in the study area (see overall REDP and Chapter 9). Details on development of the plans since the feasibility studies in early 2000 can be found in the overall REDP. The plans are in compliance with GoL and ADB safeguard standards and incorporate feedback from PAPs into project planning and program development.
25. During project implementation, numbers of people and affected assets may change. The revised Cut-Off-Date has been announced by the PRLRC as 21st of August, 2015 and was disseminated in 2UR villages on 8<sup>th</sup> and 9<sup>th</sup> of September 2015. This arrangement is re-confirmed by the PRLRC notification No. 695/ PG. XSB, dated 17/06/2016, clearly confirming the cut-of-date for 2UR being 21 August 2015. PAPs have been informed about this PRLRC notification No. 695/ PG. XSB, dated 17/06/2016, when it was disseminated in the 3 communities of 2UR on the 28 and 29 June 2016. This confirmed date does not need a new asset inventory as all impacted assets have been registered. . While an increase in numbers will alter provisional budgets presented in this report, it does not change Project obligations towards PAPs which are limited by scope and not by budget.

### 1.3 *Project Implementation Zones*

26. The Project Implementation Zone (PIZ) describes the area affected by project construction and operations, or in which the project has E&S commitments with GoL (see map in Figure 2):
27. Zone 1 Upstream - 4 villages located upstream of the reservoir. Impacts are predicted to be minor, consisting of a relatively small loss in fish catch as a result of the impoundment of the downstream reservoir. This zone will already have been impacted by the operation of the Nam Ngiep 2 project. Fish catch monitoring is being conducted in order to evaluate project impacts.
28. Zone 2 - Reservoir Area - covers the area affected by reservoir. There are 2 sub-zones. The communities in the upper section of the reservoir, Zone 2UR, will be affected by partial inundation of land. Communities in the lower section of the reservoir, designated as Zone 2LR, will be completely inundated and residents will need to be resettled.
29. Sub-Zone 2UR - Upper Reservoir Area - covers the upper section of the immediate catchment area of the 320m MSL main reservoir. Three (3) villages (Pou, Hatsamkhone, Piengta) located alongside the Nam Ngiep River will be directly affected. All belong to Thathom District, Xaysomboun Province.
30. Sub-Zone 2LR - Lower Reservoir Area - covers the lower section of the reservoir, where 4 villages (Houaypamom, Sopphuane, Sopyouak, and Namyouak) will be completely inundated. All are located in Hom District, Xaysomboun Province. All households in these villages will be resettled and compensated for the loss of housing, residential land, productive lands, and other assets, and will have livelihoods restored.
31. Zone 3 - Construction Area - covers the area where the main project components will be built. It includes the main dam, re-regulating dam, powerhouses, Project Office, camp site, storage areas, access roads, and the area between the main dam and the re-regulating dam that will be covered by its reservoir. There is one (1) directly affected community (Hatsaykham Hamlet) in this zone, administratively included in the village of Hat Gniun in Bolikhan District, Bolikhamxay Province.
32. Zone 4 - Downstream covers the villages located downstream of the re-regulating dam and affected by the operations of the Project.
33. Zone 5 - Host Villages. The Houaysoup Resettlement Area is located on the opposite bank of the Nam Ngiep River from Ban Hat Gniun and immediately south of the re-regulation reservoir and dam. It has been selected as the resettlement area for the four villages from Zone 2LR and the sub-village of Zone 3. As the nearest villages to the resettlement site, Ban Hat Gniun and Ban Thahuea are considered host villages to the resettled communities. Households from Hat Gniun and Thahuea have cultivated land or communal village land in the Houaysoup area.
34. Transmission Line - 24 villages located in 3 provinces affected by the permanent acquisition of land for transmission tower bases and the temporary impact from construction and line stringing. The exact location of towers and the number of households impacted has not yet been finalised.
35. Access Road - 4 villages and 1 sub-village (including Hatsaykham, Hat Gniun and Thahuea) affected by land acquisition for widening and realigning the access road to the main construction site.

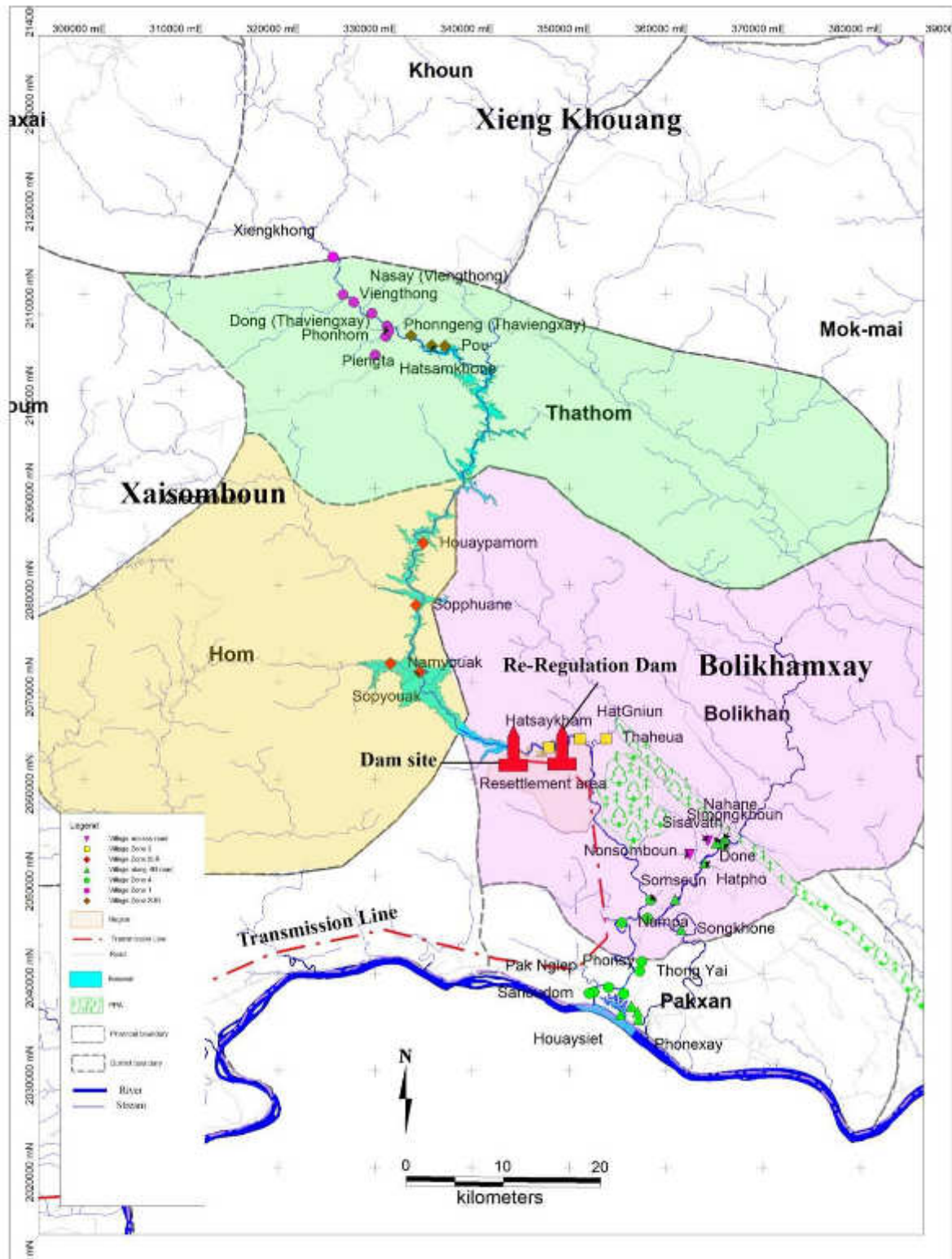


Figure 2 Map of NNP1 Project Implementation Zones

## 1.4 *Project Area of Influence*

36. The Project Area of Influence (PAI) encompasses the districts of
  - Bolikhan, Bolikhamxay Province,
  - Hom, Xaysomboun Province
  - Thathom, Xaysomboun Province
37. Excluded from the Project Area of Influence are areas defined by GoL as proscribed to PAP relocation due to it being a military area, or awarded as a concession to another party, or prohibited for other reasons including security such as in the NNP1 construction site.
38. PAPs opting for self-resettlement will be entitled to NNP1 livelihood programs only if they resettle in the Project Area of Influence (see REDP section 427).
39. The Governor of Bolikhan declared in Notice No.103/DAO.BLK, dated 18 Mar 2016, that the villages of Hat Gniun and Thahuea are proscribed to PAP who are self-resettling.

## 1.5 *Zone 2 Upper Reservoir (2UR)*

40. Zone 2UR is the focus of this updated REDP. There are three affected villages in Zone 2UR: from west to east and from upstream to downstream, all on left bank of the Nam Ngiep: Ban Piengta, Ban Hatsamkhone and Ban Pou. They are all located along national paved D1 Road in Thathom District of Xaysomboun Province, upstream from the dam site, which is located in Bolikhan District of Bolikhamxay Province. See map in Figure 3.
41. All villages were established after the end of the war in the eighties and nineties. Ban Pou and Ban Piengta have been established after the revolutionary war in 1975. Meanwhile, Ban Hatsamkhone was founded in 1994 by people resettled under government supervision from Huaphan province in between the other two communities.
42. All villages are located just above FSL, with a few houses and a significant portion of their productive agricultural land being inundated by the tail of the reservoir.
43. The 2UR communities do not need to physically resettle. Only a limited number of PAPs needs to be resettled inside their village but a significant compensation and livelihood restoration program need to be implemented for addressing the loss of rich agricultural land. This document describes in further detail how impacts will be mitigated and livelihoods restored for the people of Zone 2UR.



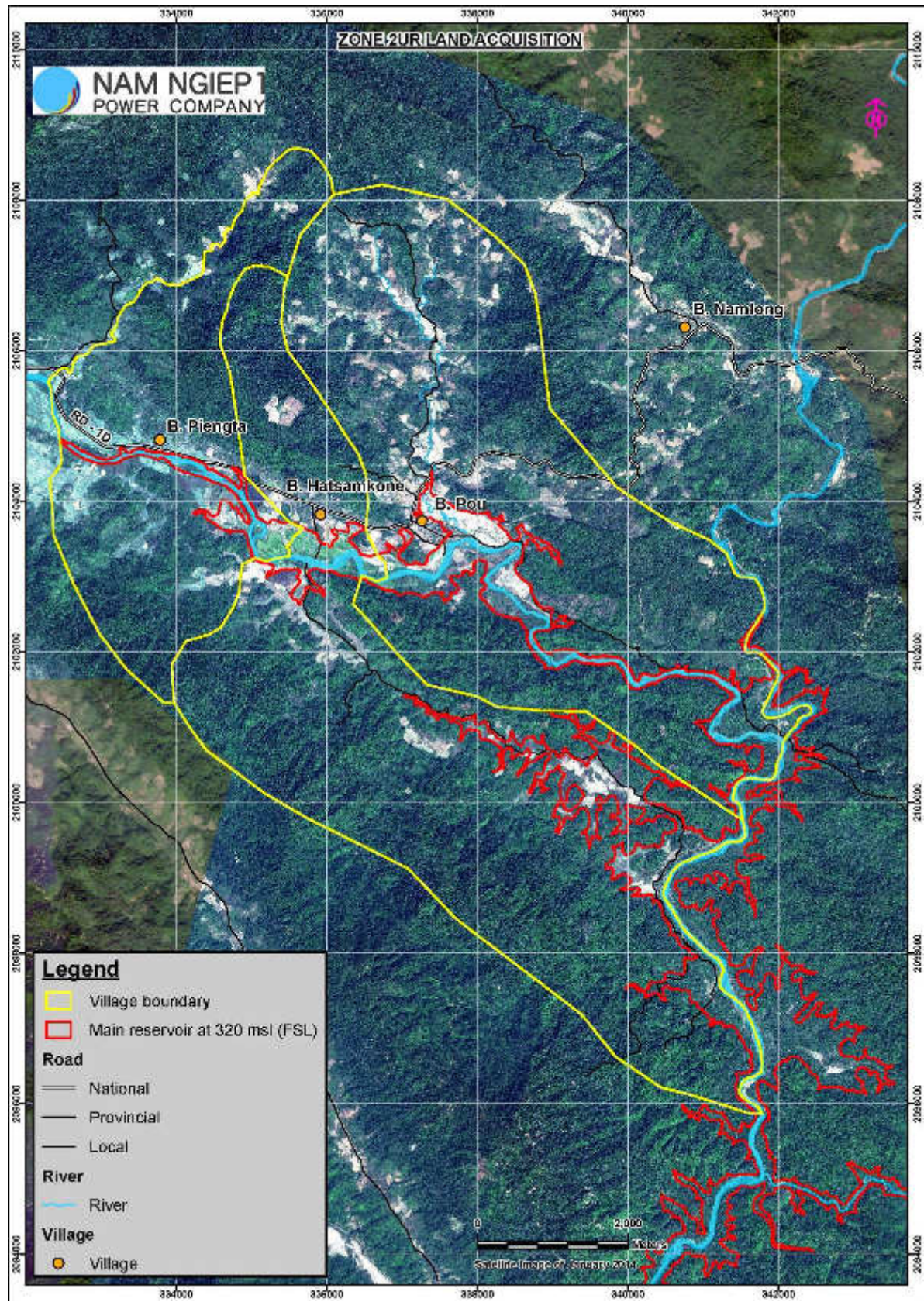


Figure 3 Satellite map of Zone 2UR showing inundated area

## CHAPTER 2 - Legal Framework

44. The Project is implemented in a manner consistent with national laws and regulations as well as international policies, performance standards and best practices. In addition to the REDP, these requirements are described in:
- the Concession Agreement (CA) with the Government of Lao PDR (GoL), integrating essential Decrees as Prime Minister's Decree No 192/PM and the Decree on the Environmental Impact Assessment as well as
  - the Facility Agreement with the ADB, integrating amongst others ADB's SPS and other social policies,
  - the Facility Agreement with the Japan Bank for International Cooperation (JBIC) integrating IFC PS, and
  - the Common Terms Agreement (CTA) with commercial lenders who apply Equator Principles (ES).
45. The Project's CA (Annex C, Appendix 2) outlines in details applicable standards, of which a selection is included in Table 1.
46. A detailed analysis of the Project standards including a Gap Analysis between ADB and Lao regulations can be found in the REDP, Chapter 3, which also includes further details on gender and development, methods of valuations for compensation, and a discussion on ethnic groups. The Project follows the general principle, agreed in the CA, that in the case of differences between standards, the Project will always apply the higher standard to the advantage of PAPs. Lao and international standards form the base for the CA, Annex C on Environmental and Social Obligations of the Project, which is the immediate reference for the Project in handling Land Acquisition and Compensation. The following chapters will refer to details in CA, Annex C as necessary.

Year	Institution	Subject
1996	GoL	Water Resources Law, No 05/NA; 11 October 1996 and the Presidential Decree promulgating the law, No126/PDR; 2 November 1996
1998	ADB	Gender and Development Policy (1998);
1999	GoL	Law on Environmental Protection; 3 April 1999
2001	GoL	Decree on the Implementation of the Environmental Protection Law; 4 June 2001
2001	ADB	Social Protection Strategy (2001)
2003	GoL	Constitution of the Lao People’s Democratic Republic; 15 August 1991, amended on 6 May 2003
2003	GoL	Land Law; 21 October 2003
2004	GoL	Law on Promotion on Foreign Investment; 22 October 2004
2005	GoL	Decree on the Compensation and Resettlement of Development Projects, No. 192/PM; 7 July 2005
2005	GoL	National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR, 7th June 2005.
2006	GoL	Regulations for Implementing Decree 192/PM on Compensation and Resettlement of People Affected by Development Projects
2007	GoL	Forestry Law; 24 December 2007
2007	GoL	Wildlife and Aquatic Law No 07/NA; 24 December 2007
2008	GoL	Electricity Law, No 03/NA; 8 Dec 2008
2009	GoL	Decree on State Land Lease or Concession; 25 May 2009, No. 135/PM
2009	GoL	The Law on Fishery No. 03/NA, dated 9 July 2009
2009	GoL	The Executive Decree on State Land Lease and Concession Fees Rate, No. 02/PR, dated 18 November 2009
2009	ADB	ADB Safeguard Policy Statement (2009) including (II) Safeguard Requirements 2: Involuntary Resettlement; and (III) Safeguard Requirements 3: Indigenous Peoples
2010	GoL	The Decree on Environmental Impact Assessment, No 112/PM; 16 February 2010 (repealed in 2013)
2010	GoL	Technical Guidelines on Compensation and Resettlement of People Affected by Development Projects, Regulation 699/PMO, MONRE March 2010
2011	ADB	Public Communications Policy (2011); and
2011	GoL	The Law on Electricity (Amended), No 03/NA, dated 20 Dec 2011
2002	IFC	IFC Handbook for Preparing a Resettlement Action Plan, 2002
2012	IFC	Performance Standard 5: Land Acquisition and Involuntary Resettlement
2012	IFC	Performance Standard 7: Indigenous Peoples
2012	IFC	Performance Standard 8: Cultural Heritage
2012	GoL	The Law on Environmental Protection, No. 29/NA, 18 December 2012
2013	GoL	The Ministerial Instruction on the Environmental and Social Impact Assessment for the Investment Projects and Activities No.8030/MONRE, dated 17 December 2013

Table 1 Applicable Legal and Policy Standards for the Project

## CHAPTER 3 - Socioeconomic Profile

### 3.1 Demography and Population Changes

47. All 2UR villages were recently established. Ban Pou and Ban Piengta were established after the revolutionary war in 1975 and Ban Hatsamkhone was founded in 1994. Ban Hatsamkhone was resettled from Huaphan province under government supervision and was located in between the two existing communities.



Figure 4 Ban Pou

48. The field survey of Ban Pou, Ban Hatsamkhone and Ban Piengta conducted in 2011 recorded a total of 2,036 people living in 328 households. By 2015, this number had grown to 2,191 people living in 352 in households, equivalent to an annual population growth rate of 1.9%. The villages of Ban Pou and Ban Hatsamkhone showed the highest growth rates (2.5% and 2.4%)

Village	Total 2011		Total 2015		Annual growth rate		Ethnicity
	HHs	Population	HHs	Population	HHs	Population	
<i>Ban Pou</i>	172	1,129	188	1,245	2.2%	2.5%	Hmong, Lao Loum, Khmu
<i>Ban Hatsamkhone</i>	74	453	80	499	2.0%	2.4%	Lao Loum
<i>Ban Piengta</i>	82	454	84	447	0.6%	-0.4%	Lao Loum, Hmong, Khmu
<b>Total</b>	<b>328</b>	<b>2,036</b>	<b>352</b>	<b>2,191</b>	<b>1.8%</b>	<b>1.9%</b>	

Table 2. Annual Population growth

49. The 2016 asset registration records a total of 211 directly affected households, of which 183 households come from the 3 2UR villages affected by the reservoir, and 28 households have land assets impacted by the reservoir in Zone2UR, but are currently living in other villages outside the zone. The asset registration has registered project impacts on all households as further detailed in Chapter 4.

Village	HH	Population		Ethnicity			Directly Affected		Ethnicity		
		People (Total)	People (Fem.)	Hmong	Lao Loum	Khmu	HH	Population	Hmong	Lao Loum	Khmu
Hatsamkhone	80	499	239	-	77	3	63	429	-	65	2
Piengta	84	447	219	4	80	-	42	199	-	38	-
Pou	188	1,245	598	122	63	3	78	494	21	55	2
Other Village	NA	NA	NA	NA	NA	NA	28	NA	NA	NA	NA
<b>Total</b>	<b>352</b>	<b>2,191</b>	<b>1,056</b>	<b>126</b>	<b>220</b>	<b>6</b>	<b>211</b>	<b>1,122</b>	<b>21</b>	<b>158</b>	<b>4</b>

Table 3 Population Profile of Zone 2UR (Source: 2014 Census and 2016 asset registration)

50. The age / gender structure of the population is shown in Table 4. There is no significant difference between the age structure for each gender within the zone or within each village, but there is a significant difference in age structure between the Hmong section of Ban Pou - where 63% of the population are aged under 19 years - and the other 2 villages with 45-48% of the population under the age of 19 year.

Age group (years)	Male	Female	Total	Pou [Hmong]	Pou [Lao Loum]	Piengta	Hatsamkhone	Total
0-9	23%	26%	25%	35%	19%	18%	17%	24%
10-19	31%	25%	28%	28%	26%	27%	31%	28%
20-29	15%	16%	16%	12%	19%	20%	16%	16%
30-39	11%	12%	11%	11%	13%	12%	10%	11%
40-49	9%	8%	9%	6%	8%	9%	13%	8%
50-59	6%	6%	6%	4%	9%	6%	6%	6%
60+	6%	6%	6%	4%	7%	8%	8%	6%

Table 4 Age and Gender Structure of 2UR villages (Baseline Socio Economic Survey, 2014)

### 3.2 Ethnicity

The Lao Loum is the dominant ethnic group in Zone 2UR; however, there are also significant populations of Khmu and Hmong, particularly in Ban Pou, where two thirds of residents are Hmong (See Table 3)

### 3.3 House Style

51. The nature of the dwellings in Zone 2UR is linked to the ethnic group in each village. Typical dwellings are illustrated in Figure 5. However more modern materials are now being used with significant differences between the three villages and between the ethnic components (Hmong and Lao Loum) of Ban Pou:

- If wood and brick are classified as “superior” wall material and bamboo and leaves as “inferior” then the Hmong component of Ban Pou has the largest percent of poor building materials and the other villages have highest quality of wall material.
- 30% of Hmong households of Ban Pou have wood or thatched leaf roofing compared to 98% of households of other communities having roofs made of more durable materials.

Village / community	Brick	Wood	Bamboo	Total
Pou [Hmong]	2%	64%	34%	100%
Pou [Lao Loum]	17%	46%	37%	100%
Piengta	11%	65%	24%	100%
Hatsamkhone	12%	72%	17%	100%
Total (percent)	9%	63%	28%	100%
Total (count)	31 houses	215 houses	96 houses	342 houses

Table 5 Wall construction material, 2UR villages (Source: 2014 Baseline Socio Economic Survey)

Village / community	Tile/tile sheeting	Metal sheeting	Wood	Leaves	Total
Pou [Hmong]	43%	26%	24%	7%	100%
Pou [Lao Loum]	47%	51%	2%	0%	100%
Piengta	27%	70%	1%	1%	100%
Hatsamkhone	54%	44%	0%	3%	100%
Total (percent)	42%	45%	9%	3%	100%
Total (count)	145 houses	155 houses	31 houses	11 houses	342 houses

Table 6 Roofing construction material, 2UR villages (Source: 2014 Baseline Socio Economic Survey)



House of Lao Loum of zone 2UR



House of Hmong of zone 2UR



*House of Khmu of zone 2UR*

Figure 5 Typical houses of each ethnicity in 2UR zone

### 3.4 *Social Organization and Cultural Relations*

52. PAPs in Zone 2UR are integrated into a diverse and complex network of social organizations and cultural relations. A key element is the public administration of Lao PDR. People are resident in villages, headed by a Village Chief. Villages are combined into kumbans and at the next level into districts, which again form provinces, finally resulting in the national community of Lao PDR.
53. Ministries at national level are represented at provincial and district levels. Essential for this project are the Ministry of Energy and Mines (MEM), the Ministry of National Resources and Environment (MoNRE), the Ministry of Agriculture and Forestry (MAF), and also the Ministries of Health (MoH), Education (MoE), and of Information and Culture (MIC). These public institutions are supported by mass organizations with structures at all levels, including the Front for National Construction, the Lao Women's Union (LWU), and the Lao Youth Union.
54. As elsewhere in Laos, a significant number of villagers are members of village-based mass organisations such as the LWU, Lao Youth Union, and Lao Workers' Union.
55. Next to these public institutions, PAPs are integrated into further social and cultural relations within and between villages. These include at village level informal, but influential, elders' councils, which have an essential say in the development of a community.
56. Ban Pou is separated into two hamlets - a Hmong hamlet of 122 households and Lao Loum community of 63 households and 2 Khmu households.
57. Hmong households in 2UR villages (part of Ban Pou) are identified and linked by clan systems, which connect them with villagers from Hatsaykham in Zone 3, 2LR villages in the lower reservoir area and other villages in Hom District. These linkages extend further to Hmong communities in the rest of the country as well as abroad, which allows them to mobilize economic, cultural, political and social resources to support the communities in their communication with the Project. It also enables information about experiences in other hydropower projects to be widely shared and circulated.
58. Social Organization and Cultural Relations follow the pattern discussed in Chapter 7 of the REDP. Hmong groups are divided into patrilineal clans (*xeem*) which are strictly exogamous, that is marriage outside the birth clan is compulsory. Polygamy is traditional but less observed nowadays than in the past.

59. The baseline socioeconomic survey of 2014 did not identify any polygamous households in Zone 2UR. Further, more detailed investigation of domestic arrangements are currently being undertaken as part of the asset registration and compensation process.
60. The Hmong are believed to have their origins in China and to have migrated into northern Southeast Asia during the 19th century. There are 19 Hmong clans currently living in Lao PDR and they are generally group-oriented, with interests of the group coming before the interests of the individual, and clan leaders in each village representing the interests of the village. In the project impacted areas, there are four main clans: Yang, Vang, Xiong, and Lor, although there are some persons from clans such as Pialouang, Moua, Lee, Her and Vue who have married into these clans. In Hmong community of Ban Pou hamlet, the Xiong clan leads other clans socially and politically. Family members are under the authority and direction of the male-headed clans and household, usually the oldest male. Sons will automatically inherit family property and all other assets, and are often the ones to receive formal education. For this reason, male elders represent village households in all discussions, particularly with outsiders, and it is unusual for any person or family to contradict elders in public meetings.
61. The few Khmu households are completely integrated in the Lao Loum community of their village (Pou and Hatsamkhone).
62. Recent Lao history has encouraged further social networks between local and central level, which have to be taken into account when addressing stakeholders. While for the older generation, the liberation war is an essential factor in the evolution of such networks, for the young generation, modern communication as well as work and education in urban areas have extended social networks, providing them with additional social and cultural resources and influencing their development, preferences and life choices. With, in the near future, expected better communications of Thathom District with other districts of Xaysomboun province and with Bolikhamxay province, a further influx of technology can be expected, with possible changing patterns of livelihoods expectations.

### ***3.5 Infrastructure and services***

63. As in most of rural Lao PDR, the infrastructure of the villages of Zone 2UR is limited. Overview of it is listed in Table 7 below.



Infrastructure	Ban Pou	Ban Hatsamkhone	Ban Piengta
<i>Electricity</i>	Available in most households, from national grid		
<i>Drinking water source</i>	Piped water from springs	Piped water from open streams	Piped water from open streams
<i>Transportation and type of road/ Problem</i>	Asphalt-paved D1 road; earth paths inside the villages / difficult to use in wet season		
<i>Navigation waterway</i>	Nam Ngiep		
<i>Small grocery shops</i>	6 shops	5 shops	2 shops
<i>Rice Milling Machine</i>	Available	Available	Available
<i>Nursery School</i>	Not available	Not available	Not available
<i>Primary School</i>	1	1	1
<i>Secondary School</i>	1	Not available	Not available
<i>Temple</i>	1	Not available	Not available
<i>Health Centre</i>	Not available	Not available	1
<i>Pharmacy</i>	Not available	Not available	Not available
<i>Cemetery</i>	1	1	1
<i>Petrol</i>	Several villagers sell gasoline in bottles; several petrol stations in the area are located along D1 road		

Table 7 Infrastructure of 2UR villages (Source: field visits 2011; update 2013)

64. The main transportation access is the asphalt paved, all-weather National Road 1D which links the villages with Phonesavanh, the provincial capital of Xieng Khouang, approximately 90 km to the northwest and the district capital Thathom approximately 25 km to the southeast, from where roads continue to Bolikhamxay Province and Khamouane Province respectively. From Thaviengxay a paved road leads to Xaysomboun district. Roads within the villages are earth surface, just partly flattened, which become muddy and difficult to use following rains. Currently, people use boats to cross the Nam Ngiep during rainy season while it is possible to cross by foot or Tek-Tek (hand tractor) through the water in dry season.
65. All villages in this zone are connected to the electricity grid and only a few Hatsamkhone households are reported to be not connected (Table 8).

Community	Grid Electricity	No Electricity	Total
Pou [Hmong]	100%	0%	100%
Pou [Lao Loum]	100%	0%	100%
Piengta	100%	0%	100%
Hatsamkhone	96.15%	3.85%	100%
Total	339	3	342

Table 8 Electricity infrastructure of 2UR villages (Source: Baseline Socio Economic Survey, 2014)

66. All villages get water from a Gravity Fed System (GFS) but the one of Ban Pou is connected to springs with limited flow at the end of the dry season while for Hatsamkhone and Piengta the GFS are connected to a stream which is turbid in the rainy season, even though there is always enough quantity. Poor water quality (turbidity) is probably why bottled water, delivered by truck, is more common in Piengta (Table 9 and Table 10).

Community	Bottled Water	GFS	Other	Total
Pou [Hmong]	3%	96%	1%	100%
Pou [Lao Loum]	8%	90%	2%	100%
Piengta	43%	56%	1%	100%
Hatsamkhone	13%	87%	0%	100%
Total	16%	83%	1%	100%
Total	55	284	3	339

Table 9 Drinking water sources of 2UR villages in wet season (Source: Baseline Socio Economic Survey, 2014)

Community	Bottled Water	GFS	Other	Total
Pou [Hmong]	3%	96%	1%	100%
Pou [Lao Loum]	8%	90%	2%	100%
Piengta	42%	57%	1%	100%
Hatsamkhone	13%	87%	0%	100%
Total (percent)	16%	83%	1%	100%
Total (count)	54	285	3	342

Table 10 Drinking water sources of 2UR villages in dry season (Source: Baseline Socio Economic Survey, 2014)

67. The availability of sanitation/toilets varies from village to village. It is the lowest in Hmong community of Ban Pou (69%). Almost all toilets are pour flush (99.6%) and 100% of toilets are used when owned (Table 11).

Community	Have toilet	Pour Flush	Pit Latrine	Use of toilet
Pou [Hmong]	69%	100%	0%	100%
Pou [Lao Loum]	98%	100%	0%	100%
Piengta	95%	100%	0%	100%
Hatsamkhone	96%	99%	1%	100%
Total (%)	87%	100%	0%	100%
Total (households)	297	296	1	297

Table 11 Sanitation in 2UR villages (Source: Baseline Socio Economic Survey, 2014)

68. Primary schools are available in all three villages, and a lower secondary school opened in Ban Pou in

September 2013.

69. Ban Piengta has a health centre which is also accessible by the people of the nearby villages. None of the communities have pharmacies.
70. All villages have small general stores. These are typically small rooms or add-ons at people's houses which sell soaps, shampoos and detergents, toothpaste, and a variety of packaged and canned goods.

### 3.6 School Attendance

71. In general, all villages reported education as one of their main concerns and good schooling opportunities for the younger generation as a major aspiration. There is a lack of teachers and teaching materials to provide adequate educational services, as well as household income to send children to school. Furthermore, some people have expressed concern that even the public school system needs private financial input to pay for extra tutoring.
72. Table 12 indicates the Primary Age Enrolment (PAE), 6-10 years in the 4 communities. Overall there is no significant difference in PAE between communities or in male and female PAE but there are differences in male and female PAE in individual villages. However the total surveyed numbers of male and female primary age students outside Ban Pou [Hmong] are relatively small (less than 50 students in each village).

Community	MALE		FEMALE		TOTAL	
	Enrolled	Count	Enrolled	Count	Enrolled	Count
Pou [Hmong]	96%	75	95%	66	96%	141
Pou [Lao Loum]	77%	13	100%	20	91%	33
Piengta	100%	21	87%	23	93%	44
Hatsamkhone	92%	24	100%	23	96%	47
<b>Total</b>	<b>94%</b>	<b>133</b>	<b>95%</b>	<b>132</b>	<b>95%</b>	<b>265</b>

Table 12 Primary age (6-10 years) enrolment in 2UR villages  
(Source: Baseline Socio Economic Survey, 2014)

73. Table 13 provides the Secondary Age Enrolment (SAE) in the 4 communities. There is no significant difference in SAE between males and females overall or in any individual villages.
74. SAE is significantly different between communities: SAE is 20% for Ban Pou [Hmong] and 65% for Ban Pou (Lao Loum] and reaches 84% in Piengta and Hatsamkhone. It is not clear if low SAE is due to language difficulties, higher than normal age for grade, poverty, distance to high school, or other impediments.

Village / Community	Male		Female		Total	
	Enrolled	Count	Enrolled	Count	Enrolled	Count
Pou [Hmong]	22%	76	17%	46	20%	122
Pou [Lao Loum]	71%	31	53%	17	65%	48
Piengta	87%	31	81%	27	84%	58
Hatsamkhone	86%	36	80%	25	84%	61

<b>Total</b>	<b>56%</b>	<b>174</b>	<b>51%</b>	<b>115</b>	<b>54%</b>	<b>289</b>
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Table 13 Percent of students of lower secondary age (11-15 years) that are enrolled in Lower Secondary in 2UR villages (Source: Baseline Socio Economic Survey, 2014)

75. The Table 14 provides the mean age by Grade 5. Ban Pou [Hmong] children enrol late (mean age 7.1±0.2) compared to other villages who generally enrol at age 6.
76. Overall Hmong students of Ban Pou are older when they finish primary school (13.1±0.4) but Ban Pou [Lao Loum] are also old for grade, having a mean age of 11.3±0.3. The other villages have a mean age of 10.4 years. It is not clear what may be the issue (poverty, language, lack of motivation, etc.).

Grade	Age in Years for Children in Each Grade			
	Pou [Hmong]	Pou [LaoLoum]	Piengta	Hatsamkhone
1	7.1	6.0	5.9	5.7
2	9.4	7.4	7.9	7.6
3	11.1	8.5	10.6	8.7
4	12.0	10.0	9.7	9.3
5	13.1	11.3	10.4	10.4

Table 14 Mean age (years) by grade in 2UR villages (Source: Baseline Socio Economic Survey, 2014)

### 3.7 *Adult Education and Literacy*

77. Literacy is a challenge for rural communities and also for the Project's communication efforts in Zone 2UR. Levels of educational achievement are related to age, gender and ethnicity (refer Figure 6 and Figure 7). For Zone 2UR:
- 28% of adult Hmong have no formal education compared to 10% of adult Lao Loum
  - 24% of adult Hmong have higher than primary education compared with 42% of Lao Loum adults
  - 40% of Hmong women have no formal education and only 4% have higher than primary level education whereas 16% of Lao Loum women have no formal education and 32% have higher than primary education.
78. Younger age groups have more education: the 20-29 year age group have about 7 years of education on average, with males having about 2 years more education on average. Older age groups have less education and more difference between genders – the 50-59 year group have an average of 4 years of education, males averaged 5 years and females average 3.4 years (Table 15).

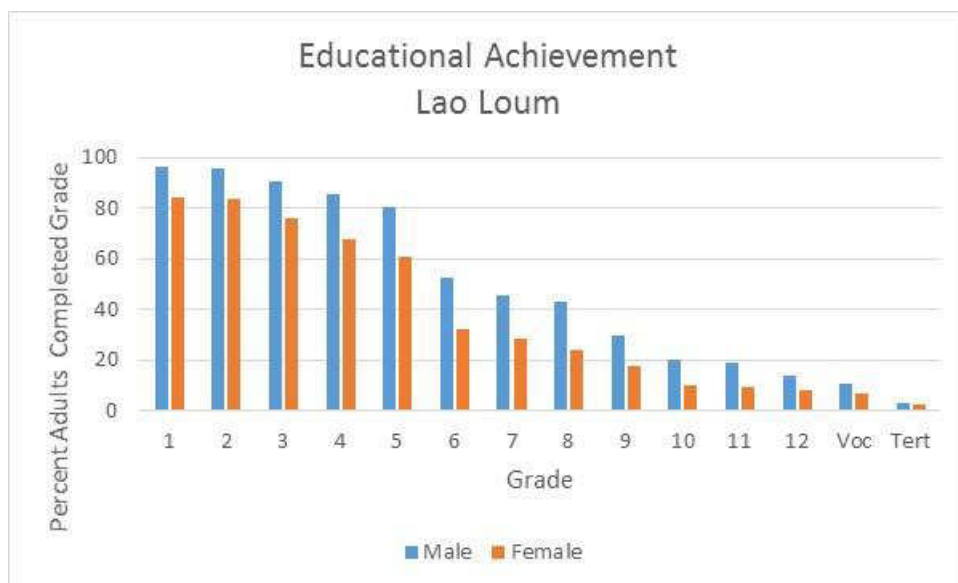
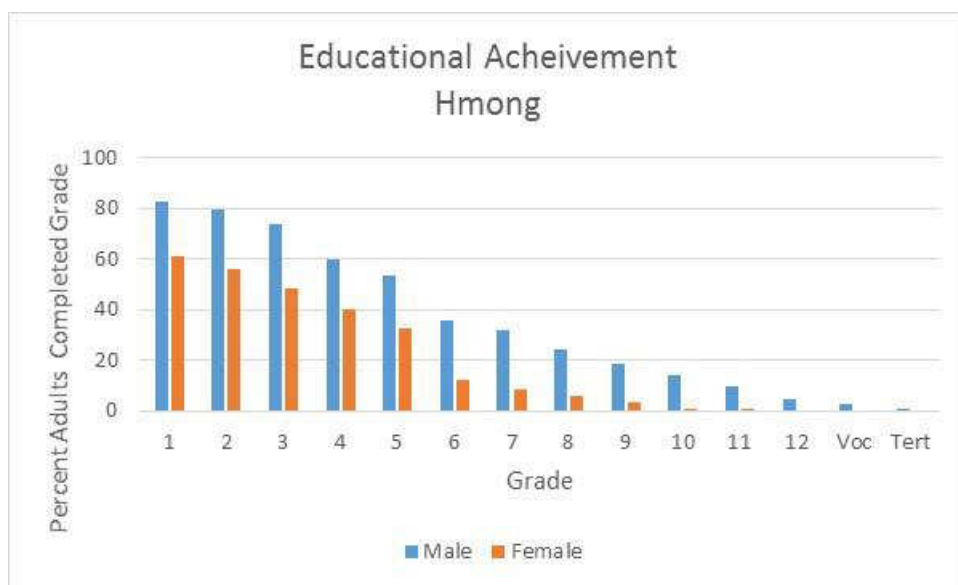


Figure 6 Educational achievement for adults 18 years and over that have completed their education.



79.

Figure 7 Educational achievement for adults 18 years and over who have completed their education.

Age Group (years)	Male		Female		Total	
	Mean	Se	Mean	Se	Mean	Se
20-29	8.2	±0.3	6	±0.3	7.1	±0.2
30-39	6.6	±0.4	4.1	±0.3	5.3	±0.3
40-49	5.5	±0.4	3.6	±0.3	4.6	±0.3
50-59	5	±0.4	3.4	±0.4	4.2	±0.3
60+	3.7	±0.4	1	±0.3	2.3	±0.3

Table 15 Mean years of formal education by age and gender  
(Source: Baseline Socio Economic Survey, 2014)

Age group (years)	Male	Female	Total
5-9	64%	61%	63%
10-14	93%	93%	93%
15-19	92%	91%	92%
20-24	100%	86%	92%
25-29	90%	90%	90%
30-34	95%	76%	84%
35-39	95%	71%	84%
40-44	89%	93%	91%
45-49	100%	80%	90%
50-54	88%	91%	89%
55-59	100%	100%	100%
60-64	100%	75%	88%
65-69	77%	67%	72%
<b>Total (%)</b>	<b>87%</b>	<b>80%</b>	<b>84%</b>
Total surveyed	370	332	632

Table 16 Lao fluency by age and gender (Source: Baseline Socio Economic Survey, 2014)

80. Adult literacy is correlated with age, gender and village. (Table 17 and Table 18). Education and literacy are generally lower for women: only 49% of adult women in 2UR villages are fully literate compared to 70% of men. The percentage of literacy is particularly low for older women (>50 years). Ban Pou [Hmong] has lowest literacy levels for both males and female adults: overall only 37% of adults are literate, with 48% of men and only 26% of women being fully literate.

Age Group (years)	Male	Female	All
20-29	77%	69%	73%
30-39	76%	52%	64%
40-49	73%	46%	60%
50-59	60%	38%	49%
60+	44%	1%	27%
<b>Total</b>	<b>70%</b>	<b>49%</b>	<b>59%</b>

Table 17 Literacy by age and gender for Zone 2UR (Source: Baseline Socio Economic Survey, 2014)

Village	Male	Female	All
Pou [Hmong]	48%	26%	37%
Pou [Lao Loum]	87%	65%	76%
Piengta	72%	47%	60%
Hatsamkhone	79%	68%	73%
<b>TOTAL</b>	<b>69%</b>	<b>49%</b>	<b>59%</b>

Table 18 Adult Literacy (age>20) by village and gender for Zone 2UR (Source: Baseline Socio Economic Survey, 2014)

81. The Project has started adult literacy classes in 2015 in Zone 2UR in response to an expressed desire from the villages to improve adult literacy (see section 8.3.4).

### 3.8 Diet and Nutrition

82. The nutritional status of a person is a function of the nature and quantity of food intake (dietary intake), the levels and types of diseases and infections, lifestyle, calorific requirements of the person, reproductive status and history, and the ability of the person to assimilate and absorb nutrients.
83. Poor nutritional status (low nutrition) may have an injurious impact on health, as can some pre- and post-birth customary practices, causing deficiency diseases such as blindness, anaemia, scurvy, osteoporosis, preterm birth, stillbirth, poor intellectual development as well as reduced growth (stunting). Poor diet (excess consumption) may also result in , obesity and can lead to common chronic systemic diseases as cardiovascular disease and diabetes. The combination of low nutrition and over consumption within the same community is an increasing problem in the developing world.
84. Volumes of food consumptions are lower in 2UR than in other zones and are particularly low in the Hmong community of Ban Pou (Table 19). Estimated consumption of staples (mainly rice) was 14.7 kg/month which was lower than the other zones included in the baseline (Baseline Socio Economic Survey, 2014). The Hmong households in Ban Pou have the lowest consumption of staples in the zone, recording a consumption of only 13.4 kg/ person/ month.
85. Per capita fish consumption in Zone 2UR is relatively low,  $1.8 \pm 0.1$  kg/person/month (this is total weight and includes non-edible parts) with Hmong community of Ban Pou having the lowest one (1.1 kg/person/month). The same can be said about meat consumption, slightly lower than average (1.4 kg /month) than for the whole area (1.5 kg/month) (Table 20). This is a minimum not including poultry which was counted by the bird.

Community	Rice (kg/month)		Total Staples (kg/month)		Fish (kg/month)		Meat (kg/month)		Poultry (birds/month)	
	mean	se	mean	se	mean	se	mean	se	Mean	se
Pou [Hmong]	12.3	±0.4	13.4	±0.5	1.1	±0.1	1.0	±0.1	0.7	±0.1
Pou [Lao Loum]	14.6	±0.6	16.1	±0.7	2.5	±0.2	1.5	±0.2	2.1	±0.2
Piengta	13.4	±0.4	14.7	±0.5	2.1	±0.2	1.6	±0.2	2.1	±0.2
Hatsamkhone	14.2	±0.5	15.4	±0.5	1.9	±0.1	1.8	±0.1	1.3	±0.1
Total	13.4	±0.2	14.7	±0.3	1.8	±0.1	1.4	±0.1	1.5	±0.1

Table 19 Per capita food consumption for Zone 2UR (Source: Baseline Socio Economic Survey, 2014)

ZONE	Fish Consumption Kg/person/ month		Meat Consumption Kg/person/ month	
	Mean	Se	Mean	Se
Z1 Catchment	1.5	±0.1	1.1	±0.1
<b>Z2 Upper Reservoir</b>	<b>1.8</b>	<b>±0.1</b>	<b>1.4</b>	<b>±0.1</b>
Z2 Lower Reservoir	3.9	±0.2	1.7	±0.1
Reference Village 1	1.3	±0.1	0.6	±0.1
Z3 Construction area	2.2	±0.3	2.8	±0.3
Z4 Downstream	2.7	±0.2	1.4	±0.1
Z5 Hosts	3.1	±0.3	2.1	±0.2
Reference Village 2	3.0	±0.2	1.5	±0.1

Table 20 Fish and meat consumption for all zones (Source: Baseline Socio Economic Survey, 2014)

86. The 2014 health baseline survey used 2 simple approaches to the measurement of the nutritional status of 2UR households:
1. Child anthropometric measurements and
  2. Anaemia levels amongst women of child bearing age.
87. Stunting (low height for age) is a primary manifestation of long term / chronic malnutrition and recurrent infections, such as diarrhoea and helminthiasis (parasitic infections), in early childhood. Anaemia is low levels of red blood cells which causes tiredness, inability to work and affects child development. It is caused by insufficient iron intake (diet), loss of blood, and parasite infections.
88. The baseline health survey for 2UR shows that apparently adequate levels of food consumption are not translated into health outcomes. Child stunting and anaemia in women are high with child stunting affecting 34% of all children in the zone (but more than 50% in Ban Pou) and anaemia in 2UR



affecting 51% of child bearing age women (but up to 67% in Hmong community of Ban Pou).

89. This compares to a national average of 44% stunting in rural areas with road access (Lao Social Indicator Survey 2012) and 36% of women who are anaemic (Lao PDR Nutrition Profile, 2014).

Name	Stunting children < 5 years	Anaemia (women 25-45yrs)*	Contraceptive use (women 25-45yrs)
Pou [Hmong]	67%	50%	0%
Pou [Lao]	58%	56%	11%
Piengta	50%	11%	56%
Hatsamkhone	29%	30%	30%
Total	51%	34%	28%

Table 21 Nutritional indicators and condom use for 2UR villages  
(Source: 2014 Baseline Socio-Economic Survey)

90. Contraceptive use (28%) is rather low compared to the overall average for the socio-economic survey (40%) but that figure hides variability with high use in Piengta and a null use in the Hmong community of Ban Pou.

### 3.9 Health and Health Services

91. Health care in the villages relies on two bases: on the one hand villagers consult traditional healers and use local knowledge on treatment and medicine; this extends to spiritual analysis and procedures. On the other hand they are integrated into the formal health care system, which, however, is still weakly established. There is a health centre in Ban Piengta and dispensaries provide services in Ban Thaviengxay and the district capital Thathom. The nearest hospital is located in Phonesavanh, the capital of Xieng Khouang Province; a distance of 77km. All of these facilities are accessible year round by an all-weather-road (Road D1).
92. The 2014 Baseline Socio-Economic Survey provides some information on health perceptions, treatment seeking and health access. There is no gender differences but there are significant differences between villages – Ban Pou reported the lowest number of days off due to ill health (Table 22). Previous analysis has shown that poor households generally self-report less illness and lose fewer days of normal activities. Reported ill health is also related to age with children less than 5 and older adults reporting highest levels of ill health.
93. Almost all persons reporting ill health sought treatment (>90%). Lowest level of treatment seeking was in Ban Pou [Hmong] (90%) and highest was in Hatsamkhone where 99% of those reporting ill-health sought some form of treatment.

Community / village	Ill health	Seek treatment	Days off
Pou [Hmong]	23%	21%	11%
Pou [Lao Loum]	36%	33%	8%
Piengta	31%	29%	13%
Hatsamkhone	28%	28%	15%

TOTAL	28%	21%	12%
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Table 22 Seeking treatment if ill (Source: Baseline Socio-Economic Survey, 2014)

Zone 2UR villages use various health facilities (Table 23). Public hospitals and village health volunteers are the most commonly used health facilities but there are significant differences between villages.: Ban Pou [Lao Loum] has a high use of the village health volunteers but the other villages use public health hospitals and clinics the most frequently

Health facility \ Village	Pou [Hmong]	Pou [Lao Loum]	Piengta	Hatsamkhone	Total
Public hospital/Clinic	74%	48%	75%	69%	68%
Village Health/Volunteer	18%	59%	18%	29%	29%
Pharmacy/Shop	8%	2%	8%	2%	5%
Traditional Healer	4%	0%	1%	2%	2%
Private clinic/doctor	0%	0%	3%	1%	1%
Doctor Home visit	1%	1%	1%	0%	1%
Total	104%	109%	107%	103%	106%

Table 23 Health facilities used by 2UR villages (Source: Baseline Socio-Economic Survey, 2014)

94. Table 24 lists the health issues recorded by the Piengta Health Centre in 2015. Diarrhoea and respiratory diseases are the most prevalent health complaints reported.

Health Complaint	Piengta		Hatsamkhone		Pou	
	Patients	Percent population	Patients	Percent population	Patients	Percent population
Gastritis	8	1.8%	9	1.9%	13	1.24%
Cold/Flu	38	8.5%	40	8.5%	49	4.70%
Diarrhoea	42	9.5%	50	10.77%	64	6.14%
Bronchitis	18	4.07%	35	7.54%	51	4.89%
Button	5	1.13%	6	1.29%	11	1.05%
Wound	13	2.9%	6	1.29%	8	0.76%
Other	43	9.72%	40	8.62%	72	6.90%
Patients	167	38%	186	40%	268	26%
<b>Total population</b>	<b>442</b>		<b>464</b>		<b>1042</b>	

Table 24 Summary of outpatients' health data from January to October 2015 in Piengta Health Centre (Source: Piengta Health Centre)

### 3.10 Gender Issues and Status of Women

95. Gender dimensions of concern in the project area which also apply to Zone 2UR include:

- land rights; most land and housing are formally or informally under male control and patrilineal heritage line. This is addressed by all replacement land and housing registered and titled in the joint names of husband and wife. Where a man has more than one wife, the second family will be separately titled in the name of the wife and a male family member of her choice (e.g. eldest son)
- financial management; where compensation money may be handed only to a male household head, there is higher risk of poor subsequent investment. The Project has instituted bank accounts in the joint names of husband and wife, with prior financial training provided to understand how to deposit and withdraw funds. All acknowledgements of receipts or withdrawals must have the joint signatures or thumbprints of both husband and wife. This compensation procedure was instituted for roads and TL land acquisition, and has proved very popular, particularly with women
- hard work; women have multiple responsibilities taking care of the house, cooking, caring for the sick, elderly and children, gender-specific agricultural tasks (e.g. weeding, hoeing, fetching water, land clearance, harvesting, etc.), and income generating work. Replacement housing will integrate labour saving devices such as accessible domestic water supply, electricity, etc. to reduce the drudgery component of these responsibilities
- health; reproductive and maternal health is poor with comparatively high levels of anaemia, and continued laborious work throughout pregnancy. Sanitation is poor, and improved water and sanitation facilities will be provided in replacement housing, and training given in their use. The health program is outlined in more detail in the SDP.

- education; less formal education due to early inclusion into domestic work, and less ability to understand written documents particularly if the first language is not Lao. Improved educational facilities will be provided in Houaysoup, with permanent teacher presence and teacher housing. Adult literacy and basic numeracy classes, particularly for women, will also be implemented for all those interested to participate.
  - communication; typically external agencies and government extension staff tend to talk only to male village representatives and in Lao language, especially where the culture is patriarchal and patrilineal, as with Hmong. The Project has made particular effort to employ Hmong men and women as fieldworkers for Hmong communities. Women's meetings are held separately from those of men, and women's preferences for various types of training are given precedence
  - ethnicity; ethnic minority women are proportionately less familiar with Lao language and therefore less likely to be informed of their rights. See above point.
96. 2UR Hmong community are strongly patriarchal. Family members are under the authority and direction of the male-headed household, usually the oldest male. Sons will automatically inherit family property and all other assets and are often the ones to receive a formal education. Hmong women normally do not represent the family status and may not be included in meetings. Even if they participate, women rarely voice their opinions. Both a Hmong man and woman are considered adults only after they have produced children. Hmong woman only gain prestige in the family by giving birth to a boy.
97. Separate consultation meetings with female villagers resulted in the following gender issues being identified:
- A high percentage of females have no formal education and many did not complete primary school
  - Early marriage (15 to 16 years) and early and frequent pregnancies
  - High demand of physical labour including raising of children and care of livestock, as well as most housework and tending gardens
  - Informally no property rights for females recognized
  - No traditional right to divorce for females
  - Husbands generally as lone decision makers;
  - Few opportunities for financial independence or to learn new livelihood activities such as weaving, tailoring, and food preservation techniques
  - Health problems such as diarrhoea, womb pain, body ache; distance to Paksan hospital is a further health-related issue and previous access available only during the dry season

### 3.11 *Information and Services*

98. There is significant difference in 14 asset types regarding communities and Ban Pou [Hmong] owns least assets. 2UR has full access to national electricity grid and mobile phone networks, and this translates in a high ownership of mobile phones and other electrical assets (Table 25).
99. It is worth noting the ownership of hand tractors (higher than in 2LR) and the one of boat and boat engines: the ownership is virtually nil for the Hmong community of Ban Pou but is particularly high for Piengta and Hatsamkhone, and relatively less for the Lao Loum Ban Pou community. This has to be put in relation with the importance of income from fishing for these 3 communities (**Error! Reference source not found.** and **Error! Reference source not found.**).

Asset \ Villages	Pou [Hmong]	Pou [Lao Loum]	Piengta	Hatsamkhone	Total	Chi2
Mobile phones/other phones	93%	98%	96%	100%	96	0.042
Televisions	56%	95%	93%	91%	80	0
Motorcycles/scooters	76%	85%	80%	81%	80	0.578
Satellite dish	22%	92%	83%	85%	63	0
Wardrobe	51%	68%	63%	69%	61	0.039
Electric rice cooker	31%	59%	45%	72%	49	0
Bicycles	34%	54%	45%	58%	46	0.004
Refrigerators/freezers	21%	68%	40%	55%	42	0
Hand Tractor	34%	54%	40%	46%	42	0.057
Tape players/CD players/radio	31%	54%	36%	37%	37	0.022
DVD Player	28%	32%	26%	32%	29	0.801
Boat	1%	20%	45%	28%	21	0
Boat motor	0%	20%	26%	18%	14	0
Generator	19%	24%	0%	8%	13	0
Glass Fronted Cabinet	5%	15%	19%	12%	12	0.015
Car or truck	5%	7%	5%	12%	7	0.262
Water Pump	1%	14%	7%	5%	6	0.005
Cameras, video cameras	6%	3%	6%	3%	5	0.65
Water Dispenser	5%	2%	5%	4%	4	0.752
Couch	2%	2%	2%	8%	4	0.151
Washing Machines	1%	5%	1%	3%	2	0.259

Table 25 Ownership of assets (in percentage) by households in 2UR villages  
(Source: 2014 Baseline Socio- Economic Survey)

### 3.12 Income

100. Total income is the sum of income from all sources for all household members; it includes wages and salaries, pensions, interest, transfers, entrepreneurial income from household businesses, and income from agriculture, fisheries and forest. Total income includes both cash income and the imputed value of in-kind income (the value of goods produced and consumed directly by the household, and the value of in-kind payments for work, e.g. food). It is expressed as income per person per month in this report.
101. The 2014 Baseline Socio Economic Survey represents the most comprehensive and reliable estimate of household income in 2UR villages. This survey found households in 2UR reported a mean per capita income of 881,000 LAK/month, with approximately 63% of this income occurring as cash income. There are significant differences in mean per capita income between villages with Ban Pou [Hmong] community having a mean per capita income of 367,000 LAK/person/month only. All other villages in this zone have a mean income higher than 1,000,000 LAK/person/month
102. Fishing, Agriculture, Employment and Business income (cash sales + imputed value of self-consumption) are the 4 largest sources of income overall.

103. Fishing is the largest source of income except in Ban Pou [Hmong] where agriculture is the largest source of income – note that fishing is a minor source of income for the Hmong community in this village - and in Hatsamkhone where business income is larger and fishing comes second.
104. Rural households in the Lao PDR typically utilize a wide variety of livelihoods, with income diversity often adding to a household's resilience, particularly for poor households.
105. There are significant differences in the average number of income sources for households in the 4 communities of Zone 2UR. Households in the Hmong hamlet in Ban Pou reported an average of 5 income sources out of a maximum possible 8 sources over the last year, whereas the other communities reported an average of more than 6 sources per household. A significant proportion of Hmong households in Ban Pou had very limited set of income sources: 10% of households reported 3 or fewer income sources in the last year, and 33% reported 4 or fewer income sources.

No of income sources declared in the last year	Ban Pou [Hmong]	Ban Pou [Lao]	Piengta	Hatsamkhone
2	1%	0%	0%	0%
3	9%	0%	0%	1%
4	23%	2%	7%	5%
5	31%	14%	24%	10%
6	26%	37%	39%	28%
7	7%	39%	26%	45%
8	2%	8%	4%	10%
Total (%)	100%	100%	100%	100%
Mean number of income sources	5.0±0.1	6.4±0.1	6.0±0.1	6.4±0.1
Total (households)	121	59	84	78

Table 26 Diversity of income sources in Zone 2UR. The survey identified 8 possible incomes sources (Employment, Business, Fishing, Agriculture, Livestock, Forests, Hunting and Other)

Source	Pou [Hmong]		Pou [Lao Loum]		Piengta		Hatsamkhone		Total	
	Mean	Se	Mean	Se	Mean	Se	Mean	Se	Mean	Se
Employment	51,000	±9,000	235,000	±38,000	244,000	±49,000	246,000	±37,000	175,000	±17,000
Business	19,000	±9,000	129,000	±37,000	221,000	±79,000	392,000	±111,000	173,000	±33,000
Other	11,000	±5,000	27,000	±6,000	42,000	±15,000	28,000	±7,000	25,000	±5,000
Fishing	66,000	±8,000	311,000	±62,000	360,000	±50,000	298,000	±45,000	233,000	±20,000
Agriculture	142,000	±10,000	235,000	±24,000	159,000	±13,000	223,000	±20,000	181,000	±8,000
Livestock	56,000	±9,000	62,000	±12,000	57,000	±15,000	72,000	±22,000	61,000	±7,000
Forest	19,000	±3,000	30,000	±10,000	19,000	±3,000	20,000	±4,000	21,000	±2,000
Hunting	3,000	±1,000	24,000	8,000	8,000	±4,000	23,000	±7,000	13,000	±2,000
<b>Total</b>	<b>367,000</b>	<b>23,000</b>	<b>1,053,000</b>	<b>94,000</b>	<b>1,110,000</b>	<b>±102,000</b>	<b>1,303,000</b>	<b>±145,000</b>	<b>881,000</b>	<b>50,000</b>

Table 27 Per capita total income (LAK/month) in 2UR villages (Source: 2014 Baseline Socio- Economic Survey)

Source	Pou [Hmong]		Pou [Lao Loum]		Piengta		Hatsamkhone		Total	
	Mean	Se	Mean	Se	Mean	Se	Mean	Se	Mean	Se
Employment	14%	±2%	22%	±4%	22%	±4%	19%	±3%	20%	±2%
Business	5%	±2%	12%	±3%	20%	±7%	30%	±9%	20%	±4%
Other	3%	±1%	3%	±1%	4%	±1%	2%	±1%	3%	±1%
Fishing	18%	±2%	30%	±6%	32%	±4%	23%	±3%	26%	±2%
Agriculture	39%	±3%	22%	±2%	14%	±1%	17%	±2%	21%	±1%
Livestock	15%	±2%	6%	±1%	5%	±1%	6%	±2%	7%	±1%
Forest	5%	±1%	3%	±1%	2%	±0.3%	2%	±0.3%	2%	±0%
Hunting	1%	±0.2%	2%	±1%	1%	±0.3%	2%	±1%	1%	±0.3%
<b>Total</b>	<b>100%</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>	

Table 28 Total income (in percentage) in 2UR villages (Source: 2014 Baseline Socio- Economic Survey)

	Pou [Hmong]		Pou [LaoLoum]		Piengta		Hatsamkhone		Total	
	Mean	Se	Mean	Se	Mean	Se	Mean	Se	Mean	Se
Employment	51,000	±9,000	235,000	±38,000	244,000	±49,000	246,000	±37,000	175,000	±17,000
Business	19,000	±9,000	129,000	±37,000	221,000	±79,000	392,000	±111,000	173,000	±33,000
Other	11,000	±5,000	27,000	±6,000	42,000	±15,000	28,000	±7,000	25,000	±5,000
Fishing	1,000	-	95,000	±38,000	139,000	±34,000	95,000	±29,000	72,000	±13,000
Agriculture	29,000	±5,000	83,000	±18,000	37,000	±8,000	90,000	±15,000	54,000	±5,000
Livestock	45,000	±8,000	47,000	±11,000	38,000	1±±4,000	58,000	±22,000	47,000	±7,000
Forest	8,000	±2,000	8,000	±6,000	5,000	±3,000	5,000	±2,000	7,000	±1,000
Hunting	1,000	-	7,000	±4,000	3,000	±2,000	12,000	±5,000	5,000	±1,000
<b>Total</b>	<b>165,000</b>	<b>18,000</b>	<b>631,000</b>	<b>±72,000</b>	<b>729,000</b>	<b>±96,000</b>	<b>925,000</b>	<b>±132,000</b>	<b>557,000</b>	<b>±44,000</b>

Table 29 Per capita cash income (LAK/month) in 2UR villages (Source: 2014 Baseline Socio- Economic Survey)

	Pou [Hmong]	Pou [Lao Loum]	Piengta	Hatsamkhone	Total
Employment	100%	100%	100%	100%	100%
Business	100%	100%	100%	100%	100%
Other	100%	100%	100%	100%	100%
Fishing	2%	31%	39%	32%	31%
Agriculture	20%	35%	23%	40%	30%
Livestock	80%	76%	67%	81%	77%
Forest	42%	27%	26%	25%	33%
Hunting	33%	29%	38%	52%	38%
<b>Total</b>	<b>45%</b>	<b>60%</b>	<b>66%</b>	<b>71%</b>	<b>63%</b>

\* Assumption is made that employment, business & other income are mostly cash income, as these were not split into cash & non-cash in the SES questionnaire.

Table 30 Cash income (in percentage) in 2UR villages (Source: 2014 Baseline Socio-Economic Survey)



106. Household incomes are not equally distributed, and typically a small percentage of the population have much higher incomes than the rest. This is also the case for Zone 2UR.
107. Ban Pou [Hmong] has a very narrow wealth distribution and most households (72%) are clustered in the poorest group: 10% of Pou [Hmong] households even reported incomes of less than 125,000 LAK/person/month. There are no wealthy households. In other villages there is a long “tail” of a few households with very high incomes.

Per capita income (million LAK/month)	Pou[Hmong]	Pou[LaoLoum]	Piengta	Hatsamkhone	Total
0-0.4	72%	14%	15%	12%	34%
0.4- 0.8	22%	27%	27%	32%	27%
0.8- 1.2	4%	31%	25%	17%	17%
1.2- 1.6	2%	14%	14%	17%	10%
1.6- 2.0	0%	0%	6%	8%	3%
2.0- 2.4	0%	8%	5%	6%	4%
2.4- 2.8	0%	2%	1%	3%	1%
3.2- 3.6	0%	5%	2%	1%	2%
3.6- 4,2	0%	0%	2%	0%	1%
>4.2	0%	0%	1%	5%	1%
TOTAL (%)	100%	100%	100%	100%	100%
<b>TOTAL (households)</b>	<b>121</b>	<b>59</b>	<b>84</b>	<b>78</b>	<b>342</b>

Table 31 Per capita income Distribution in 2UR (Source: Baseline Socio Economic Survey, 2014)

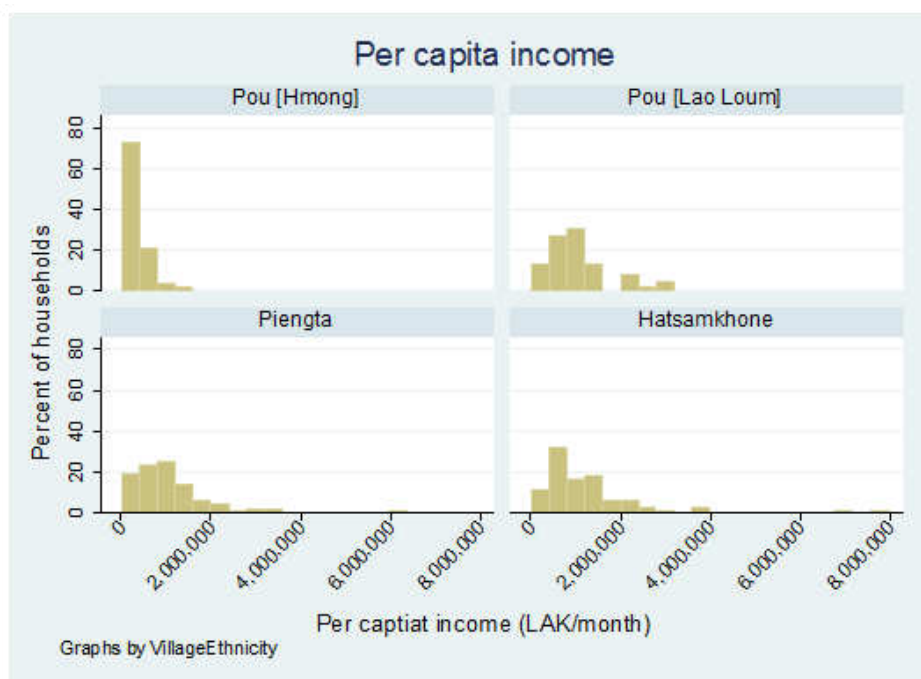


Figure 8 Income Distribution in 2UR (Source: Baseline Socio Economic Survey, 2014)

### 3.13 Agriculture and Horticulture Land Use

108. A total of 75% of adults over the age of 18 years in 2UR (with up to 82% in Hmong community of Ban Pou) identified their main occupation as farmer. The second group is the one of students and only 4.6% identified themselves as government workers. The percentage of government workers is much higher in all Lao Loum communities than in the Hmong community of Ban Pou (only 0.8%).

Main occupation (in %)	Pou [Hmong]	Pou [LaoLoum]	Piengta	Hatsamkhone	Total
Farmer	82%	72%	74%	69%	75%
School Student	10%	8%	9%	15%	11%
Too old/Retired	3.4%	7.3%	5.6%	4.8%	5.0%
GOV worker	0.8%	7.7%	5.2%	6.5%	4.6%
Home duties	2.5%	2.4%	0.8%	2.8%	2.1%
Non-farm Labourer	0.0%	1.0%	1.5%	1.0%	0.8%
University/Tertiary	0.6%	0.5%	2.2%	0.0%	0.8%
Trader	0.0%	0.0%	1.5%	0.7%	0.5%
Farm Labourer	0.8%	0.0%	0.0%	0.0%	0.3%
Other (specify)	0.0%	0.5%	0.4%	0.3%	0.3%
Child, < school age	0.0%	1.0%	0.0%	0.0%	0.2%

Table 32 Households' main occupation in 2UR Villages. (Source: 2014 Baseline Socio-Economic Survey)

109. The land ownership and land use of the three villages in Zone 2UR (as per 2011 field survey) are presented in Table 33.
110. Privately held lands account for only slightly more than 6% of the total land area of these villages. These privately held lands are almost all agricultural. About 30% of the privately held lands in all four communities are paddy fields. 17% of the privately held lands are upland rice fields, and 47% of the privately held lands are other cultivated areas.

Type of land use (ha)	Piengta	Hatsamkhone	Pou	Total
<b>1. Private Land</b>				
1.1 Residential area	5.51	9.88	18.94	34.33
1.2 Paddy field	68.19	78.44	130.1	276.73
1.3 Upland rice field	24.074	37.29	93.78	155.14
1.4 Other cultivated land	125.95	126.05	172.58	424.58
1.5 Other private land use	4	3	7	14
Total	227.73	254.66	422.4	904.78
1.6 Fish Ponds (unit)	0	3	7	10
<b>2. Public Land</b>				
2.1 School Land	1	1.5	1.5	4
2.2 Temple Land	0	0	0.5	0.5
2.3 Village Office Land	0	0	0	0
2.4 Health Centre Land	0.5	0.42	0.71	1.63
2.5 Cemetery land	2	3	2	7
2.6 Grazing area	41.9	2.5	6.15	50.55
2.7 Pond/water body	0	0	0	0
2.8 Other public land use	23.7	26.3	35.4	85.4
Total	69.1	33.72	46.26	149.08
<b>3 Forest and others</b>				
3.1 Community-managed production forest	245	857	2,050	3,152
3.2 Community-managed reserved forest	253	637	694	1,584
3.3 Other Forest				
Protection forest	5423	540	657.5	6,620.5
Unstocked forest	363	365	882	1,610
Buffer zone	41.9	2.5	6.15	50.55
Total	6,325.90	2,401.50	4,289.65	13,017.10
<b>Total Land Use</b>				<b>14,070.91</b>

Table 33 Land Use Patterns of 2UR Villages (Source: Field Survey 2011)

111. Forest land makes up more than 90% of village land in each of the three villages, however, the nature of the forest land differs between each village. In Piengta, 82% of village land is protection forest. In Ban Pou and Hatsamkhone a much smaller percentage (20% and 14% respectively) is classified as protection forest and a larger percentage of village land is classified as community production forest (32% and 43% respectively).

112. Table 34 presents the area of rice cultivation in each community, by each type of rice field: paddy and swidden or upland fields. Paddy fields make up approximately one third of total cultivation in each village, whereas swidden cultivation makes up 11-24% of cultivation. Ban Pou has the highest level of swidden, with the Hmong community within this village being more reliant on swidden cultivation than other communities.

Village Name	Paddy Field Cultivation (ha)	Paddy Field / Overall Cultivation Area (%)	Swidden Cultivation (ha)	Swidden Field / Overall Cultivation Area (%)
<i>Upper section of the reservoir area</i>				
Piengta	68.19	31.25	24.074	11.03
Hatsamkhone	78.44	32.44	37.291	15.42
Pou	130.10	32.81	93.786	23.66

Table 34 Area of Rice Cultivation of each Type and Area of Rice Cultivation in Comparison to Other Agricultural Activities (Source: Field Survey 2011)

### 3.14 Rice Sufficiency

113. An assessment of rice-self-sufficiency in 2011 showed that the majority of households (80%) are able to produce enough rice to meet their needs for the year (Table 35). There are significant differences between villages, with Ban Pou<sup>3</sup> having the lowest level of rice self-sufficiency (71%) and Hatsamkhone (92%) the highest. There are several coping strategies applied by villagers including local rice banks, as indicated by villagers in Ban Hatsamkhone.

Village	No. of HH	No. of HHs interviewed	Sufficient Year Round	Insufficient for 2 to 4 months	Insufficient for 5 to 6 months	Insufficient for 7 to 8 months
<i>Upper section of the reservoir area</i>						
Piengta	82	79	87%	9%	2%	2%
Hatsamkhone	74	73	92%	6%	1%	1%
Pou	172	145	71%	15%	9%	5%
<b>TOTAL</b>	<b>328</b>	<b>297</b>	<b>80%</b>	<b>11%</b>	<b>5%</b>	<b>3%</b>

Table 35 Rice Sufficiency Production Rates of Households on a Yearly Basis (Source: Field Survey 2011)

114. The Baseline Socio Economic Survey was undertaken in October-November 2014, just prior to the annual rice harvest. At that time, households in 2UR reported eating rice about 7 days/week (mean value) (Table 36).

<sup>3</sup> The 2011 field survey did not differentiate between the Hmong and Lao Loum sub-villages.

	Pou [Hmong] (days/week)		Pou [Lao Loum] (days/week)		Piengta (days/week)		Hatsamkhone (days/week)	
	mean	se	mean	se	mean	se	mean	se
Sticky rice	2.2	±0.3	6.9	±0.1	6.6	±0.1	6.8	±0.1
Plain rice	5.3	±0.3	0.6	±0.2	0.7	±0.2	0.5	±0.2
Fish	2.4	±0.2	4.7	±0.3	3.9	±0.3	4.1	±0.2
Pork	1.5	±0.1	1.2	±0.2	1.0	±0.1	2.5	±0.3
Poultry	1.4	±0.1	2.9	±0.3	3.1	±0.3	2.4	±0.2
Wild Animals	0.4	±0.1	0.6	±0.2	0.5	±0.1	1.2	±0.2
Beef	0.5	±0.1	0.7	±0.2	1.3	±0.2	0.8	±0.1
Wild Birds	0.2	±0.1	0.3	±0.1	0.3	±0.1	0.4	±0.1
Buffalo	0.0	±0.0	0.4	±0.1	0.8	±0.2	0.2	±0.1

Table 36 Mean consumption days/week for key food (Source: 2014 Baseline Socio-Economic Survey)

115. The Project's vulnerability officer regularly monitors claims of rice insufficiency to understand which households are most poor and vulnerable. The incidence and causes of any food insufficiency will be closely monitored and addressed through the livelihood support program.

### 3.15 Livestock

116. Livestock is an important income and savings source. All households raise a variety of animals, including large and small livestock (Table 37). For large livestock with fenced grazing areas farther away, villagers have formed livestock groups, organizing the supervision of livestock in these remote grazing areas. This livelihood activity is reported by PAPs as a favoured livelihood activity.
117. Importance of large livestock and pigs is however much lower in Piengta, which may seem contradictory when looking at the respective grazing areas of the 3 villages, with Piengta area representing 80% of the total grazing area according to the 2011 field survey (refer to Table 33).
118. Median per capita income from livestock is similar in all communities but representing 15% for Hmong community of Ban Pou, 3 times the one of other communities, and 77% of livestock is part of the cash income (**Error! Reference source not found.** to **Error! Reference source not found.**).

	Village	Buffalo	Cattle	Pig	Duck	Chicken	TOTAL	Large Livestock
Percent households owning livestock	Pou [Hmong]	13%	66%	69%	60%	98%	98%	60%
	Pou [Lao Loum]	15%	61%	68%	93%	100%	100%	93%
	Piengta	11%	20%	38%	81%	99%	100%	81%
	Hatsamkhone	12%	53%	49%	72%	100%	100%	72%
Average number owned	Pou [Hmong]	0.5	3.9	2.6	4.9	18.5	30.6	4.4
	Pou [Lao Loum]	0.6	5.1	2.9	12.3	30.2	51.1	5.8
	Piengta	0.1	0.8	0.8	11.9	25.1	38.8	0.9
	Hatsamkhone	0.5	3.2	1.6	6.0	26.2	37.5	3.7
Mean per capita value (million kip)	Pou [Hmong]	0.5±0.1	2.4±0.3	0.2±0	0.05±0	0.1±0	3.4±0	3±0.3
	Pou [Lao Loum]	0.7±0.2	4±0.7	0.3±0	0.1±0	0.2±0	5.4±0.8	4.7±0.8
	Piengta	0.2±0.1	0.7±0.2	0.1±0	0.2±0	0.2±0	1.4±0.2	0.9±0.2
	Hatsamkhone	0.7±0.3	2.5±0.5	0.1±0	0.1±0	0.2±0	3.7±0.6	3.2±0.6

Table 37 Livestock in 2UR (Source: 2014 Baseline Socio-Economic Survey)

### 3.16 Fisheries

119. The Nam Ngiep River as well as larger tributaries and smaller streams are an important fisheries resource, with many meals including some fish, either fresh or preserved for the 2UR villages.
120. Fisheries are an important element of nutrition for people from 2UR. Analysis of the 2014 Baseline Socio Economic Survey shows that households in 2UR consume fresh fish about 4 days/ week in most villages (Table 36), but with a total consumption of only 1.8 kg/per person/month (Table 20), lower than other impacted zones. The Hmong community of Ban Pou have lower than average fish consumption with consumed 2.4 days/week of fish on average with a total of 1.1 kg/per person/month (Table 19).
121. The Survey found the total income from fishing was approximately 233,000 kip/person/ month which constitute 26% of total income. Cash income from fisheries amounted to 26% of total (cash + imputed) income (**Error! Reference source not found. to Error! Reference source not found.**).
122. As elsewhere in the area, river fishing is the task of the men. They use cast nets, fishnet, and sometimes fishhooks. While most of the fish they catch is for home consumption, some surplus is on occasion sold at the market like in Ban Thaviengxay. Women and older persons use scoop nets in areas where they can wade, to scoop small fry and aquatic products such as snails, frogs, etc.
123. The Project implements a long term fish catch monitoring program to complement this SES assessment and better understand seasonal variation in fisheries, fishing environments and fishing gears. These data are not yet available but will be reported annually. They will feed the Fisheries Co-Management Programme for the reservoir fisheries development that will need to partially offset the loss of the current fishing grounds together with a Project-supported programme of capture fisheries in constructed ponds if of interest to PAPs.

### 3.17 Forest Utilization

124. While Non-Timber Forest Products have been an important livelihood activity in 2UR, PAPs reported already during the 2011 survey that in recent years NTFP collection had become more and more difficult due to overconsumption in the nearby forests. Forests have become a less important factor for most households’ livelihoods and this is confirmed by the Baseline SES that found that forest based incomes (NTFP, timber and hunting) provided a total per capita income of only 34,000 LAK/month and constituted less than 4% of total income and only 2.2% of cash income (refer to **Error! Reference source not found.** to **Error! Reference source not found.**).

### 3.18 Other Sources of Income

125. Household income in 2UR comes mainly from fisheries, agriculture (crops and livestock) but also from employment and business (20% each) and Forest resource (NTFP, timber and hunting). The Hmong community of Ban Pou has a different profile with a much higher income from agriculture and a livestock income (15%) higher than the one of employment and business (14% and 6% respectively) (see **Error! Reference source not found.** to **Error! Reference source not found.**).

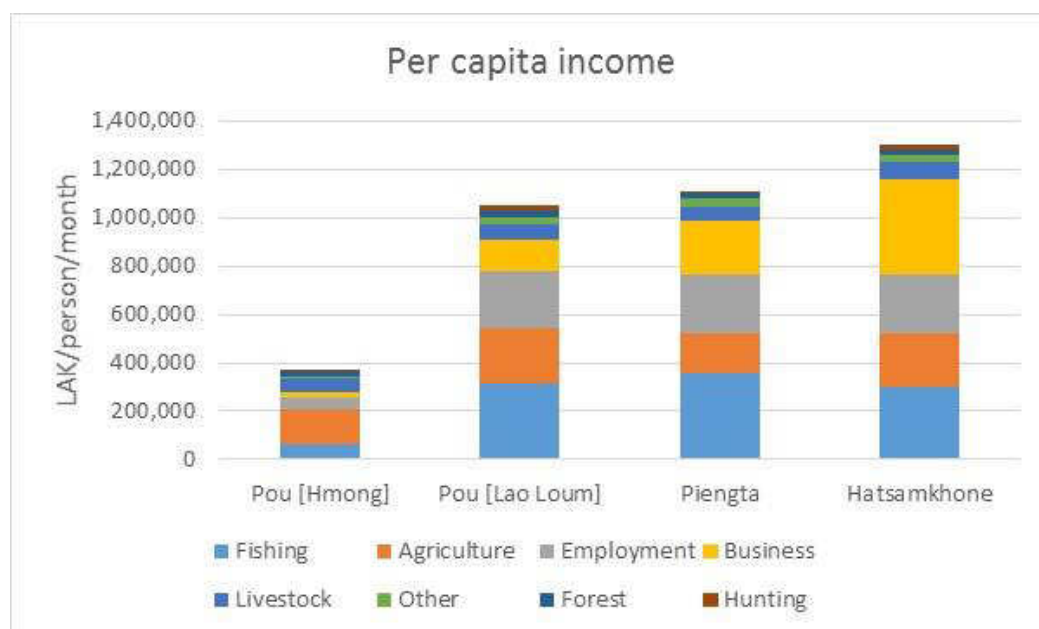


Figure 9: Distribution of Per Capita Income (Source: 2014 Baseline Socio Economic Survey)

### 3.19 Primary Production and Off-Farm Income

126. Income can be divided between primary production and off-farm income. Primary production includes income from agriculture, livestock, forests and fishing. Off farm income includes employment, business income, and other income which includes, land rental, interest payments, and remittances. Primary production includes both cash income and the imputed value of self-consumed production. Off-farm income is largely cash income. Off-farm income is an important method of reducing vulnerability and poverty but, in rural settings, is also highly dependent on the strength of farm sector.

127. As expected, primary production accounts for the majority of income contributing 57% of total income in Zone 2UR and off-farm income accounts for the remaining 43%. There is a large range in the importance of off-farm income between villages, with off-farm income accounting for only 22% of total income in Ban Pou [Hmong] and over 51% of off-farm income in Hatsamkhone.

### 3.20 Household Expenditure and Consumption

128. Consumption has been pioneered by the World Bank Living Standards Measurement Studies program as the key indicator of household living standards since the program's inception in the 1980's. Household consumption, which includes cash expenditure and the imputed value of self-produced and consumed goods, has a number of important advantages as an indicator of household living standards and poverty, particularly in a developing country context. Advantages of a consumption based metric include:
- consumption has a direct relation to the total "utility" or welfare level of a household;
  - consumption is generally easier to measure than income, particularly in rural contexts where much of income is in the form of self-consumed goods that are difficult to value;
  - consumption is thought to be less temporally variable than income, as households use formal and informal borrowing and saving so that they can consume at a relatively constant rate despite fluctuations in income; and
  - households are thought to be less reluctant to share information about expenditure than income
129. In order to accurately reflect the wellbeing of a household, the construction of a consumption based indicator must account for the following:
- Not all consumption adds to wellbeing of the household
  - Consumption of durable items is spread over many years
  - Purchase of high values items may inappropriately bias consumption upwards
  - Goods and services produced and consumed by the family are not directly valued through a purchase
  - Consumption of some items may be supported by increasing debt.
130. A consumption aggregate does not include necessary expenditure / investments in income making activities (e.g. cost of seed, investment in fencing, purchase of livestock etc.) and generally uses an "annual use value" for major purchases. The use value of an item is equivalent to the annual write down of the value of the item. Thus the consumption aggregate does not include all expenditure and is not expected to balance exactly with income but does indicate the week to week well-being /standard of living of the household.
131. The 2014 Baseline Socio Economic Survey divided consumption into:
1. Food consumption, cash expenditure and the imputed value of self-produced food consumed by the household.
  2. Consumables including clothes, footwear, personal items, phone, medical and educational expenses.
  3. Durable Items such as minor household goods and furniture; and
  4. Use value of major assets such as cars, motorcycles, major household items etc.
132. Mean per capita consumption in 2UR in late 2014 is estimated to be approximately 701,000



kip/month (Table 38). Food is the biggest source of consumption accounting for 64% of total consumption (Table 39). Cash expenditure on food accounts for 30% of total food consumption, though this value probably represents a maximum as the survey was undertaken in October/November 2014 just prior to harvest, when most households had already consumed their self-produced staples (rice, cassava etc.).

133. Mean consumption for Ban Pou [Hmong] is very low (397±18k LAK/person/month) compared to other villages (>820k LAK person/month). Ban Pou [Hmong] also spend more on food as a percentage of total consumption (70%) than other villages (<64%) – this is also typical for poorer households and villages.
134. Cash expenditure amounts to 49% of total consumption, which is less than for Zone 3 (Hatsaykham). The percentage of consumption obtained by cash expenditure generally increases with increasing wealth, and conversely the proportion of food consumption in the total generally decreases with increasing wealth.

Consumption	Pou [Hmong] (LAK/person/month)		Pou [Lao Loum] (LAK/person/month)		Piengta (LAK/person/month)		Hatsamkhone (LAK/person/month)		Total (LAK/person/month)	
	mean	se	mean	se	mean	se	mean	se	mean	se
Food	277,000	±11,000	602,000	±40,000	569,000	±33,000	485,000	±19,000	452,000	±14,000
Cash Food	101,000	±8,000	317,000	±35,000	291,000	±26,000	228,000	±18,000	214,000	±11,000
Consumables	95,000	±9,000	230,000	±29,000	181,000	±14,000	214,000	±21,000	167,000	±9,000
Durables	22,000	±4,000	100,000	±17,000	106,000	±23,000	117,000	±20,000	78,000	±8,000
Asset Use	2,000	±0	3,000	±1,000	7,000	±2,000	8,000	±2,000	5,000	±1,000
<b>Total</b>	<b>397,000</b>	<b>±18,000</b>	<b>935,000</b>	<b>±65,000</b>	<b>863,000</b>	<b>±48,000</b>	<b>824,000</b>	<b>±40,000</b>	<b>701,000</b>	<b>±23,000</b>

Table 38 Household consumption (LAK/person/month) in 2UR (Source: Baseline Socioeconomic Survey, 2014)

Consumption	Pou [Hmong]		Pou [Lao Loum]		Piengta		Hatsamkhone		Total	
	mean	se	mean	Se	mean	se	mean	Se	mean	se
Food	70%	±3%	64%	±4%	66%	±4%	59%	±2%	64%	±2%
Cash Food	25%	±2%	34%	±4%	34%	±3%	28%	±2%	30%	±2%
Consumables	24%	±2%	25%	±3%	21%	±2%	26%	±3%	24%	±1%
Durables	6%	±1%	11%	±2%	12%	±3%	14%	±2%	11%	±1%
Asset Use	0%	±0%	0%	±0%	1%	±0%	1%	±0%	1%	±0%
<b>Total</b>	<b>100%</b>	<b>±5%</b>	<b>100%</b>	<b>±7%</b>	<b>100%</b>	<b>±6%</b>	<b>100%</b>	<b>±5%</b>	<b>100%</b>	<b>±3%</b>

Table 39 Household consumption by village (by percentage of Total) in 2UR (Source: Baseline Socioeconomic Survey, 2014)

135. Household consumption is more normally distributed than income, and the majority of households have per capita consumption rates of between 0 and 1.0 million LAK/month (Table 40). There are however, significant differences between villages: 83% of household in Ban Pou [Hmong] have per capita consumption less than 500,000 kip/person/month whereas in the other villages it is typically only 20%. Piengta has a relatively low level of per capita consumption with a narrow distribution

Per capita consumption (million LAK/month)	Pou [Hmong]	Pou [Lao Loum]	Piengta	Hatsamkhone	Total
0 - 0.5	83%	22%	19%	22%	43%
0.5 - 1	15%	44%	54%	53%	38%
1 - 1.5	2%	22%	15%	22%	13%
1.5 - 2	1%	5%	11%	4%	5%
2 - 2.5	0%	7%	1%	0%	1%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Total households.	121	59	84	78	342

Table 40 Frequency distribution of household consumption in 2UR villages (Source: Baseline Socio Economic Survey, 2014)

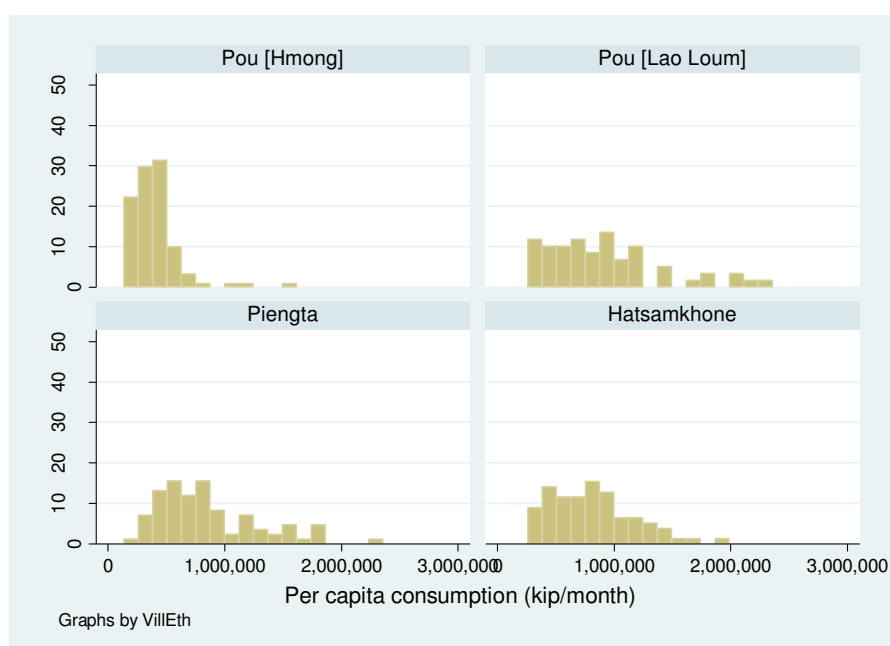


Figure 10: Distribution of Per Capita Consumption (Source: Baseline Socio Economic Survey, 2014)

136. The components of food consumption have also been estimated. Meat has the highest monetary value of monthly consumption, followed by staples and fish (Table 41). There are significant differences between villages with Ban Pou [Hmong] having a relatively low consumption of meat and fish (in kip) compared to the other communities in Zone 2UR.

	Impute value of goods produced and consumed within the household unit (LAK/person/month)									
	Pou [Hmong]		Pou [Lao Loum]		Piengta		Hatsamkhone		Total	
	mean	se	mean	se	mean	se	mean	se	mean	se
Meat	72,000	±5,000	175,000	15,000	199,000	±22,000	135,000	±9,000	135,000	±7,000
Staples	78,000	±3,000	94,000	±4,000	82,000	±3,000	85,000	±3,000	83,000	±2,000
Fish	31,000	±3,000	81,000	±8,000	75,000	±7,000	76,000	±6,000	61,000	±3,000
Other	23,000	±2,000	66,000	±7,000	69,000	±7,000	55,000	±6,000	49,000	±3,000
Vegetables	23,000	±1,000	29,000	±2,000	28,000	±2,000	29,000	±2,000	27,000	±1,000
Alcohol	5,000	±1,000	49,000	±9,000	42,000	±9,000	20,000	±4,000	25,000	±3,000
Fruit	17,000	±1,000	26,000	±3,000	23,000	±2,000	31,000	±2,000	23,000	±1,000
Milk Eggs	7,000	±1,000	22,000	±2,000	21,000	±2,000	23,000	±3,000	17,000	±1,000
Tobacco	3,000	0	12,000	±1,000	12,000	±1,000	7,000	±1,000	8,000	±1,000
<b>TOTAL</b>	<b>258,000</b>		<b>554,000</b>		<b>552,000</b>		<b>461,000</b>		<b>428,000</b>	

Table 41 Imputed consumption values (LAK) per person per month (Source: 2014 Baseline Socio-Economic Survey)

### 3.21 Poverty

137. Poverty is general scarcity or dearth, or the state of one who lacks a certain amount of material possessions or money. Poverty is a multifaceted concept, which includes economic, social, health, environment and political elements. Poverty may be defined qualitatively by participatory methods, and quantitatively using proxy metrics.
138. The current estimate of the Lao Rural Poverty Line for October 2014 (the start of the survey period) is approximately 230,000 LAK per capita /month (US\$28.75 at current rate of exchange). It is based on the inflation of the 2010 poverty line to 2014 prices (Table 42). Poverty lines also include measurements typically based on a minimum calorific intake per person plus an allowance for other necessities such as clothing, shelter, medicine and education. The current estimate of the poverty line requires an inflation adjustment for over 5 years, and should be considered, at the moment as an approximate guide only.

Date	CPI (central zone)	Rural Poverty Line <sup>4</sup>
January 2010	96.45	180,000
October 2014	124.9	~233,000

Table 42 Estimated poverty line for study area.

139. A total of 342 households out of 352 households were assessed in the 3 communities in 2014. A total of 14 households or about 4% of the population were classified as potentially poor on our estimate of the current poverty line (233,000 LAK/person/month). See Table 43.
140. This poverty evaluation is likely to be valid at a statistical level for the population (i.e. it is a reliable estimate of the overall percentage of household living in poverty) – however, it only provides an initial guide for evaluation individual households since it is largely based on “average calorific requirements” and subject to some measurement error.
141. All poor households live in Ban Pou [Hmong] where 12% of the households lived below the poverty. A further 9 households or 3% of households lived just above the poverty line in the same community.

Poverty level	Pou [Hmong]	Pou [Lao Loum]	Piengta	Hatsamkhone	Total
Non Poor	81%	100%	100%	100%	93%
Near Poor	7%	0%	0%	0%	3%
Poor	12%	0%	0%	0%	4%
<b>Total</b>	<b>121</b>	<b>59</b>	<b>84</b>	<b>78</b>	<b>342</b>

Table 43 households' poverty percentage in 2UR (Source: Baseline Socioeconomic Survey, 2014).

### 3.22 Vulnerable Households

142. The vulnerability-assessment for 2UR identified 27 vulnerable households with a total population of

<sup>4</sup> GoL Decree on Poverty Criteria and Development Criteria 2012-2015, No. 201/GO, April 25, 2012

124 people. The reasons for their vulnerability are diverse and include the presence of physically or mentally impaired household members, low income, and 4 female headed household (

Source of vulnerability	<i>Piengta</i>		<i>Hatsamkhone</i>		<i>Pou</i>	
	HHs	Residents of vulnerable HH	HHs	Residents of vulnerable HH	HHs	Residents of vulnerable HH
Intellectually impaired	2	10	1	4	0	0
Low income and physical disability	1	4	5	23	5	32
Female headed household	2	3	0		2	8
Households living below the poverty line	0	0	2	13	4	20
Elderly	2	5	1	2	0	10
<b>TOTAL</b>	<b>7</b>	<b>22</b>	<b>9</b>	<b>42</b>	<b>11</b>	<b>60</b>

144. Table 44 below).

Source of vulnerability	<i>Piengta</i>		<i>Hatsamkhone</i>		<i>Pou</i>	
	HHs	Residents of vulnerable HH	HHs	Residents of vulnerable HH	HHs	Residents of vulnerable HH
Intellectually impaired	2	10	1	4	0	0
Low income and physical disability	1	4	5	23	5	32
Female headed household	2	3	0		2	8
Households living below the poverty line	0	0	2	13	4	20
Elderly	2	5	1	2	0	10
<b>TOTAL</b>	<b>7</b>	<b>22</b>	<b>9</b>	<b>42</b>	<b>11</b>	<b>60</b>

Table 44 Vulnerable Households in 2UR villages (Source: Vulnerable household database, 2016)

145. Vulnerable households are entitled to project support under different programs, the SDP programs including but not limited to Health, Education, Gender and if land is impacted, the compensation and livelihood restoration measures.

## CHAPTER 4 - Land Acquisition and Resettlement

146. The initial plan of the Project was to construct a higher dam, allowing the reservoir to fill up until 360 MSL. This would have impacted several more villages in the upper reservoir area, flooding all villages in Thaviengxay Villages-Cluster, Thathom District, Xaysomboun Province. Concerns were not just raised because of loss of houses, but as well because of an essential part of the province's rice fields. A second design established a full supply level at 340 MSL, but still several villages would have been flooded. The current design was agreed to establish a reservoir with a full supply level of 320 MSL. Thus, the impact in the upper reservoir area was reduced considerably and according to the impact assessment for the upper reservoir area, only 6 houses and agricultural land of three villages will now be impacted (Asset registration 2016). Further details to minimize the impacts of the project can be found in the Chapter 2.3 of the SIA, published on the company website.
147. Impoundment of the reservoir in NNP1 at 320 MSL will cause the loss of some residential land and a considerable amount of productive lands (including 40% of paddy fields) in the 3 villages of Zone 2UR: Ban Pou, Ban Piengta and Ban Hatsamkhone (see Figure 11, Figure 12 and Figure 13).
148. Following the demarcation of the 320 MSL, potentially affected assets were surveyed along with the preliminary census survey and socio-economic study of the affected people in 2011. A description of each affected property was recorded with the acknowledgement of the owner as well as the chief or representative of the village.
149. A detailed impact asset registration survey with a GIS system in place has been carried out since October 2015 and was completed in Q2 2016. The Project will permanently impact limited residential areas in Pou (6 PAPs) and approximately half of the households of the villages (an additional 177 out of 352 households will be directly impacted through land acquisition of portions of agricultural land, including 40% of the paddy fields in the 3 communities, with a total land area acquired of 495 ha. In addition to the 183 households living in the 3 communities of 2UR, an additional 28 households have land assets impacted by the reservoir in Zone2UR, but are currently living in other villages outside the zone. The asset registration has registered project impacts on all households. Project impacts have been updated through a detailed asset registration, completed in Q2 of 2016. It covers all land and assets belonging to Zone 2UR PAPs in the inundation area. The scope of land acquisition is fully described in this Chapter 4.

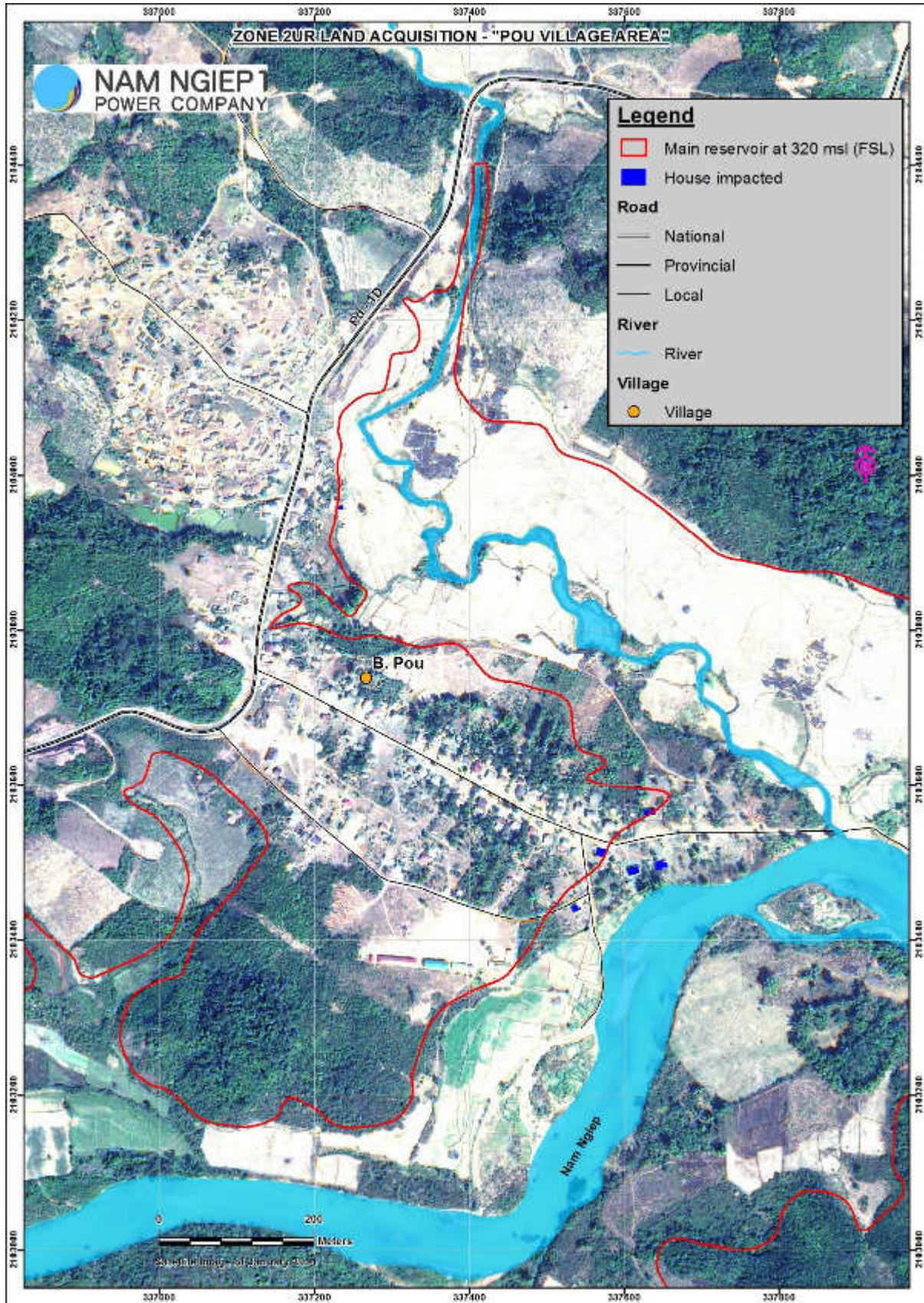


Figure 11: Map of area of Pou affected by impoundment



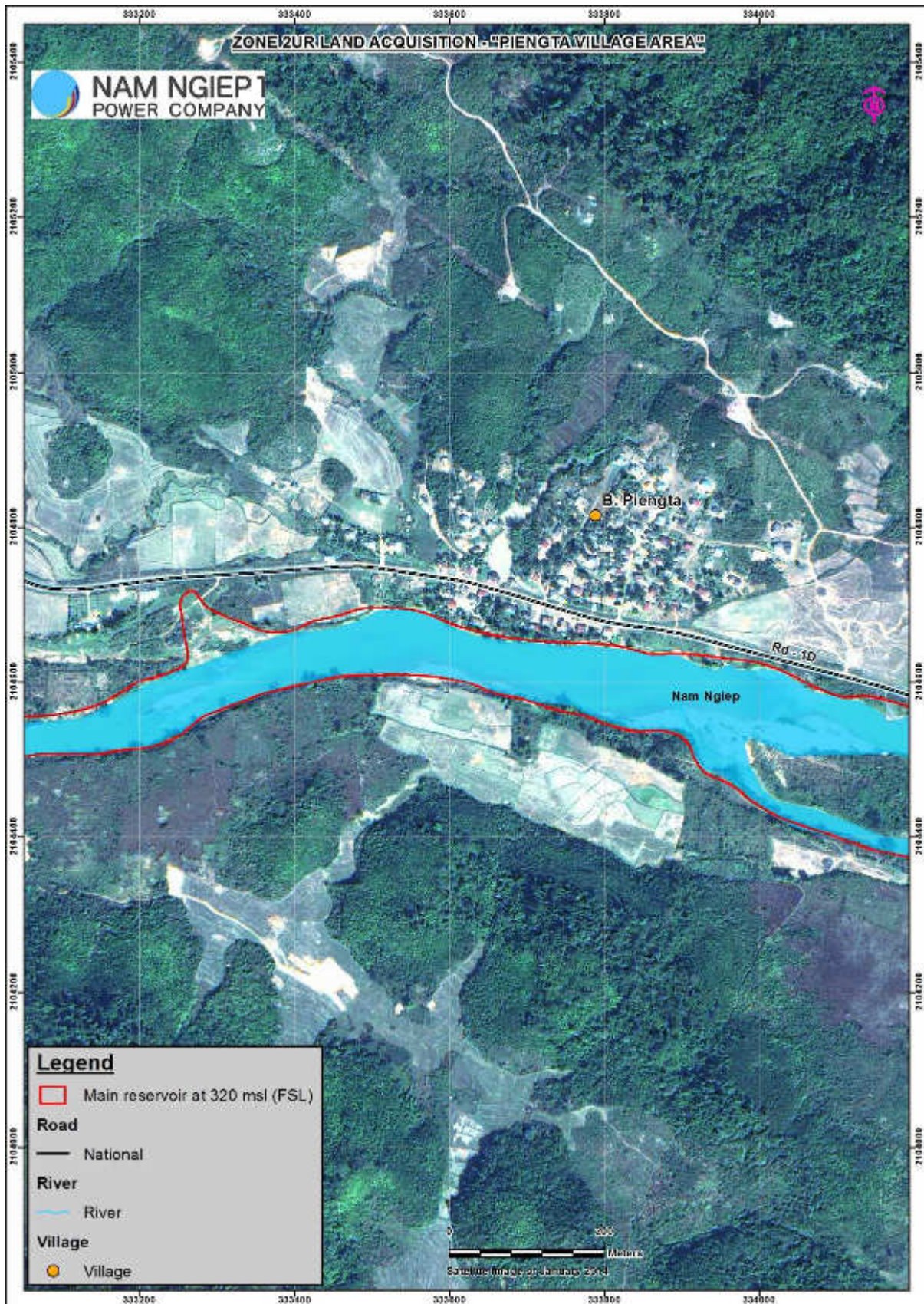


Figure 12: Map of area of Piengta affected by impoundment

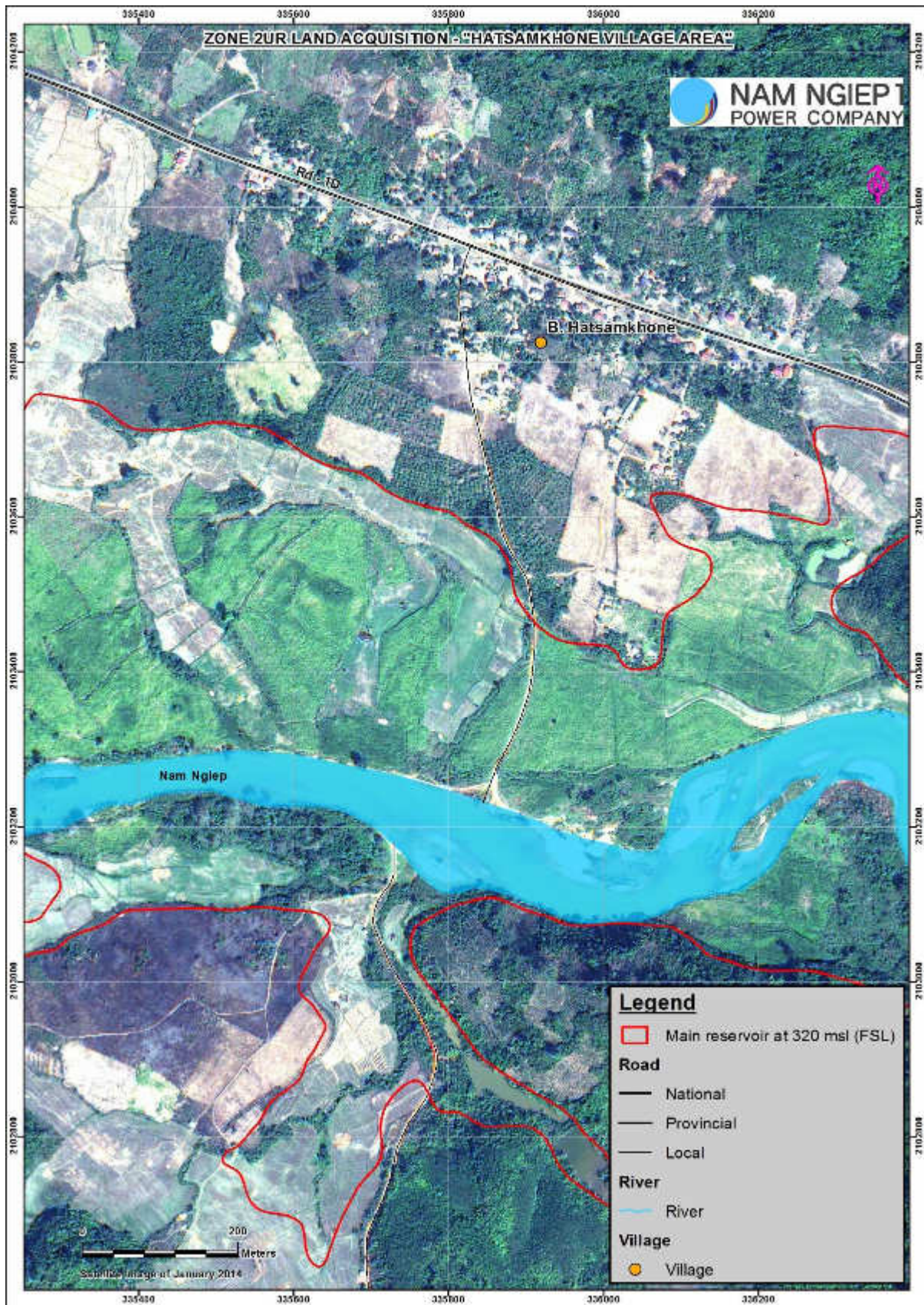


Figure 13: Map of area of Hatsamkhone affected by impoundment

#### 4.1 Loss of Structures

150. The inundation of the NNP1 reservoir at 320 MSL will affect housing and various auxiliary structures located in 6 household plots in Ban Pou. Fences and farm shacks belong to these and several other households of the 177 households losing agricultural land. Water will reach about 30 – 40 cm above the ground over all or a substantial portion of these residences when the reservoir is at full capacity. Even though this will not occur throughout the year, the continuous flooding of those lands for even a few months will require that these houses and related structures be relocated elsewhere in the same communities. No other households in the three communities will resettle.
151. Table 45 below shows the type and number of affected main structures according to asset registration completed in Q2 2016.

No	Impacted Structures	Pou (# of structures)	Piengta (#of structures)	Hatsamkhone (#of structures)
1	Animal pen	4	-	3
2	Cattle pen	5	-	1
3	House	6	-	-
4	Kitchen	1	-	-
5	Other	22	5	5
6	Poultry pen	4	1	-
7	Rice storage	3	-	1
8	Ricefield hut	17	10	40
9	Toilet	5	-	1
10	Road	-	-	7
<b>Total:</b>		<b>67</b>	<b>16</b>	<b>58</b>

Table 45 Impacted Structures (Source: asset registration 2016)

No	Impacted fences	Pou (length in m)	Piengta (length in m)	Hatsamkhone (length in m)
1	*2-Line Barb Wire	90	-	-
2	*3-Line Barb Wire	2,741	197	1,527
3	*4-Line Barb Wire	4,059	-	654
4	Bamboo fence (poles and planks)	-	15	58
5	Bamboo fence with wooden poles	238	-	198
6	Barb wire fence with wooden poles	926	-	-
7	Plank fence	179	-	-
8	Wooden fence (poles and planks)	1,181	72	644
<b>Total:</b>		<b>9,414</b>	<b>284</b>	<b>3,081</b>

Table 46. Impacted fencing (Source: asset registration. 2016)

## 4.2 Loss of Lands

All three villages will lose considerable productive land. Approximately 495 ha will be Ban Pou, Ban Piengta, and Ban Hatsamkhone, directly affecting approximately half of the according to the asset registration (see Table

47

No.	Village/ Land type	Developed land with planted grass and fence	Digging Fish pond/Fish pond with stream	Fallow rice field	Garden land	Garden land for industrial plantation	Land at the edge of paddy rice field	Land development with natural glass and fence	Plowed upland field	Rain-fed rice paddy rice field	Residential /Housing land	Rotational shifting cultivation 1-3 years for XSB area	Total Area (Ha)
1	Pou	-	1.82	23.29	35.02	0.01	1.65	38.01	2.13	77.54	1.07	26.82	207.36
2	Piengta	-	-	1.07	2.89	-	0.84	-	24.20	15.90	-	14.67	59.57
3	Hatsamkhone	-	2.08	12.76	15.65	-	13.48	44.01	6.66	104.77	0.17	28.68	228.25
	<b>Total</b>	-	3.90	37.12	53.57	0.01	15.97	82.02	32.98	198.21	1.24	70.17	495.18

152. Table 47), 78 households in Ban Pou, 63 households in Ban Hatsamkhone, and 42 households in Ban Piengta will be directly impacted. A total of 28 households own land in in the territory of the 3 2UR village, but are currently living elsewhere. Although most of the lands will not be flooded year round, they are likely to be inundated during rainy season, which is also the main rice growing season. The use of the draw down zone (DDZ) for restoring and enhancing livelihoods is described in detail in Chapter 6.3.4.

153. The most critical losses in 2UR will be of paddy fields; of the people who lose land, more than three quarters lose paddy fields. Further losses are land for cash crops, vegetable garden plots, and some minor upland rice fields along the Nam Ngiep as well as around the Nam Pou, a tributary to Nam Ngiep which gets impacted by the flooding from the reservoir as well, and the streams opposite Ban Hatsamkhone over the Nam Ngiep. Due to the specifics of impact (inundation), once a flat plot of land (paddy fields and residential land, most of cash crop land) is impacted, it is fully impacted. Thus, similar to the non-existence of partial impact on structure, there exists no partial impact on these flat land plots.

154.

No.	Village/ Land type	Developed land with planted grass and fence	Digging Fish pond/Fish pond with stream	Fallow rice field	Garden land	Garden land for industrial plantation	Land at the edge of paddy rice field	Land development with natural glass and fence	Plowed upland field	Rain-fed rice paddy rice field	Residential /Housing land	Rotational shifting cultivation 1-3 years for XSB area	Total Area (Ha)
1	Pou	-	1.82	23.29	35.02	0.01	1.65	38.01	2.13	77.54	1.07	26.82	207.36
2	Piengta	-	-	1.07	2.89	-	0.84	-	24.20	15.90	-	14.67	59.57
3	Hatsamkhone	-	2.08	12.76	15.65	-	13.48	44.01	6.66	104.77	0.17	28.68	228.25
	<b>Total</b>	-	3.90	37.12	53.57	0.01	15.97	82.02	32.98	198.21	1.24	70.17	495.18

Table 47: Loss of Lands in Zone 2UR to be inundated by 320 m MSL Reservoir. (Source: Project Lands database 2016.)

No	Village	Total paddy field (Ha)	Affected paddy field (Ha)	% affected
1	Piengta	162.98	15.9	10%
2	Hatsamkhone	169.42	104.77	62%
3	Pou	167.4	77.54	46%
	<b>Total</b>	499.8	198.21	40%

Table 48: Impact of land aquisation on the total area of paddy ricefields in the 3 communities. (GIS database and project lands database 2016.)

155. Most upland rice and plantation land in the 3 communities' remain unaffected, but a total of 40% of the paddy fields will be affected by the reservoir.

### 4.3 Loss of Crops and Trees

156. Affected lands include a number of privately owned trees of Agar Wood and fruit trees that have been planted by the villagers (Table 51). They will be eligible for compensation, with the PAPs able to keep the salvaged wood. The Project will support a regeneration of these alternative forms of income.
157. In addition to any compensation for the loss of these lands and other resources in cash and/or in kind, the project will initiate changes to resource utilization patterns that can provide people with stable and sustainable livelihoods).
158. The loss of trees in 2UR owned by Zone 2UR PAPs has been estimated during the 2011 field survey and are updated based on the asset registration completed in Q1 2016.

159.

Category	Type	Total number Impacted			
		Pou	Piengta	Hatsamkhone	Total
<b>Perennial</b>	Banana	3,732	533	1,466	5,731
	Banana <1 year	493	-	80	573
	Cassava	6,925	229	25,877	33,031
	Lemon grass	89	56	190	335
	Sugar cane	998	17	52	1,067

Table 49 Type and number of perennial crops and trees impacted in 2UR villages (Source: asset registration, 2016).

Category	Type	Total number Impacted			
		Pou	Piengta	Hatsamkhone	Total
Industry Tree	Mai Dou (Lao)	38	-	11	49
	Mai Doulai (Lao)	4	-	-	4
	Teak	29	-	-	29
Product Tree	Agar wood	144	-	-	144
	Jatropha	870	-	-	870
	Rubber	236	-	-	236
Bamboo	Mai Hia (Bamboo / <i>Cephalostachyum virgatum</i> )	-	2	-	2
	Mai Phai Ban (Bamboo / <i>Bambusa nutans</i> )	218	83	17	318
	Mai Phai Sang Kham (Lao)	4	-	-	4
	Mai Sang Phai (Bamboo / <i>Bambusa vulgaris</i> )	87	71	6	164

Table 50. Type and number of trees impacted in 2UR villages (Source: Asset registration 2016).

Category	Type	Total number Impacted			
		Pou	Piengta	Hatsamkhone	Total
Fruit Tree	Acacia fruit	1	-	-	1
	Coconut	61	-	1	62
	Custard apple	9	-	1	10
	Guava	115	-	7	122
	Jack Fruit	120	-	40	160
	Kapok	53	1	-	54
	Lime	28	1	27	56
	Litchi	1	-	-	1
	Local Guava	37	2	21	60
	Local jujube	71	-	22	93
	Local Santol	33	4	-	37
	Longan	60	-	5	65
	Mak Fai (Sour berry)	53	2	3	58
	Mak Khor (Lao)	3	-	-	3
	Mak Mone Khai (Lao)	39	-	4	43
	Mango	320	20	196	536
	Midnight Horror	54	10	17	81
	Orange	12	-	5	17
	Pomelo	123	2	14	139
	Rambutan	24	-	-	24
	Santol	8	-	-	8
	Sour tamarind	10	6	12	28
	Star Apple	90	1	7	98
	Star fruit	5	-	-	5
Star gooseberry	-	-	3	3	
Tamarind	69	3	4	76	
Ton Mak Khaen (Lao)	104	1	1	106	

Table 51 Type and number of Fruit trees impacted in 2UR villages (Source: asset registration 2016)

160. In addition to any compensation for the loss of these lands and other resources by cash and/or in kind, the project will initiate changes to resource utilization patterns that can provide people with stable and sustainable livelihoods.

#### 4.4 *Community Infrastructure and Cultural Resources*

161. No major impact on community forests and grazing areas is expected in 2UR. There is expected a change in fisheries in 2UR. After an expected early increase in windfall fishing on the reservoir, reservoir management will allow subsequent sustainable fisheries. See Chapter 8.1.5 for more detail.
162. In 2UR the project will have no impact on public infrastructure, as all schools, village halls, and the health centre are above Full Supply Level. Impacts on graves are detailed in a dedicated document, the REDP – Update Graves and Cemeteries<sup>5</sup>. At one point, the reservoir will be close to Road 1D, but no impact is expected, as the road is elevated several meters above Full Supply Level.
163. There will be, however, a loss of easy access to 2 (agricultural) land areas when the reservoir reaches full supply level during the rainy season: (i) the right bank of the Nam Ngiep river and (ii) land on the east of Pou village, accessed through a road which crosses the rice fields in Pou. Currently, when river waters are low, villagers can drive a hand tractor (Tek-tek) through the Nam Ngiep river and the river to the east of Phou to reach agricultural land on the right side of the river. These access routes have to be restored by the Project. For lands on the right side of the Nam Ngiep river, a suspension bridge with agricultural access roads will be constructed. Details are described in Chapter 6.3.1. For the lands to the east of Pou village, an alternative agricultural access road will be constructed, to connect to the section of the road not inundated by the reservoir.

#### 4.5 *Tenants*

164. A total of 5 tenants were identified during the asset registration process. Four of these have also impacts on land owned by them and one tenant has only the land leased by him impacted. No formal written land lease agreements with a specific duration of the lease period exists. Therefore, as per CA annex C, Appendix 7 item 1 (b) b), one year Cash compensation equivalent to market value of gross harvest on the lost land for one year production will be provided. The cash compensation will be paid to the bank account opened in the name of both husband and wife. The tenant households are also eligible to participate in the Income Restoration and Rehabilitation Assistance program.

#### 4.6 *Gender Impacts*

165. The project is expected to have few gender-specific adverse impacts in 2UR. All women were consulted separately by the project in women-only meetings. Because women in 2UR are largely illiterate, communication methods were verbal and illustrative, and conducted in Hmong language whenever necessary with Hmong women.
166. Mitigation measures are integrated into the Gender Action Plan, outlined in the SDP. Measures to empower women and ensure they benefit from the Project are also incorporated in the GAP<sup>6</sup>.

#### 4.7 *Resettlement Consultation*

167. Final decisions to accept cash compensation based on agreed unit rates or to relocate within village

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<sup>5</sup> Published on the Company and ADB website on June 2016.

<sup>6</sup> The updated GAP is part of the SDP Update, published on the Company and ADB website on June 2016

boundaries and accept land-for-land compensation have yet to be made. The Project is preparing a timetable of consultation on this topic with separate meetings held for men and women, so that enough time is given for each household to discuss among themselves their preferred choice before the final decision is made. The target date for completion of the final choice survey is by the end of Q3 2016. See Chapter **Error! Reference source not found.** for more details on the compensation and resettlement steps and timeframe.

- 168. PAPs losing their houses have expressed so far a preference for local relocation. PAPs losing agricultural land have started discussion with the Project regarding the way to get compensated and restore livelihood. The Project has made a point of minuting the thoughts and feelings of PAPs and incorporating their views into revised planning processes.
- 169. The 6 households in Pou village who have to relocate, all expressed their strong desire to relocate within the same village and to date, 4 out of 6 households have identified the location where they would like to live. Annex E provides a map of this

### 4.8 Impacts on Income and Livelihood

- 170. All key sources of income will be affected by the Project and impacts will be significant. Table 52 lists anticipated impacts on household income sources. The list includes both negative and positive impacts from the project or mitigation activities undertaken by the project.

Income Source	Negative Impact	Mitigation / Improvement
Agriculture	<ul style="list-style-type: none"> <li>• Loss of existing land with developed agriculture (rainfed paddy fields)</li> <li>• Possibly smaller land area provided per household in vicinity.</li> <li>• Loss of access to productive lands on right bank of Nam Ngiep</li> </ul>	<ul style="list-style-type: none"> <li>• Choice for land for land</li> <li>• Choice for alternative livelihoods through cash for land compensation</li> <li>• Higher yielding rice varieties and rice cultivation techniques introduced</li> <li>• New market facilities</li> <li>• Livelihood assistance and marketing programs</li> <li>• Support to off-farm activities</li> <li>• Access to right bank of Nam Ngiep restored for agricultural production.</li> </ul> <p>For details on these programs see Chapter 8.1 Income Restoration Program.</p>
Fishing	<ul style="list-style-type: none"> <li>• Loss of Nam Ngiep and tributaries resources.</li> </ul>	<ul style="list-style-type: none"> <li>• Reservoir fishery may be significant, particularly immediately following filling of the reservoir.</li> <li>• Large area of reservoir may increase fishing 'range'.</li> </ul>



Income Source	Negative Impact	Mitigation / Improvement
Employment		<ul style="list-style-type: none"> <li>• Employment opportunities with project.</li> <li>• Improved formal and vocational education</li> </ul>
Business	<ul style="list-style-type: none"> <li>• Disruption of businesses during relocation process for concerned PAPs</li> </ul>	<ul style="list-style-type: none"> <li>• Improved infrastructure (market hall)</li> <li>• Possibility of tourism on the reservoir</li> </ul>

Table 52 Anticipated impacts on income.

171. The Project has taken these concerns on board and has integrated mitigation measures to specifically address them (see Chapter 6). The overall impact of the project and its mitigating activities is difficult to predict. Detailed project monitoring of household income and consumption will be undertaken throughout the implementation period and until 10 years after COD to determine if household reach the income and consumption targets specified in the CA.

## CHAPTER 5 - Entitlement Policy Framework

### 5.1 Overall Policy

172. Laws, regulations, and safeguards policies that guide this REDP U2UR are presented in Chapter 2. The project's overall objective is to avoid or minimize the impacts on people, households, businesses and others affected by the land acquisition required by the project. Where resettlement or compensation is unavoidable, PAPs will be compensated for their loss of land and assisted to assure their living standards remain at levels equal to, if not better than, before the Project.
173. **Compensation Policy.** The overall policy of NNP1 is, wherever feasible, to provide in-kind compensation to affected people for impacts caused by the project. Where the losses will not be significant (i.e. less than 10% of total productive assets [income generating] is affected; to assess land and non-land productive assets, impact on potential production in relation to income/expenditures can be used as proxy), cash compensation will be provided. Where relocation of houses is required, the PAP will be provided with a choice between (i) in-kind compensation of new housing, residential land and payment of all costs of relocation covered by the project or (ii) cash compensation enabling self-relocation. Voluntary donations of land or other assets will not be permitted.
174. 2UR households who will need to relocate have expressed the wish to relocate within the boundaries of their village and this has been accepted.
175. Those households choosing cash compensation and self-relocating within the Project Area of Influence will remain eligible to participate in various Project programs, including livelihoods training, health, welfare and educational programs. Those opting to self-relocate outside the Project Influence Area will no longer be eligible for any further Project support beyond the cash compensation.
176. As stated above, the overall policy of NNP1 is, wherever feasible, to provide in-kind compensation to affected people for impacts caused by the project and to provide each household with a viable portion of paddy land and community resources from which they can obtain a reasonable living standard. The amount of paddy land that can be provided in the vicinity of the villages is still unknown, and NNP1 is looking at this issue with PAPs and GoL.
177. The livelihood development programmes and the educational and health programme are highly pro-poor and the project expects low income and vulnerable households to progressively benefit from these policies. Of the 27 vulnerable households, a total of 15 vulnerable households will be impacted by land acquisition. The programs described in the SDP (including educational and health programme) are for all villagers in the 3 villages of Zone 2UR. Therefore, support is available for non-affected poor & vulnerable households as well as the 15 directly impacted by land acquisition.
178. Households in the 3 communities in Zone 2UR who are not directly impacted by land acquisition, are entitled to participate and benefit from the public infrastructure development program, including but not limited to school building upgrade, market stalls along the main road to sell local produce, bus stops, internal village road upgrades, water supply systems upgrades, bridge crossing the Nam Ngiep and others. For more details, see section 8.b of Table 56 and Chapter 6. Also the SDP programs, including but not limited to the Health Program, Education Program, Gender Program, Cultural awareness program and other Zone 2UR relevant programs as described in the SDP.

## 5.2 Eligibility for Compensation and Other Assistance

179. **Project Affected Persons (PAPs).** PAPs are any person or household who will lose all or any part of their residential, construction or production land or will face a permanent or temporary loss to their business or livelihood, or will experience permanent or temporary loss of access to their property, as a result of the construction and impoundment of the Nam Ngiep 1 Hydropower Project (NNP1).
180. **Cut-Off-Date.** All DPs who are identified in the project-impacted areas on the cut-off date and related census and asset registration are entitled to compensation for their affected assets and rehabilitation measures with a sufficient volume to restore their livelihoods. The cut-off date for the whole Project Area of NNP1 has been declared by the PRLRC (11 April 2014). An additional requirement of establishing the cut-off-date is the necessity to disseminate information about it as well as the commencement of the census and asset registration. While theoretically all three components should happen at the same time, actually there have been gaps between these components. Final eligibility and compensation is therefore dependent on the date all three components are completed. This arrangement is re-confirmed by the PRLRC notification No. 695/ PG. XSB, dated 17/06/2016, clearly confirming the cut-of-date for 2UR being 21 August 2015. PAPs have been informed about this PRLRC notification No. 695/ PG. XSB, dated 17/06/2016, when it was disseminated in the 3 communities of 2UR on the 28 and 29 June 2016. This confirmed date does not need a new asset inventory as all impacted assets have been registered. Those who encroach into village lands or who move into any 2UR village after the cut-off date will not be entitled to compensation or any other assistance, unless decided otherwise by the PRLRC and any application for such must go through the grievance procedure.
181. **Ownership.** Land or property ownership is determined by any one of the following:
- land title or other legal land certification
  - customary rights to the land, even without title or certification
  - usufruct rights to the land, even without title or certification
182. In consultation with PAPs and in accordance with national land law *customary rights to land* are assessed based on activities on claimed land at least once over the last three years before the date of eligibility. This is consistent with the amended Land Law, which withdraws rights of land users from land uncultivated or untaxed for more than three years<sup>7</sup>. The Project has records and satellite imagery showing land use since 2012, but where there are land tax records or land use certificates, this may support eligibility claims for land use before the three year cut-off. In Zone 2UR, customary rights relate primarily to upland rotational swidden plots but also other cultivated lands. With rapid vegetation growth the existence of these activities can be difficult to determine beyond three years. If a land user has documentary evidence of use prior to 3 years, this can also be considered, e.g. tax payment receipts, land use certificate.
183. **Tenants.** In case an asset is impacted by the Project and used by a tenant/leaseholder/ sharecropper, both parties have specific entitlements to compensation (Concession Agreement, Annex C, Appendix 7). Tenancy agreements are eligible for compensation if signed before the Cut-Off-Date and with the parties not reasonably aware of the risk of resettlement disclosed during village consultation meetings. In the absence of formal written tenancy agreements, tenancy is assumed to be for one year.

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<sup>7</sup> Decree of the President of Lao PDR on the Promulgation of the Amended Land Law, No. 61/PO, and No. 04/NA, 21 October 2003, Articles 18 and 62

### 5.3 Principle for Valuation and Compensation Unit Rates

184. **Valuation.** Valuation of assets for compensation has ensured that all PAPs will be compensated at replacement cost. According to ADB's SPS, this is calculated based on the following elements: (i) fair market value (unit rates); (ii) transaction costs; (iii) interest accrued, (iv) transitional and restoration costs; and (v) other applicable payments, if any.
185. The various components of the compensation package and the method of replacement calculation were explained to PAPs in 2013 and 2014 as part of the BCS procedure, and 2UR villages' households agreed that the methodology was fair and transparent. The valuation is also consistent with the legal and policy frameworks of the Lao Government and follows the principles of ADB SPS and IFC Performance Standards, whichever is more stringent.
186. After arriving at the replacement rate for each type of asset, the PRLRC presented this to the communities and the PAPs have negotiated upwards. Hence, after almost a year of negotiations, the final rates formally confirmed and released in August 2015 reflect rates for many items which are already above replacement costs. For example, the compensation unite rate for paddy rice fields for the access road is 5,000 LAK per m<sup>2</sup><sup>8</sup>. The replacement rate established by the PRLRC and proposed to the PAPs for paddy rice fields for 2UR is 8,000 LAK/m<sup>2</sup>, while the final agreed compensation unit rate issued by the PRLRC following consultation with the PAPs is 14,000 LAK/m<sup>2</sup><sup>9</sup>. Another example is the housing land. For the access road compensation, the unite rate varied between 8,000 to 20,000 LAK/m<sup>2</sup>, depending on the location. The replacement rate established by the PRLRC for housing land for 2UR and proposed to the PAPs is 20,000 LAK/m<sup>2</sup>, while the final agreed compensation unit rate issued by the PRLRC following consultation with the PAPs is 24,000 LAK/m<sup>2</sup>.
187. **Unit Rates.** Cash compensation unit prices/rates at replacement value have been assessed by the PRLRC through comparing, reviewing, and confirmation of the following four sources:
- Compensation rates paid by other investment projects operating under similar conditions; adjusted for inflation
  - Current market price study conducted by an independent consultant or research institution or NGO
  - GoL statistical information on market prices, updated monthly
  - GoL observations of prices in the affected villages
188. Following very extensive consultations between GoL (including district departments such as agriculture and forestry), PAPs (including traditional village elders in Zones 2LR, 2UR and Zone 3), and NNP1PC the PRLRC prepared and reached final agreement on the compensation unit prices/rates to be applied by the Project on 22<sup>nd</sup> of July 2015. These final rates were formally confirmed on 21<sup>st</sup> of August 2015. In mid-2016, the PRLRC reviewed the Compensation Unit Rates and issued Addendum No 792 dated 20 July 2016 to the Compensation Unit Rate Decree 1003, of 21 August 2015, with updated prices.. The PLRC found that that market values for most items, have not changed or are below or equivalent to the rates issued in August 2015 and did not update the rates for those items as the rate is still equivalent to replacement cost and compliant with SPS. However, for some items such as the barbered wire fence, the price was increased from 9.000 LAK per meter length

<sup>8</sup> LACPlan Access road, available on the NNP1PC website

<sup>9</sup> See Annex A, Compensation Unit Rate issued by the PRLRC

to 15.000 LAK per meter length. Prices for 6 year old Rubber trees and Janthorpa trees increased as well.

189. **Effectiveness.** Because compensation unit prices/rates need to reflect current replacement values, these compensation unit prices/rates apply for land acquisition in the period following 12 months from their update through the Addendum to the Compensation Unit rate, No 792, dated 20 July 2016. After this period, updates will be necessary to establish more recent rates for temporary impacts, to be provided annually until the end of construction and until outstanding other compensation payments (including settlement of grievances) have been completed. Different compensation unit prices/rates for different zones areas may depend on the prevailing market prices in each area.
190. **Total costs.** Compensation unit prices/rates include fair market value and any fees or transaction costs (taxes, registration, land transfer or other administrative fees).
191. A complete list of unit rates as drafted by the PRLRC can be found in Annex A. The following table (Table 53) provides the unit rates for different land categories.

No.	Land Type	Unit Rate in Lao Kip per sqm
1	Residential/Housing land	24,000
2	Rainfed rice field	14,000
3	Fallow rice field	4,000
4	Ploughed upland field	3,500
5	Rotational shifting cultivation 1-3 years in Houaysoup area	1,200
6	Rotational shifting cultivation 1-3 years for Other area of project	500
7	Garden land	4,000
8	Plantation land	3,000
9	Rainfed rice field (edge)	400
10	Developed land with planted grass and fence	2,000
11	Land development with natural grass and fence	600
12	Digging Fish pond /Fish pond with stream	22,800

Table 53 Unit Cost of Compensation by Type of Land Agreed between PRLRC and PAPs

192. **Crops.** In the case of rice paddy and other annual crops, farmers will be given every opportunity to harvest their final crops prior to acquisition of land. However, in cases where farmers are unable to harvest their crops prior to the date of transfer of land, or where crops are damaged by construction activities, average cash value of the harvest multiplied by ten shall be paid based on prices agreed by the PRLRC.
193. **Fruit Trees.** Compensation cost for fruit trees is based on cost of seedlings and transplanting in case of trees that have not yielded yet; and on the estimated value of annual fruit yields multiply by 10 years in the case of mature trees that have already yielded fruit.
194. **Plantation Trees.** In case of mature plantation trees, in addition to the compensation paid for land acquisition of plantation land, the owners will receive compensation for the trees, based on their size (size of actual impacted trees is determined during the asset registration) and have the option of

harvesting the trees prior to handover of land.

195. **Perennial Plants.** For perennial plants which are neither annual crops nor trees, the PRLRC has declared set prices based on replacement value.

#### 5.4 Consultation and Disclosure

196. Consultations and Information Disclosure for 2UR villages are outlined more fully in CHAPTER 9 - . PAPs views and concerns have been integrated into the development of the overall REDP as well as the updated REDP-U2UR planning.
197. A **BCS assessment** took place in 2UR villages up until the second quarter of 2014 with an overall positive result.
- The Detailed Entitlement Matrix for 2UR villages was disclosed to PAPs in March and April 2014. Further consultations on the unit rates, asset registration, infrastructure improvement or livelihood programs have also been carried out since May 2014.
  - The overall REDP planning was disclosed and discussed during these consultations as well as during the national consultation in May 2014, where PAPs from 2UR villages were present. Salient points, such as the Entitlement Matrix, have been translated into Hmong language.
  - On-going consultations accompany the resettlement implementation with physical relocation targeted in early Q1 2017 and before the rainy season 2017. 6 households will be relocated and each one was covered by the indicative choice survey where they indicated their desire to relocate within the village.
198. PAPs from 2UR villages have also been integrated via broader Project consultation meetings at district and national levels. In addition, the Project disclosed information during data collection during the recent final census and asset registration. Consultations have encompassed disclosure of entitlements, grievance redress mechanism, safety provisions, and timelines. Updated information on final unit rates issued by the PRLRC in August 2015, deadline of grave registration and Cut-Off date have been provided on 18 and 21 August 2015.
199. The NNP1 strategy is to have an indicative and final choice survey as part of the engagement process with PAPs, to inform them regarding their compensation options and carefully choose what is most suitable for them. There is a time of several weeks between these choice survey's, to allow families to collect additional information and carefully consider what is most suitable to their family situation. See Chapter 7.3 for more details on the compensation process. During the indicative choice survey, conducted in Q2 2016, 100% of the land owners expressed their preference for cash compensation and develop their other land holdings, purchase replacement land by themselves or invest in small business and other livelihood activities.
200. **Tenure Security.** For any lands impacted permanently or newly provided by the Project, GoL will issue new or updated tenure documents in joint names of husband and wife with assistance from the Project.
201. **Compensation Payment.** Payment will be made to bank accounts of PAPs in both husband's and wife's names. If the asset to be compensated is used by or the property of a second, third, or subsequent wife, where a husband has more than one wife, that wife has the option of receiving payment in both her name and that of one of her children, rather than in her and her husband's names. If PAPs have no bank account, NNP1PC will provide assistance to open a deposit account; all

costs of this procedure will be borne by the company.

202. **Compensation before Impact.** Agreements will be reached with PAPs, full compensation paid, and any other rehabilitation measures agreed upon with the PAPs prior to the commencement of inundation, construction or the creation of any impacts. If any PAP refuses compensation due to additional claims, the value of compensation owed to the PAP will be placed in an escrow account pending resolution of such claims through the grievance procedure.
203. **Grievance Mechanism.** A grievance mechanism was established in 2013 in Zones 3 and 5, and its process disclosed to PAPs and others in these affected communities. The Thathom District Grievance Committee has been established, under the Decree 624 dated 11 July 2014 and the 3 village grievance committees of zone 2UR has been established as well under the Decree 625 dated 11 July 2014. The plan schedules that a refresher training of the GRM will be implemented in Q3 of 2016. For more details on the GRM, please see Chapter
- 204.

## CHAPTER 6 - Entitlement Matrix and Mitigation Measures

### 6.1 Entitlements, Assistance and Benefits

205. General Principles are presented in section 5.2 of the overall REDP and the zone-specific entitlement matrix for Zone 2UR in its Annex B. The approved entitlement matrix is reproduced below. PAPs in 2UR villages will be eligible to the following entitlements and benefits:

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<p><b>1.b.1 Partial Loss of Agricultural Land with no need to resettle for legal owners with valid title or customary or usufruct rights</b></p>	<p><b>For non-significantly impacted PAPs as defined in REDP section 5.2.2,</b></p> <p>Cash compensation for acquired land will be paid at replacement value according to the decision of the PRLRC.</p> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p> <p><b>For significantly impacted PAPs as defined in REDP section 5.2.2,</b></p> <ul style="list-style-type: none"> <li>• Equivalent area of land with equivalent productive potential at location acceptable to the PAP will be provided in cooperation with RMU, DCC, and Village Development Coordination Committee (VDC). Where land can be purchased within the same village or within a distance acceptable to the PAP, this will be purchased by NNP1 on a willing-buyer-willing-seller basis and/or acquired on the basis of allocating available land parcels that are not owned or used by another person, with the assistance of village authorities</li> <li>• The replacement agricultural land is to be surveyed for UXO and rendered safe in accordance with REDP section 5.2.16.</li> <li>• Land titles will be provided in accordance with REDP section 5.2.15</li> <li>• Alternatively, at informed request by PAPs cash compensation for acquired land at full replacement value; payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</li> <li>• For those choosing to relocate within village boundaries or to self-resettle within the project area of influence as defined in REDP section 5.2.17, income restoration measures as outlined under clause 4</li> </ul>



Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<p><b>2.a.1 Loss of residential, commercial, industrial or institutional land without sufficient remaining land and PAPs will be required to resettle, to include</b></p> <p><b>a) Legal owner with valid title or customary or usufruct rights</b></p> <p><b>b) Persons later accepted for inclusion by the Grievance Committee under the Grievance Procedure</b></p>	<p><b>PAPs will be entitled to the following:</b></p> <ul style="list-style-type: none"> <li>• An equivalent area of land to replace the area of land lost, and in any case not less than 800 m<sup>2</sup>, for residential land and equivalent land for commercial, industrial or institutional land of equal locational value, similar characteristics, and access to facilities in an acceptable location within the area.</li> <li>• The replacement land is to be surveyed for UXO and rendered safe.</li> <li>• Land titles will be provided in accordance with REDP section 5.2.15</li> <li>• The identification of all residential replacement land and land plots shall be based on consent or broad community support of the physically displaced ethnic households and with the support of the local authorities and the Company.</li> <li>• The residential land plot shall be demarcated and fenced at the cost of the Company, both in terms of labour and material.</li> <li>• The residential land plot shall be adequately levelled and shall provide comparable access to employment, production and economic opportunities, to medical and social services, and to education services.</li> <li>• The Company shall support the establishment of new home gardens, including the promotion of new and improved techniques (organic farming, for example) and diversification of the crops, during the first four years after resettlement.</li> <li>• Replacement with commercially suitable land which is both of at least equal value and of at least equal size.</li> <li>• Location of replacement commercial land must be: (i) suitable for continuation of viable commercial activities, and (ii) acceptable to the Resettlers.</li> <li>• If suitable replacement of the commercial, or residential land cannot be found, or if Resettlers' prior commercial activities cannot be continued, or if the Resettlers don't wish to continue such activities, then the company shall pay cash compensation as outlined in REDP section 5.2.7 and 5.2.8.</li> </ul>
<p><b>2.b.1 Loss of residential, commercial, industrial or institutional land with sufficient remaining land for PAPs to reasonably continue their activities as determined by the PRLRC for</b></p>	<p><b>All impacted PAPs will be entitled to:</b></p> <ul style="list-style-type: none"> <li>• Cash compensation for acquired land to be paid at replacement value calculated according to prescribed methodology in REDP section 5.2.7 and endorsed by the PRLRC; <i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></li> <li>• Updated land titles to be provided in accordance with REDP section 5.2.15</li> <li>• In the case a fence is impacted, it is compensated in accordance</li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<p>a) Legal owner with valid title or customary or usufruct rights</p> <p>b) Persons later accepted for inclusion by the Grievance Committee under the Grievance Procedure</p>	<p>with entitlement regarding fencing (see line 3.b.3 and 3.b.4)</p> <ul style="list-style-type: none"> <li>• For residential land above Full Supply Level but inside the safety zone, the Project will backfill to elevate the land above the safety zone if reasonably possible and requested by the owner.</li> </ul>
<p>3.a.1 Total permanent loss of structures, with insufficient land in community to reorganize, such as where all structures and lands are inundated.</p> <p>Or</p> <p>Total permanent loss of structures, or where after partial permanent loss the remaining structure is rendered unviable for continued use, but there remains sufficient land for reorganization.</p> <p>Including secondary structures such as boundary walls, wells, animal sheds, granaries, etc. which are not part of the main structure/house.</p> <p>a) Legal owner with valid title or customary or usufruct rights covered by the census and their natural growth (including children of registered households who may have formed new families after the cut-off date, but excluding the relatives of a spouse who previously resided outside the area).</p> <p>b) Persons later accepted for inclusion by the Compensation Working Group or the Grievance</p>	<p>Where there is a split of households, splitting criteria as outlined above, apply.</p> <p><b>PAPs will be entitled to the following:</b></p> <ul style="list-style-type: none"> <li>• Project Affected Persons shall be entitled to the compensation of 1 newly-built house per household. In case that any household comprises of 9 or more members, such household shall be entitled to either (a) another additional 1 newly-built house per family unit or (b) additional space and facilities within the same house adequate for the needs of the residentially joint household depending on family structure. The decision between the two options shall be made by each household with 9 or more members.</li> <li>• Each replacement house for each resulting household (includes multiple replacement houses in cases of extended families) shall comprise the area as follows: <ul style="list-style-type: none"> <li>a) 50 m<sup>2</sup> for up to 5 people (small size)</li> <li>b) 75 m<sup>2</sup> for 6 to 8 people (medium size)</li> <li>c) 100 m<sup>2</sup> for more than 9 people (large size),</li> </ul>                     together with <ul style="list-style-type: none"> <li>a) independent toilet/bathroom with a septic tank</li> <li>b) kitchen,</li> <li>c) functioning electric wiring and</li> <li>d) lighting throughout connected to electricity supply</li> <li>e) water supply (1 water-meter with tap per household).</li> </ul> </li> <li>• The Company shall bear the cost of installing one electricity meter in each house, with a minimum of one low energy consumption bulb and one electric socket in each room, with the adequate breakers.</li> <li>• Ancillary structures, such as foundations for satellite dishes, shall be incorporated on the list of elements to be constructed when they exist on the old housing plot.</li> <li>• All replacement houses shall be constructed of new materials of good quality, supplied by Company at its cost. The house will use</li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<p><b>Committee under the Grievance Procedure</b></p>	<p>durable structure and walls, durable roofing material (such as corrugated metal sheets, for example).</p> <ul style="list-style-type: none"> <li>• Several standard designs (of different sizes) shall be prepared in consultation with the Resettlers and selected by the affected households and approved by PRLRC. The selection of construction materials shall be part of the consultation. The number of toilets will be adjusted to the size of the household. These standards shall be applied independently of the original house quality, for example a household who currently owns a house of low standards shall be fully eligible to a house having the improved standards offered by the Project.</li> <li>• House design to be finalized in consultation with and in consideration of the preferences of structure owners and to be approved by PRLRC;</li> <li>• Siting of housing to ensure proximity of families to each other and to maintain pre-resettlement social relationships as desired will be discussed and agreed with PAPs during design of residential area in the resettlement site as far as possible.</li> <li>• Existing outbuildings and ancillary structures (sheds, coops, rice storage barns, etc.) shall be compensated by cash; if requested, they can be replaced by equivalent asset.</li> <li>• Each existing house and outbuilding shall be dismantled with care intending to preserve the value of materials contained therein to the extent possible.</li> <li>• Where the resulting materials are in good condition and have continuing value as decided by the Resettler, they shall be transported to the site of the Resettlers new house at the project's expense and given to Resettler. Each Resettler shall have the right to be present at the dismantling of the existing house and outbuildings to assist in determining which materials are to be retained and which are to be disposed.</li> <li>• All costs of labour required for both replacement house and outbuildings construction and existing houses and outbuildings dismantlement will be borne by the company</li> <li>• All costs of transporting new and recovered materials to new sites and the cost of removal for disposal of materials without further use.</li> <li>• For the construction of the new houses as well as the dismantling of old houses, local workforce shall be engaged (incl. semi-skilled or non-skilled), which might include people (men or women) from the village. People involved in the construction and dismantling of houses will receive the level of remuneration</li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
	<p>offered locally for a job of similar nature, qualification and responsibility. The employment of workforce in the construction shall be in full compliance with the Lao Labour law and the core labour standards as required under ADB’s Social Protection Strategy 2001.</p> <ul style="list-style-type: none"> <li>• The necessary clearance of the existing vegetation shall be limited to the minimum necessary to allow for the construction of houses and related structure, and for the home garden. This vegetation clearance shall be made at the cost of the Company;</li> <li>• For PAPs eligible for self-resettlement along the criteria outlined in REDP section 5.2.10, compensation will be made at full replacement cost at current market value without depreciation or deductions for salvaged material.</li> <li>• Residential areas will be connected by roads, which will also provide access to public facilities and agricultural plots. The roads will be built as per the Lao standard for village roads. These shall include proper drainage and culverts up to the entrance of each residential plot if necessary. The road shall be covered with gravels. A detailed site development plan for the various public facilities in the village will be prepared by the project and approved by the PRLRC.</li> </ul> <p>For those choosing to relocate within village boundaries or self-resettle , transition allowance for a period of three months encompassing items a, b, c, and d listed below:</p> <ol style="list-style-type: none"> <li>a) Essential food items other than rice, such as cooking oil, salt, high protein items such as dried meat, eggs and other items as advised by a Nutritional expert and provided in kind (except for self-resettlers, for which a one-off lump-sum allowance in cash equivalent to the value of entitlement will be provided together with items (b), (c), and (d); adding to their overall package) and</li> <li>b) Electricity for 3 months paid as a monthly allowance of 50,000 LAK per Month and</li> <li>c) Water fee for 3 months paid as a monthly allowance of 20,000 LAK per Month and</li> <li>d) Solid Waste collection fee, paid as a monthly allowance of 10,000 LAK per Month.</li> </ol> <p><i>All cash compensation will be made as outlined in REDP section 5.2.7 and 5.2.8.</i></p>
<p><b>3.b.3 Movable fence which can be reasonable dismantled and rebuilt</b></p>	<p><b>All impacted PAPs will be entitled to:</b></p> <ul style="list-style-type: none"> <li>• Cash compensation for labour requirement for dismantling</li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<p><b>without significant loss of construction materials</b></p>	<p>and rebuilding of fences made from durable materials (such as barb wired and concrete posts); based on average labour costs as agreed by the PRLRC;</p> <ul style="list-style-type: none"> <li>• Salvage of fencing materials</li> <li>• A percentage of the affected fencing materials used is expected not to be salvaged and therefore compensated in cash at replacement value as agreed by the PRLRC</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<p><b>6 Loss of standing crops that could not be harvested for owners of affected crops</b></p>	<p>The project together with the RMU will inform the PAP in advance the timing of impacts on standing crops (and will complete land-related compensation) with sufficient time given for the PAP to harvest these crops. The timeframe will take into consideration crop growing cycles and harvesting requirements.</p> <p>In the case that the project requires urgent access to and/or temporarily or permanent acquisition of land and is not able to provide sufficient advance notification as outlined above, the project will provide cash compensation equivalent to 10 times the market value of damaged or lost crops.</p> <p>In the case that sufficient reasonable advanced warning (taking into consideration crop cycles including land preparation but no less than 2 months)</p> <ul style="list-style-type: none"> <li>• not to engage in crop production is ignored, while the compensation process is completed already</li> <li>• or crops ready for harvest have not been harvested in a reasonable time frame,</li> </ul> <p>such compensation will not be provided.</p> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<p><b>7.a Loss of fruit or nut trees for owner of affected trees or person with customary usage right or right to harvest (to be validated by village authorities)</b></p>	<ul style="list-style-type: none"> <li>• For fruit/nut trees bearing fruits, cash compensation will be paid based on the average annual value of the produce, established by the decision of the PRLRC, multiplied by 10.</li> <li>• For fruit/nut trees seedlings, which are not yet bearing fruits, cash compensation will be paid based on inputs such as seedling, land clearance and annual maintenance at rates as established by the decision of the PRLRC.</li> <li>• The PAP is allowed to salvage wood resulting from the clearance of land from fruit/nut trees as long as it does not interfere with project activities;</li> <li>• At least two months' notice will be given to PAPs to harvest prior to any site clearance.</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP</i></p>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
	<i>section 5.2.8.</i>
<b>7.b Loss of timber trees for owner of affected trees or person with customary usage right or right to harvest (to be validated by village authorities)</b>	<ul style="list-style-type: none"> <li>• For timber trees cash compensation will be paid based on replacement cost equivalent to current market value based on type, age and diameter at breast height (DBH) of trees, at rates established through the process described in REDP section 5.2.7 and endorsed by the decision of the PRLRC.</li> <li>• The PAP is allowed to salvage wood resulting from the clearance of land from timber trees as long as it does not interfere with project activities;</li> <li>• At least two months' notice will be given to PAPs to harvest prior to any site clearance.</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<b>7.c Loss of production trees (e.g. Kapok) for owner of affected trees or person with customary usage right or right to harvest (to be validated by village authorities)</b>	<ul style="list-style-type: none"> <li>• For production trees already producing, cash compensation will be paid based on the average annual value of the produce at rates established through the process described in REDP section 5.2.7 and endorsed by the decision of the PRLRC based on the age of the tree, multiplied by 10.</li> <li>• For production trees seedlings, which are not yet producing, cash compensation will be paid based on inputs such as seedling, land clearance and annual maintenance at rates as established through the process described in REDP section 5.2.7 and endorsed by the decision of the PRLRC.</li> <li>• The PAP is allowed to salvage wood resulting from the clearance of land from production trees as long as it does not interfere with project activities;</li> <li>• At least two months' notice will be given to PAPs to harvest prior to any site clearance.</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<b>7.d Loss of construction trees for owner of affected trees or person with customary usage right or right to harvest (to be validated by village authorities)</b>	<ul style="list-style-type: none"> <li>• For construction trees cash compensation will be paid based on replacement cost equivalent to current market value based on type of trees at rates established through the process described in REDP section 5.2.7 and endorsed by the decision of the PRLRC.</li> <li>• The PAP is allowed to salvage wood resulting from the clearance of land from construction trees as long as it does not interfere with project activities;</li> <li>• At least two months' notice will be given to PAPs to harvest prior to any site clearance.</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<b>7.e Loss of perennial plants for owner of affected plants or person with customary usage right or right to harvest (to be validated by village authorities)</b>	<ul style="list-style-type: none"> <li>• For perennial plants cash compensation will be paid based on replacement cost equivalent to current market value based on type of plant at rates established through the process described in REDP section 5.2.7 and endorsed by the decision of the PRLRC.</li> <li>• The PAP is allowed to salvage the plant materials resulting from the clearance of land from perennial plants as long as it does not interfere with project activities;</li> <li>• At least two months' notice will be given to PAPs to harvest prior to any site clearance.</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<b>7.f Loss of fishponds</b>	<ul style="list-style-type: none"> <li>• For fishponds, replacement fish pond of equal size and/or productivity and amenity plus assistance to stock and feed fish or lump sum cash payment equivalent to three years of productivity as agreed with PAP; Participation in aquaculture program;</li> </ul>
<b>9.a Temporary Losses of affected structures or other fixed assets for affected PAPs</b>	<ul style="list-style-type: none"> <li>• Compensation in cash, on the basis of replacement cost of material and labour without deduction for depreciation or salvageable materials for the damages during the period of temporary possession at rates as established through the process described in REDP section 5.2.7 and endorsed by the PRLRC</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<b>9.b Temporary Losses with severely affected structures and affected PAPs made to shift temporarily from their present location</b>	<ul style="list-style-type: none"> <li>• Entitlement will be in terms of rent allowance to cover the cost of alternate accommodation on the same standard for the period of temporary displacement.</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<b>9.c Temporary Losses of crops and trees for affected PAPs</b>	<ul style="list-style-type: none"> <li>• Compensation at market value and for loss of net income from subsequent crops that cannot be planted for the duration of temporary possession;</li> <li>• cut trees have to be compensated fully according to lines no. 7.1, 7.2, 7.3, and 7.4</li> </ul> <p>Temporary payment refers to crops planted on the temporary affected land the year before (and not what crop might have been planted the year after)</p> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<b>9.d Temporary Losses/acquisition of land for affected PAPs</b>	<ul style="list-style-type: none"> <li>• No compensation for land if returned to the original user, but a monthly rent as per market value as established through the process described in REDP section 5.2.7 and endorsed by the PRLRC will be paid to PAPs.</li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
	<ul style="list-style-type: none"> <li>• PAPs will be compensated immediately and damaged assets will be restored to at least its former or better condition as acknowledged in writing by the land owner and confirmed by the RMU</li> </ul> <p><i>Payment will be made to bank accounts of PAPs as described in REDP section 5.2.8.</i></p>
<b>10 Unforeseen Impacts</b>	<p>In case of any additional impacts identified during implementation, appropriate entitlement measures would be included. In order to ensure that unexpected impacts get identified swiftly, a comprehensive monitoring program will be established, encompassing</p> <ul style="list-style-type: none"> <li>• water quality</li> <li>• fisheries</li> <li>• fish catch monitoring</li> <li>• river bank erosion</li> <li>• pre-COD natural flood monitoring</li> </ul>

Table 54: Compensation and Benefits Entitlements 2UR

1. *Remark:* The size of company constructed replacement housing will be based on the number of people in the household.
2. In case that a house made of (a) concrete flooring or wooden floor; and (b) brick/stone/cement block/wood wall; and (c) tiles roofing, is impacted is of a concrete/wood floor square meter (m<sup>2</sup>) size larger than the potential house allocated in the resettlement area based on the number of people in the household, then the house owner can choose to either: (i) receive cash compensation for the difference in value between the impacted house and the replacement house provided; or (ii) receive a house of at least the same square meter size as the house impacted.
3. In case the impacted house is of a calculated value (using the PRLRC compensation unit rate) higher than the replacement house allocation based on the number of family members, then the house owner can chose to either: (i) receive cash compensation for the difference in value between the impacted house and the replacement house provided; or (ii) provided that the cash value of the impacted house is larger than the cash value of a house allocated based on the number of family members, receive a larger replacement house and the remaining value between impacted house and replacement house as a cash payment; or (iii) receive a house of a size constructed up to the value of the house impacted.

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207. To address the specific concerns of reservoir impacts at full supply level, the Project responded with the following process:



<p><b>Level of Impact</b></p>	<p><b>The project estimates an impact up to the highest level of operation of the reservoir on 320 MSL. The project will apply entitlements to all land assets impacted by this level; residential land inside a safety zone, comprising all land on 320 MSL to 321 MSL, will be eligible for protective measures. For all other types of land, the Project will temporary rent land inside the safety zone for the year during which the reservoir will fill to Full Supply Level as a precautionary measure and to allow further assessments.</b></p>
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## 6.2 Income Restoration and Rehabilitation

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<p><b>4.1 Loss of trade / livelihood / occupation or business incomes for business owners</b></p>	<p><b>All impacted PAPs will be entitled to Income Substitution as follows:</b></p> <ul style="list-style-type: none"> <li>• Cash Compensation for Loss of Business Income equivalent to three months of potential net profit in case of permanent closure based on an assessment endorsed by the PRLRC.</li> <li>• Cash Compensation for Loss of Business Income equivalent to potential net profit of closure period up to three months in case of temporary closure based on an assessment endorsed by the PRLRC.</li> </ul> <p>For relocation, a temporary closure period of 2 weeks is assumed, unless proven to be longer.</p> <ul style="list-style-type: none"> <li>• Participation in livelihood restoration programs based on priorities identified by affected households during consultations between individual PAPs, NNP1PC, and DCC; this can include for example trainings for alternative livelihood activities or enhancement of current livelihoods based on the individual preference of the PAP.</li> </ul>
<p><b>4.2 Loss of trade / livelihood / occupation or business incomes for wage employees</b></p>	<p><b>All impacted PAPs will be entitled to Income Substitution as follows:</b></p> <ul style="list-style-type: none"> <li>• In case of permanent closure cash compensation for loss of wages equivalent to three months of wages as indicated in the employment contract; in the case such an employment contract is not available, the wage will be based on an assessment of a wage for a comparable employment endorsed by the PRLRC.</li> <li>• In case of temporary closure, cash compensation for loss of wages equivalent to the closure period of wages as indicated in the employment contract; in the case such an employment contract is missing, the wage will be based on an assessment of a wage for a comparable employment endorsed by the PRLRC.</li> </ul> <p>For relocation, a temporary closure period of 2 weeks is assumed, unless proven to be longer.</p> <ul style="list-style-type: none"> <li>• Participation in livelihood restoration programs based on priorities identified by affected households during consultations between individual PAPs, NNP1PC, and DCC; this can include for example trainings for alternative livelihood activities or enhancement of current livelihoods based on the</li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
	<p>individual preference of the PAP which can include:</p> <ul style="list-style-type: none"> <li>○ support of employment in reconstructed enterprise or package for re-employment or starting a business</li> <li>○ participation in Occupational Skill Development Programs which shall be designed to match the PAP’s aspirations and potentials</li> </ul>
<p><b>4.3 Loss of trade / livelihood / occupation for PAPs</b></p>	<ul style="list-style-type: none"> <li>• Stream-Bed/Bank Gardens shall be compensated in accordance with decisions by PRLRC</li> </ul> <p><b>In case of significant impact (REDP section 5.2.2) on the PAP’s livelihood, significantly impacted PAPs staying within the Project’s Area of Influence (Claus 0.19) will be entitled to:</b></p> <p>Participation in livelihood restoration programs based on priorities identified by affected households during consultations between individual PAPs, NNP1PC, and DCC; this can include for example trainings for alternative livelihood activities or enhancement of current livelihoods based on the individual preference of the PAP which can include a selection of the following if found to be suitable for the area.</p> <ul style="list-style-type: none"> <li>• On-Farm Activities: <ul style="list-style-type: none"> <li>○ Agricultural livelihood restoration program: intensive agriculture program (fertilizer, seed, agricultural extension program)</li> <li>○ Where feasible and appropriate, suitable and functioning irrigation system including pumps, gates, gauges, and distribution systems for replacement paddy agricultural lands in accordance with standards issued by Ministry of Agriculture and Forestry, Lao PDR within village boundaries</li> <li>○ Complete array of plants, tree saplings, cuttings, seeds and other biomaterials as well as tools and equipment if necessary, each year for a period of not less than three (3) years, in amounts sufficient to carry out all agricultural plans and optimize the productive capacity of all agricultural lands including paddy, terraces, garden plots forage plots, and forests.</li> <li>○ Participation in aquaculture Program</li> <li>○ If necessary, provision of tools and equipment in sufficient number and quality (including replacement tools and equipment where such items are worn out or damaged) for successful agriculture, fishery and other work of all types which are proposed under Concession Agreement, Annex</li> </ul> </li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
	<p>C, Appendix 7</p> <ul style="list-style-type: none"> <li>• Off-Farm Activities:                             <ul style="list-style-type: none"> <li>○ Package for employment or starting a business</li> <li>○ A range of feasible production and income generating options which will ensure household targets are met</li> <li>○ Priority for employment in project-related jobs</li> <li>○ Participation in Occupational Skill Development Programs which shall be designed to match the PAP's aspirations and potentials.</li> </ul> </li> <li>• For students committing to work either in a public function (teachers, medical staff, etc.) in the 3 villages of 2UR or with NNP1PC, eligibility to compete for a scholarship program established and funded by the Company up to a defined quota; scholarships will be allocated via a competitive selection process with gender quotas.</li> </ul>

Table 55: Livelihood Activities Entitlements 2UR

208. *Remark:* Possible development for small scale irrigation, access roads and other public infrastructure development will be planned based on close consultation with the affected communities, through Participatory Land Use Planning (PLUP), as promoted by the GoL and described in the PLUP Manual issued by the GoL.

### 6.3 Community Resources & Infrastructure

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
<p><b>5 Loss of access to common resources and facilities including loss of access to rural common property resources and urban civic amenities, including community grazing areas, fishery and other riparian resources, NTFPs, community cemeteries for communities/Households</b></p>	<ul style="list-style-type: none"> <li>• Bridge-Crossing from the left bank to the right bank side of the Nam Ngiep River at a suitable location based on geological conditions and reservoir width, at the same time minimizing the average distance all PAPs have to travel to cross to the other side; if conditions allow, one bridge of a standard sufficient to allow the crossing of a 5 ton vehicle similar to the one built in Thaviengxay will be built, in Ban Hatsamkhone</li> <li>• An agricultural access road will be built along the edge of the reservoir on the right bank from Hatsamkhone to the agricultural area of Ban Pou and Ban Piengta</li> <li>• Access to fishery resources in the upper section of the reservoir through the construction of a boat landing site.</li> <li>• Assistance to develop a sustainable use plan for use of common resources including a Fisheries co-management program for fisheries on the reservoir</li> </ul>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
	<ul style="list-style-type: none"> <li>• For non-significant loss of common resources and facilities, compensation will be provided in kind via the establishment or improvement of community facilities equivalent to the value of the lost assets; for details see item 8</li> </ul>
<p><b>8.b Loss of public infrastructure and cultural properties for Communities / Households who do not have to resettle (affected communities)</b></p>	<ul style="list-style-type: none"> <li>• Upgrading of existing, internal village access roads with appropriate drainage facilities</li> <li>• In case of establishment of new agricultural land, agricultural tracks leading to the newly established land areas providing reasonable access to the different kinds of livelihood activities and resources but not necessarily to each single plot</li> <li>• Repair and upgrade of existing water supply systems in accordance to hydrological, geological, and geographic conditions</li> <li>• Repair of existing school buildings in Ban Pou, Ban Hatsamkhone and Ban Piengta</li> <li>• Repair of existing public health facility and initial provision of needed medical equipment for daily use in accordance with GoL standards for health centres at Ban Piengta, and then operated on a self-sustaining basis</li> <li>• Repair of existing village meeting hall in Ban Hatsamkhone and Ban Piengta; and construction of a village meeting hall in Ban Pou, designed to allow the presence of 2 persons per household</li> <li>• 3 bus stops, one for Ban Pou, one for Ban Hatsamkhone, one Ban Piengta; the bus stops will have a roof and be located at suitable locations along the main road or inside the village depending on the preferences of the PAPs and road safety concerns</li> <li>• Market stalls for Ban Pou, Ban Hatsamkhone, Ban Piengta will have a roof and will be located at suitable locations along the main road or inside the village depending on the preferences of the PAPs, public land availability, and road safety concerns</li> </ul> <p>All specifications and designs for this public infrastructure will be prepared in consultation with the village, and will follow the standards of similar buildings. All shall be</p> <ol style="list-style-type: none"> <li>a. covered with durable roofing material</li> <li>b. have a concrete structure</li> <li>c. be connected to electricity (except bus stop)</li> <li>d. have access to the water supply system (except bus stop )</li> <li>e. have toilets connected to a septic tank (except bus stop)</li> <li>f. UXO clearance to a depth of 1 metre for all community infrastructure land as outlined in REDP section 5.2.16.</li> </ol>

Kind of Impact and Entitlement	Compensation Policy Zone 2UR
	g. Fencing of all community buildings (except bus stop and market stalls) h. Community and state land titles will be facilitated by the Company as outlined in REDP section 5.2.15

Table 56: Community Resources and Infrastructure Entitlements 2UR

### 6.3.1 Details Public Infrastructure

209. Even prior to the project commencement, the Public infrastructure in the affected areas of Zone 2UR was in need of improvement. Most of the schools in the area provide only the first 2 or 3 years of primary education, but even if buildings have been improved, support in providing education material can facilitate a better educational system. There are some piped-water systems in the villages from nearby sources or streams, but as outlined above just in Ban Pou with drinkable water. The alleyways within villages are simple, dirt paths. During the rainy season, most of the alleyways are filled with mud holes and are barely useable. Even though these conditions are not in any way due to the project, their improvement helps with the livelihood restoration plan and to enhance the general living conditions of the people. The villagers also requested the provision of these basic infrastructures during public consultations.
210. In response to these requests, the project, together with local authorities and village representatives, made an inventory of public infrastructure to be upgraded. Projects with high priority for upgrades, such as the internal village road and quick repairs to the water supply systems were implemented in Q1 and Q2 of 2016, while other requirements are under detailed studies and will be implemented from Q4 2016 onwards.

No	Infrastructure	Piengta	Hatsam-khone	Pou	Total	Current status
1	Suspension bridge (3 meter wide, 110 meter long, 5 Ton weight capacity)		1	-	1	Detailed geological survey and detailed design are ongoing
2	Repair and upgrade health centre	1			1	Bidding process is ongoing
3	Repair and upgrade primary school buildings, and classroom furniture, based on current condition and number of students.	1 new classroom and 1 teacher room added to current building	1 new building with 3 classrooms, new toilet building and repair two existing classrooms	1 new building with 7 classrooms plus 1 teacher room and new toilet building	3	Assessment completed. Design based on Ministry of Education standard ongoing.

No	Infrastructure	Piengta	Hatsam-khone	Pou	Total	Current status
4	Bus stop along the road	1	1	1	3	Design and consultation on suitable location for each community ongoing.
5	Small market shops near the road, including electricity, water point, toilet and waste disposal facilities	1	1	1	3	Design and consultation on suitable location for each community ongoing.
6	Upgrade and new construction of agricultural roads opposite (right) bank of Nam Ngiep*	2.5* km new construction	3 km new construction and 3.5 km upgrade*	0* km	9.5* km	Design ongoing. Purpose is to restore access to agricultural land.
7	Upgrade of internal village roads	0.6 km	0.4 km	1.6 km	2.6 km	Completed
8	Upgrade and expansion of gravity fed water supply system	1	1	1	3	Temporary repairs completed upgrades currently ongoing
9	Upgrade of existing and construction of new small scale gravity fed irrigation systems**	Yes	Yes	Yes	Yes**	Water flow in several streams currently being recorded.
10	Fish landing	1	1	1	3	Consultation will be initiated to determine the initial location
11	Construction of village meeting hall	New construction of village meeting hall	New construction of village meeting hall	New construction of village meeting hall	3	Design and consultation on suitable location for each community ongoing.

Table 57: List of Infrastructure to build or upgrade in Zone 2UR

\* Estimated numbers, actual construction may differ, due to ongoing design.

\*\*Total numbers will be determined after the Confirmation survey and detailed participatory land use

planning in each community

211. This provisional infrastructure development scheme will be improved according to the community and area development plan, incorporating existing infrastructure, GoL and village knowledge, expert knowledge, and consulted interests by all stakeholders living in the area.

### 6.3.2 Water Supply Improvement

212. The water supply system improvements (for household use water) which will be provided in the 2UR villages depends on (i) the existing systems (gravity flow systems from spring/stream sources and using a network of public tap-stands for distribution) and (ii) on the number of the households in each village with at least 1 point per 6 households distributed in the village, according to the standards that have been promoted by UNICEF in the country. In Pou village, the water storage capacity will be increased by 24 m<sup>3</sup> and additional 15 tap-stands will be constructed in the village, to reach the required coverage. In Piengta village, the supply of water from water sources will be expanded through two boreholes with electric pumps, allowing for groundwater to supplement the GFS system in the dry season, when the water flow of the current source is reduced. In Hatsamkhone, a filter tank will be installed in the system, to reduce turbid of the water.



Figure 14 Survey in Zone 2UR villages for water supply improvement.



### 6.3.3 Details Road Improvement and Suspension Bridge

213. An initial field visits and consultations with villagers confirmed that there are several dirt tracks North and South of the residence area of the impacted villages which would be partly or completely and temporarily or permanently inundated due to the creation of the reservoir. These tracks are currently accessed by villagers either by foot, motorbike or by hand tractor “lot thaai/tek”. Villagers use these tracks currently to; (i) access the villages rice fields, which is practice in all three villages; (ii) access the cash crop fields such as corn and cassava fields, predominantly relevant in Ban Hatsamkhone and Ban Pou; and (iii) to access the forest area to collect certain NTFP’s such as bamboo, wood for cooking and house construction materials, predominantly by villagers from Ban Piengta.
214. Initial discussion with the affected communities suggested that there is a need for improved roads to ensure continuous and permanent access to the fields and forest on the South side of the Nam Ngiep River. With improved roads in place the agriculture - and in particular the cash crop production would be stimulated. To mitigate the above mentioned adverse impacts the Project will provide upgrading of a selection of the existing road infrastructure. These roads will be constructed in such a way that they can be accessed all year round and people can access them by foot, motorbike or hand tractor “lot thaai/tek-tek”. Upgrade of the internal village roads is completed.
215. The design of agricultural roads, box culvert/drainage system shall comply with, but not limited to, the minimum requirement by GOL as follows:
- The standard and design shall be comply with to Road Design Manual 1996 issued by MPWT/GOL.
  - Design flood: 30 year flood
  - Box culvert: ASSHTO HL 93 (HS 20)
  - Carriageway: 01 lances
  - Design speed: 20km/h
  - Road categorization by Design Standard of Lao PDR: Access Roads design class VII (Road width =3.5m surface)
  - Pavement: Gravelly pavement, excluding Access Roads shall be surfaced by compacted laterite or appropriated selected materials and gravel where required.
  - Gradient: max 9%, lane width: 3.5 m
  - Terrain: Rolling: 10-25 m contours per Kilometre



Figure 15 Survey in Zone 2UR villages for internal road improvement

216. In order to allow vehicle crossing to reach the south side of the Nam Ngiep, a suspension bridge of approximately 110 meters length will be constructed. Design criteria are as follows:
- Bridge type: Suspension/Cable stayed bridge
  - Design code: ACI
  - Bridge width: 3 meters
  - Capacity of load: maximum 5 tons; light vehicle passages
  - Design flood: 100-year flood

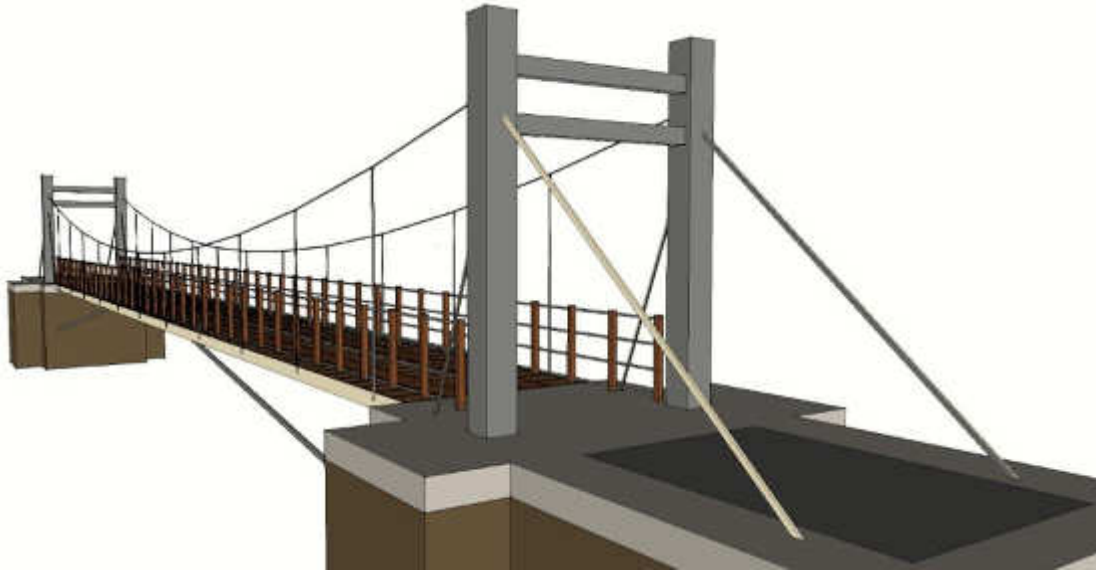


Figure 16 Conceptual design of suspension bridge (Infrastructure team design 2016).



Figure 17 Conceptual design of roadside market stalls (Infrastructure team design 2016).



Figure 18 Conceptual design of road side bus stop (Infrastructure team design 2016).

#### 6.3.4 Dry season irrigated drawdown zone production

217. Construction or repair of irrigation channels for land in the upper zones of the drawdown zone (DDZ) of the Nam Ngiep River of all affected villages would enable villagers to practice dry season production in certain sections of the DDZ and hence increase agricultural production to sustain their livelihoods. Land in the DDZ, when not being inundated is considered state land while taking into consideration that such land is part of the land lease agreement between GOL and NNP1PC which gives NNP1PC certain non-exclusive land use rights. Hom district will issue regulations on the use and restrictions on the use of the DDZ. Cultivation of this state land will be allowed during the time it is not inundated. Allocation for cultivation will be on a seasonal bases to those households who indicate they would like to cultivate for the specific season. Priority will be given to PAPs losing productive land, so the activity can be incorporated into their livelihood activities. The DCC, together with the RMU are currently drafting a regulation for the use of the DDZ, which will be discussed with representatives of the 3 communities, to establish clear procedures and agreement on the use of the DDZ well in advance before the DDZ land becomes available.
218. Simultaneously to the construction of these irrigation canals the Project will support the communities with establishing Water User Groups and Water User Associations who would be responsible for keeping these systems operational. These groups are tasked with collecting fees from users and carrying out maintenance to the irrigation system when necessary to keep the system functional. It might not be possible to include all households in this dry season irrigated scheme, therefore selection criteria for inclusion will be developed by the Project to ensure that the most vulnerable and/or most severely impacted families will be able to participate in this scheme, in case they have the capabilities to participate in such a program. The Project will take further into consideration expertise of households on the usage of irrigation systems and alternatively provide accompanying programs to provide such expertise.

### 6.3.5 Fish Landing

219. To facilitate the sale of fish caught in the reservoir, fish landing sites will be developed. These fish landing sites must be accessible by road when the reservoir is full and access the current riverbed when the water level reduces and the current riverbed will provide access to the reservoir area at level reservoir levels. Several potential sites have been identified and will be further studied to take into consideration local preferences for landing of fish. Experiences from other projects indicates that the location of fish landings will develop over time and requires flexibility. In order not to create unused monuments, the initial fish landing sites will be supported with temporary structures until the fisheries market has established itself. Structures will include a shelter for waiting traders and road access to near the shoreline, to allow small trucks to access to the proximity of the water line to load fish.
220. Permanent structures will be constructed in 2019 or 2020, depending on the stability of the fisheries market and fish landing/trading practises as they develop.

### 6.3.6 Village Office and meeting hall

221. In each community a village office connected to a meeting hall will be constructed. The size of each meeting hall will vary village by village, depending on the number of households in each village. The size will be such, that 2 persons per household can attend a meeting.



Figure 19 Conceptual design of village office and meeting hall (Infrastructure team design 2016).

## 6.4 Special Measures for Vulnerable Households

222. A dedicated program for the most vulnerable PAPs has been prepared by the Company in consultation with those PAPs to assure there are no additional adverse impacts. The Project will have positive impacts on vulnerable households in 2UR in general. The development of public infrastructure, including improvement of internal village roads, the construction of bus stops, and repair of health centre and schools will all lead to better access of vulnerable households and thereby improve their integration into local development. Additionally, as described in REDP section 5.11, adapted individual livelihood development programs for PAPs will be implemented by the Project with coordination by the vulnerability officer. Continuing monitoring of vulnerability will be implemented.
223. As described in the overall REDP, the project addresses four different kinds of vulnerability with

different programs:

- i. Needs of Ethnic Groups will be addressed as cross-cutting issues (above all regarding the use of appropriate forms of communication), but also via special programs and activities as outlined in the Ethnic Development Plan.
- ii. The issue of PAPs without legal title to land or property is addressed by acknowledging customary rights to lands with no request for legal titles for asset registration and compensation.
- iii. Needs of Women will be addressed as cross-cutting issues (focus group discussions, tenure security), but as well via special programs and activities as outlined in the Gender Action Plan (see SDP).
- iv. Poor households will be addressed by a focus on land allocation of at least a viable size and additional livelihood activities, including trainings and inputs as well as the implementation of a social safety net as outlined above.
- v. Vulnerable PAP households where the measures outlined in points i to iv are not sufficient or viable will receive overall special assistance and additional, regular monitoring by the vulnerability officer.

Assistance specific to the type of vulnerability will also be provided:

- a. for vulnerable households with people with disabilities;
- b. for vulnerable households with people with health problems;
- c. for vulnerable households with not enough labour to establish independent living.

224. The vulnerability officer will assess the needs and potential activities together with each individual household and will coordinate with the education, health, and livelihood teams of the Project to provide sustainable and livelihood improving support.
225. Measures undertaken to support vulnerable people are individual, case-responsive strategies, which provide suitable support to specific individual needs instead of providing broad, general support programmes. Meanwhile, NNP1 recognises that some individual vulnerable persons have similar needs where the project can provide similar assistance. The programs will thereby extend over the period of project impacts.

## ***6.5 Project-related employment opportunities***

226. The Project's SMO has hired a labour management officer, supporting the employment of PAPs through linking Company, contractors and subcontractors with PAPs looking for employment as well as in linking employment-related livelihood activities with the Project's construction work. In 2UR this will encompass limited employment for the infrastructure construction. Meanwhile, options at the main construction site are logistically more difficult for PAPs from 2UR, as the construction site is a day-long journey away.

# CHAPTER 7 - Compensation Procedures

227. The entitlements and policies outlined above will be implemented along a set of steps and procedures. The steps of the compensation program for PAPs are visualized in Figure 20.

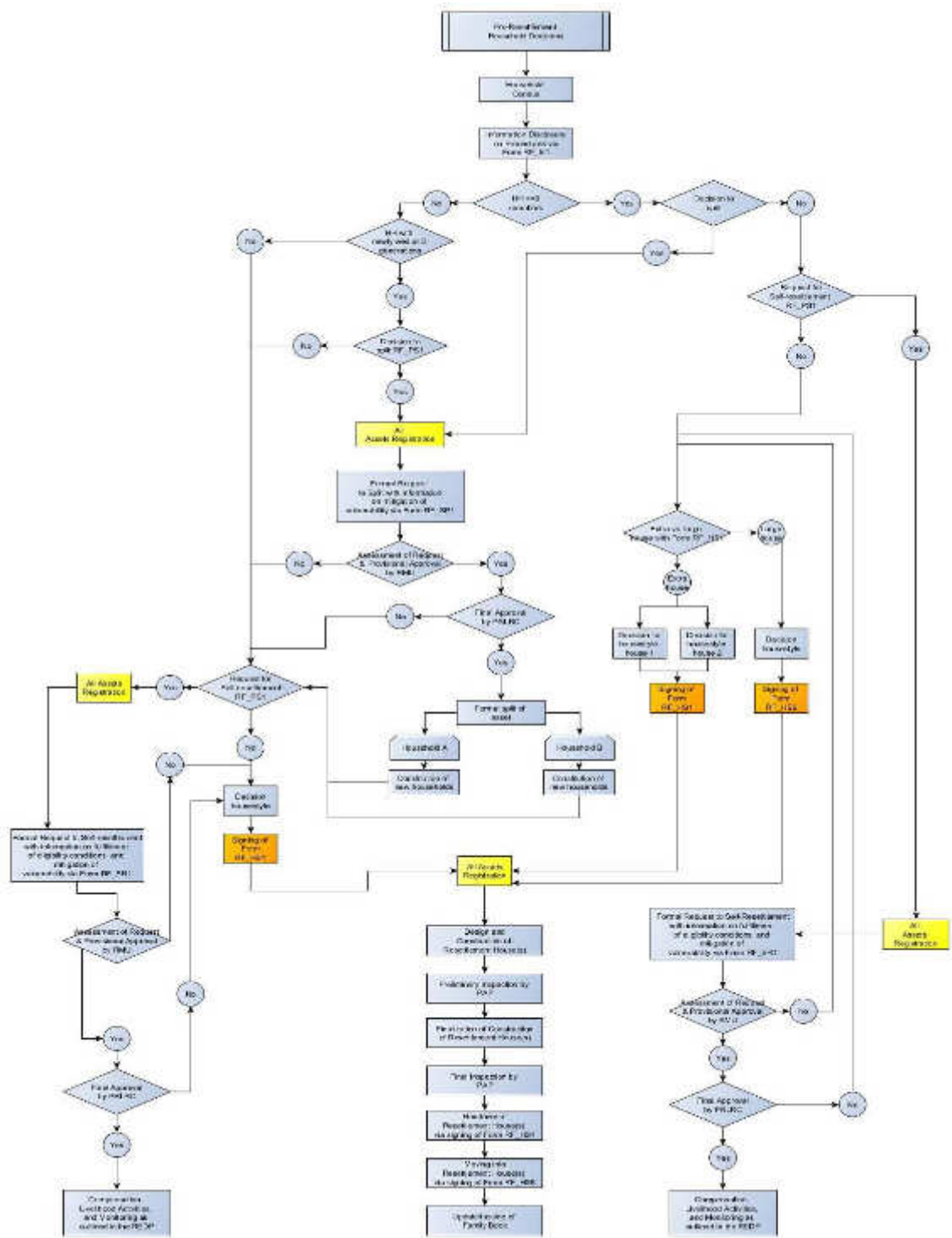


Figure 20 Flow chart of household choices and compensation program for Zone 2UR

## 7.1 Confirmation Survey

228. The Confirmation Survey is described in CA Annex C Clause 89,c, iii:

*conduct a comprehensive and detailed confirmation survey of PAPs who are eligible to receive entitlements including without limitation:*

1. *the identity of PAPs;*
2. *the identity of Persons who are entitled to receive transitional assistance and entitlements;*  
*and*
3. *loss of assets, income and net income, housing, access to community resources, natural resources, and business opportunities and corresponding entitlements;*

229. The confirmation survey is considered the sole authoritative survey to identify all PAPs at the time of the cut-off date and all the assets of those PAPs that will need to be compensated. The Census has been implemented in Quarter 3 of 2014 and the Baseline Socio-Economic Survey in Quarter 4 2014. Asset registration commenced in October 2015 and completed in Q2 2016.

### 7.1.1 Census

230. During the Census, the Project registered every household in each of the three 2UR villages with the names of all family members and pictures of husband and wife. This allows correct and easy identification of households later in the process. At the same time, the Project also collected village profile information including village infrastructure as well as main economic activities. The assessment of impacts on each registered household is part of the asset registration.

### 7.1.2 Asset Registration Survey

231. Based on the census, the Project has conducted the registration of asset of all Zone 2UR private lands and structures impacted by the Project. This asset registration commenced in October 2015 and was completed in Q2 2016. The basis for the land assets registration is a Geographic Information System (GIS) using layers containing each asset registered, assets impacted and later on in the process all assets compensated. Through a coding system, each land plot is connected to a database which has been established and which contains all project relevant information from the PAPs. All information in the database is interconnected through a project PAP ID as well as a Land Plot ID. Summary tables presenting survey data provide sex-disaggregated information.

232. Because land size and use determine compensation entitlements and compensation values, careful measurement of each asset is undertaken using both GPS and measure tape. Trees are individually counted and measured for size or age.

233. The asset registration is undertaken in the presence of both husband and wife, and owners of adjacent land plots must agree on the borders, even in the case where there are clear boundary demarcations such as fences.

234. The asset registration survey closely involved relevant District authorities (such as the Land department, tax department, and agricultural department), Village Authorities and community elders.

235. Prior to finalizing the asset survey in each community, all findings are presented during village level consultation meetings and are made publicly available for review by all villagers.

236. The GRM for resettlement and compensation makes use of the existing Village Grievance



Committees. In significantly impacted villages such as 2UR villages, the Project will provide in mid-2016 additional training to the Grievance Committee to enable the committee to deal with grievance cases arising from Project impacts on access roads and the transmission line. Furthermore, the Project has provided the contact details of the SMO's grievance officer in charge to facilitate easy access to the GRM.

237. The asset registration is made using 4 copies: one copy for the PAP, one copy for the District Coordinating Committee (DCC), one copy for the Resettlement Management Unit (RMU), and one copy for the Company to be kept in both hard copy and included in the data base. One fully signed set of compensation documents was handed over to the PAP and kept by the PAP in the project folder.
238. The flowchart of Asset Registration process is in Figure 21.

## 7.2 *Data Base*

239. A database has been established for the SMO, containing all relevant data such as census and asset registration information. Each household has been provided a household ID (HH\_ID) and each member of the household has been provided an individual ID (PAP\_ID) that is linked to their household ID. This allows the project to follow changes in household composition, as people marry, divorce, die, have children, move away, or break away to form new households; and it allows the project to follow the social and economic conditions of individuals over time, and their involvement with the project. The population today and the population at the expected end of commitment (COD +10 years) in 2029 will be very different, and so the project needs a way to be able to track the many changes that will occur during that time to both households (with the HH\_ID) and individuals (with the PAP\_ID) in those households.
240. The PAP, through this unique PAP identification, forms the core unit of this database. Connected to each HH\_ID are all datasets of the household, including asset registration, compensation entitlements, socio economic & health data and later on during project implementation, compensation payments, trainings received, livelihood activities supported etc.
241. The database is used for both planning and reporting; updating of REDP and SDP, and supported with the hard copies (original documents) to form the proof whether CA obligations are fulfilled yet or not.
242. A section of the database also contains grievances filed and the progress and resolution of such grievances. As of the writing of this update, no grievance has been filed by Zone 2UR residents.

### 7.3 *Compensation Process*

243. While Land for Land is the preferred method compensation for PAPs, as clearly expressed in Social Safeguard documents from GoL as well as ADB and IFC, cash compensation is also a viable option as a result of specific requests from PAP households. As described above, for vulnerable households, where even small impacts might have an extraordinary effect, the Project implements in parallel its vulnerable households program.
244. Affected households have now been informed of final unit rates. For the ones losing agricultural land and small structures associated land-for-land is the primary method of compensation that will however depend on the availability of appropriate land and of the PLUP with the 2UR PAPs.
245. For the ones having to relocate housing, a comparative package of either (i) full cash compensation; or (ii) relocation within their village boundaries with replacement housing, land and community services, plus cash compensation for any asset that cannot be fully replaced, will be prepared. Each Zone 2UR household will be interviewed as part of the choice survey for expressing which package they want to opt for. After a period of 14 days for family discussion and consideration, the final decision will be made. The flow chart for the Resettlement Choice by PAPs is in Figure 22.
246. For those PAP households who cannot or will not make a choice, they will be deemed to have selected moving to company constructed housing. In the meantime, construction of replacement housing, pegging of replacement land and construction of community facilities will continue for those who have made the choice to relocate within their village. Those taking cash compensation, if they self-relocate within the Project Area of Influence (PAI), will remain eligible to participate in livelihood restoration programs and in activities of various sub-plans of the SDP. All households of PAPs are informed about the procedure and the date for final decision during the survey.
247. During the asset registration process, 28 Households were identified who have land in one of the 3 communities of zone 2UR, but are living in other villages. These households will be paid cash compensation and if they live in the Project zone of Influence, are eligible to join the livelihood activities organized in the 3 communities.

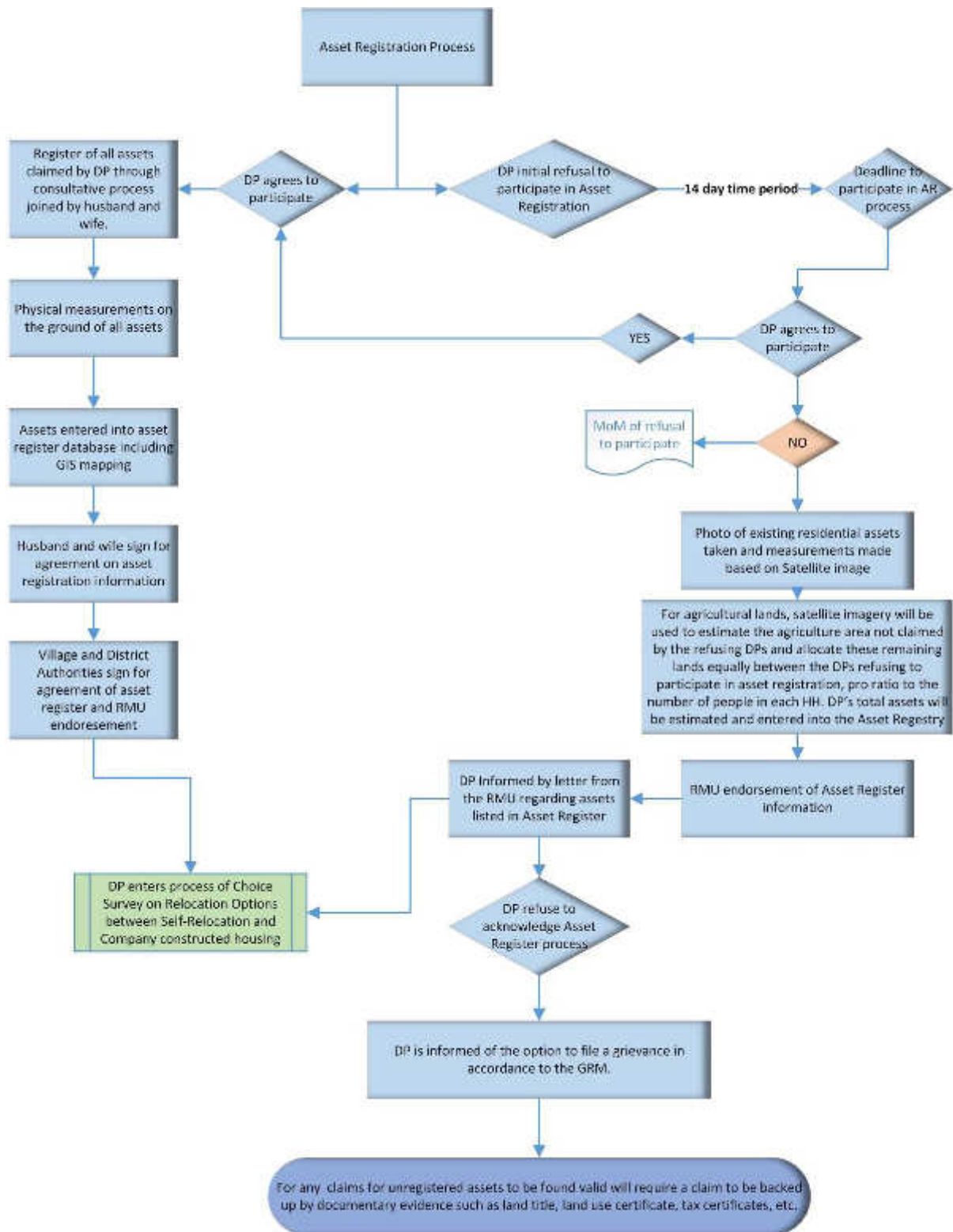


Figure 21 Asset Registration flow chart.

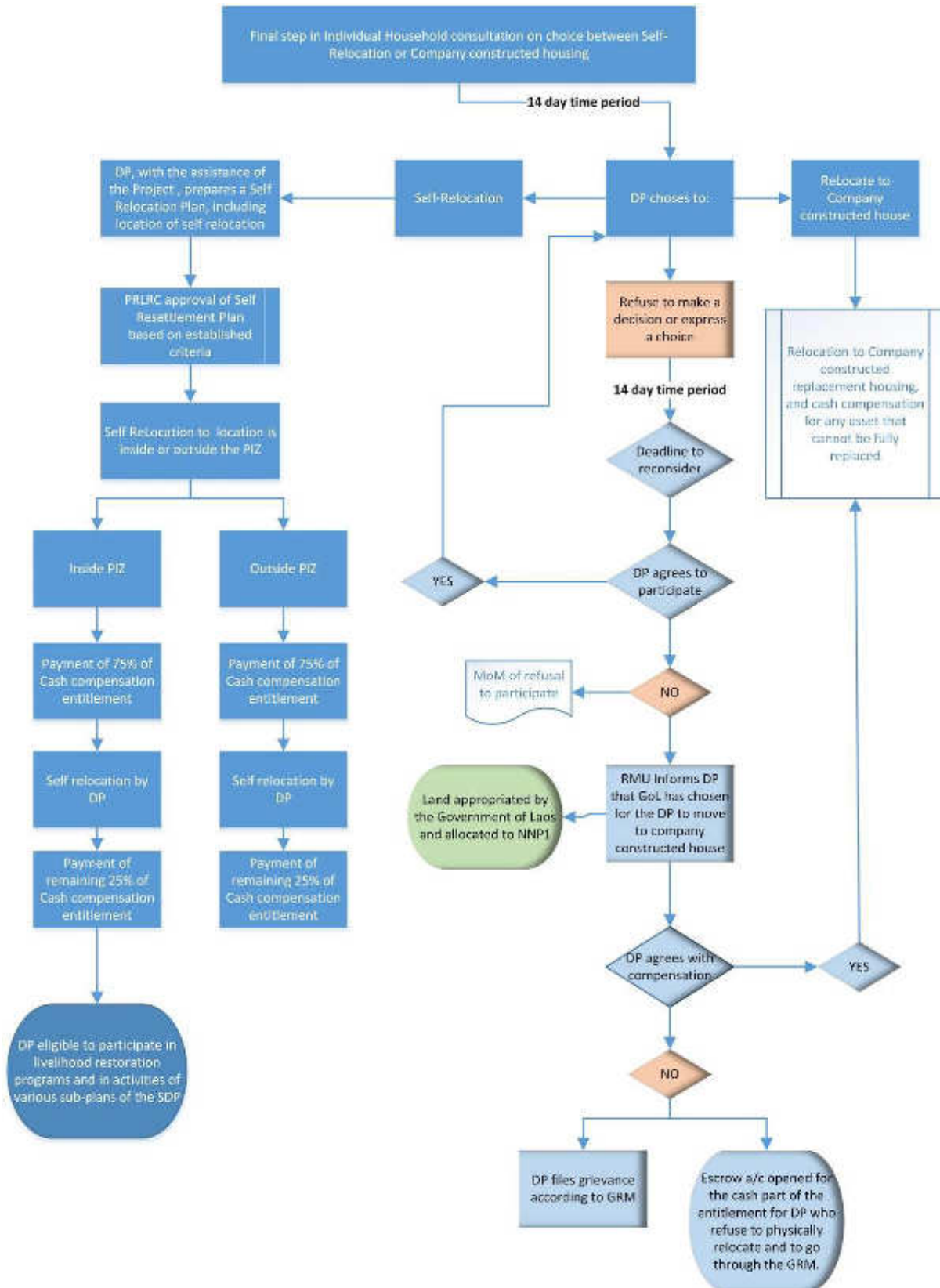


Figure 22 Flow chart on Resettlement Choice for PAPs.

## 7.4 Compensation Calculation

248. Compensation for each household is calculated using the finalised compensation unit rates outlined in Chapter 5 (with all details in Annex A) and the results of asset registration as described in the previous section. Compensation for each individual, impacted household is calculated and summarized through the use of the SMO database.
249. Following the calculation of these compensation values, the RMU representative(s) on behalf of the PRLRC reviews the calculations and checks them thoroughly, as required by the responsibilities of the PRLRC and RMU detailed in the CA<sup>10</sup>.

## 7.5 In-Kind Compensation Calculations

### 7.5.1 Land-for-Land

250. As described in Chapter 5, households from each of the three 2UR villages are entitled to land-for-land compensation with land to be found in the vicinity of the villages.
251. Through careful discussion with the local communities and local authorities, the company has endeavoured to identify land areas suitable for development into replacement paddy rice field land. On the request of the communities, several sites were inspected, but none found suitable as land areas which could be developed into paddy rice fields, due to either the high slope or the distance to the existing communities. Therefore, for those PAP's who choose land-for-land compensation during the choice survey the project will obtain land in the vicinity of the communities through a system of willing-buyer-willing-seller. Land purchased this way will be cleared of UXO and land titles will be issued to the new owner, on the name of both husband and wife. During the indicative choice survey, conducted in Q2 2016, 100% of the land owners expressed their preference for cash compensation and develop their other land holdings, purchase replacement land by themselves or invest in small business and other livelihood activities.
252. Therefore, after the final choice survey, there are several scenarios :
  - (1) - If during the final choice a PAP requests land for land and thereby requests for NNP1 to purchase land for them, NNP1PC will seek replacement land in the communities nearby the location of the PAP. NNP1PC will assess the economic status of the potential seller, including total land assets, sources of family income; assess the credibility of the stated reason for sale; use of funds if a sale can be agreed and the risk of the land sale leading to impoverishment of the potential seller. If there is a medium to high risk of the land purchase leading to impoverishment to the seller, then NNP1PC will not agree to the land purchase.
253. If during the final choice survey more than 10 households request land for land, then the NNP1PC will prepare a separate sub plan for that and such sub plan will assess impacts on the potential land sellers and corresponding measures and submits this to the ADB. If less than 10 households request land for land, then NNP1PC will act on the request by the PAPs quickly, while ensuring that proper measures are taken and provide all information afterwards to the ADB, to allow a third party audit of such transaction

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<sup>10</sup>Annex C Appendix 5, Clause 4 iii, Clause 5 ix, clause 9 ii and Clause 10 xii and Annex C, Clause 89, c,v.

254. (2) If PAPs opt to take cash compensation on their own and opt to purchase land elsewhere within their own village boundaries or any of the affected 2UR villages, NNP1 will require PAPs to participate in family financial training for those household receiving more than 10 million LAK in compensation payments, as part of the compensation process. For those PAPs receiving less than 10 million LAK in compensation payments, participation in detailed planning is voluntary. See Chapter 7.10 for further details on the financial training.

### 7.5.2 House-for-House

255. All households choosing to relocate within the village boundaries are entitled to a house according to criteria outlined in the Chapter 6. Based on these consulted and approved guidelines with PAPs and GoL, the Project developed several house designs as basis for further consultations.
256. The Project has conducted several rounds of consultations and updates of these house designs mainly in Hatsaykham and 2LR. The adaptations brought them in compliance with cultural rules and preferences as well as PAPs' wishes for a productive and healthy residence with endorsement by the village elders and consequently by the individual households. Particular attention has been paid to ensure easy access for those households with disabled family members.
257. The Project will provide houses made of durable materials exceeding the quality of the current bamboo and wooden houses. The size of each new dwelling is dependent on the size of the resettler family. Each household will also be provided with pour-flush toilets and showers with appropriate septic tanks. As outlined above, in addition PAPs will be able to bring the materials of the current house to the resettlement site, with dismantling and transport organized and paid for by the Project in consultation with the PAPs.
258. The indicative choice survey with the 6 house owner whose houses are at or below 320 msl was conducted in June 2016. All 6 households indicated that they would like the Company to construct a replacement house for them, at a location in the village identified by themselves. Following this indicative choice survey, the SMO will conduct further consultations on the details of the house design during Q3 2016, to meet cultural preferences as far as practical possible.
259. House construction is scheduled to start in late 2016 or early 2017 after UXO survey has been completed of the land identified by each house owner. The household will have the opportunity to inspect the house before handover and to ensure its compliance with the agreed standard design chosen. Due to construction site health and safety regulations, house inspections can only be conducted jointly between NNP1PC and the household.
260. The houses will be built in compliance with Lao safety standards and will also be inspected by the related district authorities before handover.



Figure 23 Conceptual design of 50m<sup>2</sup> Lao Loum style house (Infrastructure Team Design 2016)

### 7.5.3 Replacement of Community Assets

261. No significant community asset will be impacted but PAPs will lose access to the Nam Ngiep right bank. As outlined in the entitlement matrix above, PAPs are entitled to the restoration of these accesses via a bridge and in addition, for the non-significant loss of common resources and facilities, to in kind compensation via establishment or improvement of community facilities.
262. This include the upgrade of existing village roads, establishment of new roads leading to newly established land areas, repair of existing health centre, school buildings and meeting halls (refer to section 6.3).
263. A fisheries co-management program will ensure that sharing of the fishery resources on the future reservoir will be done in a productive, fair, and sustainable manner. A separate fisheries co-management plan is being prepared by the EMO.

### 7.5.4 Compensation of Outbuildings

264. The Project undertook an assessment of the preferred method of compensation for outbuildings: replaced in kind or in cash. It was decided that it is of mutual benefit to provide cash compensation rather than replacement assets for the following reasons:
  - PAPs are entitled to dismantle current outbuildings and bring materials to the new resettlement site; therefore, appropriate materials for outbuildings are available to resettlers already;
  - PAPs know best which outbuildings they need; different from houses, outbuildings are less complex to build and not dependent on engineering advice;
  - Cash compensation can be either used to upgrade these outbuildings or for other livelihood activities.
265. Should PAPs prefer replacement structures, e.g. for vulnerable households with insufficient labour force, this will be agreed on during individual consultations.

### 7.5.5 Compensation of Lost Business Opportunities

266. The Project will provide up to a maximum of 3-month compensation for businesses in 2UR villages affected by the period of resettlement based on the value of loss, assessed by the RMU. The Project will furthermore consult and take into account PAPs activities to facilitate resettlement during a period most convenient to the PAPs. For the purpose of relation, a business closure time of 2 weeks is calculated, unless proven to take longer. None of the 6 households requiring relocation operates a small shop.

### 7.6 Individual Household Consultation

267. Prior to cash compensation payments, a family finance training program will be initiated, that uses private consultations to raise awareness on family finances, methods of savings and prioritization of family income. This has already been undertaken for compensation due over the access roads for Hatsaykham households.
268. Individual household consultation will be conducted with each PAP to inform the household, which includes both husband and wife(s) and possibly children of the household regarding their entitlements and compensation values based on their asset registration, entitlement matrix, and compensation rates. A record of the meeting with each PAP will be kept, including a photo of the PAPs attending the individual consultation. The PAPs will be informed regarding their right to submit a grievance if they do not agree with the information provided during the consultation.

### 7.7 Bank Transfers

269. Compensation payments will be made through a bank account<sup>11</sup>, registered in the name of both husband and wife(s) and requiring dual signature or thumbprint. In case a PAP has no such account, then the project facilitates all aspects of opening such a bank account starting at the consultation meeting, by assisting the PAP to fill in the bank opening forms, requesting the required copies of document needed, such as a copy of the family book. Special assistance will be given to those PAPs who are illiterate or functionally illiterate.
270. Opening bank accounts for the non-literate might be seen as impractical. However, the methodology was tested for Access Roads and Transmission Line payments, including for non-literate Hatsaykham landowners. Results were very successful, and particularly appreciated by women, for whom it was the first time that an explanation of how much money was received in compensation, and how to use the account had been provided. Despite non-literacy, the Project has facilitated the process with the district bank to enable both husband and wife to sign via thumbprint if necessary. Additionally, the Project is undertaking functional literacy programs with PAPs. The project processes the request of the bank account opening at the nearest branch of the bank and makes the initial payments and deposits of opening the bank account without deducting for these from the compensation entitlements. Feedback from the Access Road compensation is positive as outlined in the access road audit report. Although the extra effort is mentioned by some PAPs (particularly men), the reliability of money being directly transferred is above all welcomed by women.

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<sup>11</sup>As per CA Annex C, Clause 89, c,v.



## 7.8 *Documentation of Receiving Compensation*

### 7.8.1 **Signing of compensation forms for cash compensation**

271. Payment of compensation through a bank account requires trust and several steps to complete the process.
272. Following the entitlement calculation for an individual household, review of this entitlement by the PRLRC & RMU and individual household consultation with the PAP, compensation payment forms are printed in 4 copies; one copy for the PAP, one copy for the DCC, one copy for the RMU and one copy for the Company to be kept in both hard copy and included in the data base.
273. The compensation forms will require PAP's signatures and/or thumb prints (both husband and wife(s)) in two steps:
  - Initial agreement to the compensation amount and for it to be received on a specific bank account listed on the form
  - Agreement that the compensation is received in full in the designated bank account
274. During an individual household meeting with each PAP, the PAP is requested to review the relevant documents, and if they (husband and wife(s) or wife and adult child) agree, designate a bank account for receiving the compensation funds and make the first step signatures. As outlined above, the Project assists PAPs to open bank accounts in both the husband's and wife's name, if such a bank account is not available; which is above all in more remote villages the case. All related costs are borne by the Project. The Project opens new bank accounts in banks with local branches in the respective village or district.
275. Following the first signature of the PAPs, the RMU as designated representative of the PRLRC as well as the DCC sign the compensation forms endorsing the compensation payments. Following the first signature of the PAPs and PRLRC approval, the Company signs for endorsing the compensation forms and transfers the compensation funds to the designated bank account of the PAP, and updates the bank account to show to the PAP clearly that the bank transfers have been conducted and that the compensation payment has been received properly and in the full amount.
276. Following the transfer of the funds and the updated bank account statement, the bank account book is returned to the PAP. The PAP (both husband and wife(s) or wife and adult child) is now requested to sign for the 2<sup>nd</sup> step on the compensation form, agreeing that the compensation payment has been received in full and that the bank account book has been returned to the PAP. The PAP will also be requested to sign a copy of the bank account statement for reference by the project that the funds have been transferred correctly.
277. One fully signed set of compensation documents is handed over to the PAP and kept by the PAP in the project folder.
278. In the case of rental agreements, two copies will be signed by both the Project and the affected person, one copy of the rental agreement being kept with the Project and the other by the land owner.
279. One key aspect of the compensation payments is that these payments are made to bank accounts, belonging to the PAPs and requiring dual signature for withdraws of. Many people, especially those living in the remote villages, do not have previous experiences with banking and compensation money may not typically be made to both husband and wife. Through the family financial training programs the project will create better understanding of financial institutions such as banks, how they

work, how interest calculations are performed and the different services provided, such as saving accounts, fix term deposits, ATM cards etc.

### **7.8.2 Signing of compensation forms for in kind compensation**

280. When compensation is provided in kind, such as for support assets for vulnerable households or as community contributions, clear records will be maintained when in kind compensation is handed over to the PAP. Records of such in kind compensation will clearly state the compensation provided and for what impacts the compensation is provided, when the hand over date was, and the responsibilities of the PAP following the hand over.
281. Compensation in kind for community land acquisition will be made as a result of the outcome of consultations and be based on prioritised wishes of a community. Such compensation typically takes the form of a Project contribution that will benefit all the community concerned such as improvements to school buildings or health facilities.
282. In-kind compensation forms are made in 4 copies; one copy for the PAP, one copy for the DCC, one copy for the RMU and one copy for the Company to be kept in both hard copy and included in the data base.
283. One fully signed set of compensation documents, together with the land titles, is handed over to the PAP and kept by the PAP in the project folder.

### **7.8.3 Documented Hand-Over for Common Property Compensation**

284. When compensation is provided for common properties in kind, such as school repairs or equipment, clear records must be maintained when common properties are handed over to the Community and or local government. Prior to handover of common properties, responsibilities for operation and maintenance will be clearly agreed with PAPs, and responsible parties for such works adequately trained and equipped, including establishment of mechanisms to fund Operation and Maintenance. Such handover events are regularly accompanied by a small ceremony.
285. Compensation forms combined with the Operation and Maintenance agreements, training record, and financing plan are made in 4 copies; one copy for the Community, one copy for the DCC, one copy for the RMU and one copy for the Company to be kept in both hard copy and included in the data base.
286. One fully signed set of documents is handed over to the Representative of the Community and to be kept by the Community in the designated records folder.

## **7.9 *Special measures for vulnerable households***

287. The Project follows Lao and ADB standards regarding vulnerable household, putting them into the Project context. Four types of vulnerability are addressed by the overall design of the social programs:
  - Indigenous People/Ethnic Groups. These form the majority of PAPs in the PIZ overall but a minority in 2UR zone. Some households in 2UR villages affected by resettlement are classified as vulnerable.
  - The issue of PAPs without legal title to land or property is addressed by acknowledging customary rights to lands and compensating accordingly.

- Women are among the most vulnerable in remote areas. Should any vulnerable household be further identified in the course of time, they will be eligible for the specific measures in the Project GAP. For example cash compensation is transferred into joint bank accounts in the names of both the male and female heads of households.
  - Households below poverty line (currently extrapolated at 230,000LAK per person per month<sup>12</sup>) will be brought above poverty line in compliance with the poverty elimination test outlined in the Concession Agreement along the Livelihood and Income Restoration Plan outlined in the REDP (Section 4.22.2).
288. Additionally to these categories of vulnerability, the Project uses the following context-adapted definition of vulnerable groups other than the groups discussed above, based on outlined national and international standards.
289. Vulnerable Households are households who might suffer disproportionately from the loss of fixed and movable assets, other assets, and production base; or face the risk of being marginalized from the effects of resettlement; and specifically include:
- Single female headed households with dependents and low income;
  - Households whose members are socially stigmatized as a result of traditional or cultural bias inside the community
  - Households living in poverty with not enough labour to make use of general pro-poor activities outlined above;
  - Landless households with no alternative sustainable income from regular employment or businesses
  - Elderly households with no means of support
  - Households with disabled or invalid persons;
  - Households with members with severe and long-term diseases having a substantial impact on the households productivity and/or expenditure
  - Households with members of households addicted to substance abuse.
290. A vulnerability check-list is attached to the Asset Registration Form to screen all impacted households on a first step, before the Project's vulnerability officer is engaged to identify vulnerable households and implement specific mitigation measures together with the PAPs. The Project's social monitoring team supported the vulnerability officer in this task. Also, all other Project staff (above all the Asset Registration and the Community Relations staff) are trained to identify potential vulnerability and inform the vulnerability officer, so that she can investigate further.
291. Support measures include additional household consultation meetings, inclusion of additional family members into the family consultation if there are single headed households, special times to organize household consultation meetings to meet the time availability of the household, and exploring the option of providing livelihood trainings at dedicated education centres for handicapped people, as well as other solutions and assistance, as required.

## 7.10 PAP Training

292. Training on a range of topics are provided to the PAPs, some specifically related to Compensation and some more general, but with specific impacts on the Compensation methodology. All training

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<sup>12</sup> At exchange rates as of this REDP-U2UR update, this amounts to US\$29.

offers, training delivered and participants will be registered.

293. Family financial training is a term broadly used for trainings that concern finances. For NNP1, conducting family financial trainings for PAP is important because specific compensations are made in Cash and because significantly impacted PAPs will be offered alternative livelihood restoration activities which are based on a market economy, requiring good understanding of finances.
294. A range of training session will be conducted on appropriate times during the project, with key messages repeated at regular intervals and integrated in other training sessions if impacts are significant.
295. Other areas of family finances that have been and will be discussed include things like purchases of large household goods made on a monthly payment contract, mobile phone plans etc. With knowledge, people will be able to make decisions that are suitable for their family situation.

### ***7.11 Further Ethnic Group and Gender Arrangements***

296. To address the needs of Zone 2UR PAPs, the Project has prepared ethnic and gender development plans which are included in the REDP/SDP. The following support measures are additionally carried out during the planning, implementation and monitoring of the land acquisition and compensation activities:
  - The DCC includes representatives of the district offices of the LWU and LFNC. The members of the DCC also include the chief and/or deputy chief of 2UR villages.
  - The DCC consults individually with the PAPs and their families to ensure that all understand the NNP1's policies, entitlements and procedures regarding land acquisition, compensation and resettlement; and, to identify the specific needs and concerns of male and female PAPs. Meeting individually with these PAPs will also ensure that women particularly the ethnic women in the households understand and feel comfortable to speak up.
  - The compensation payment forms are signed or affirmed by both spouses if the land or other affected assets are conjugal property.
  - All information to PAPs affected by construction is distributed to men and women equally; and, the DCC and/or Village Development Committee (VDC) takes appropriate steps, as necessary, to encourage women to participate in any public meetings about the sub-project.
  - The DCC collaborates with the Project's Environment and Social Division (ESD) to ensure that women and members of the ethnic PAPs are targeted for information about resettlement and land acquisition activities.
  - All members of PAP households regardless of ethnicity or gender are equally eligible to apply and, depending on their qualifications, be considered for employment by the contractor(s) for civil works for NNP1 Project.
  - If there is employment associated with construction, new jobs are reserved as much as practicable for qualified women regardless of their ethnicity.
  - All databases and monitoring indicators for land acquisition, compensation and resettlement activities disaggregate data and other information by gender and ethnicity.

## 7.12 Chosen Relocation Options

297. As outlined in the previous chapter as well as in detail in the overall REDP, Zone 2UR PAPs have several choices to make before resettling:
1. Split of Households for
    - a. Large families and / or joint households with one husband and several wives
    - b. Newly wed sons and daughters still living with their parents
    - c. Sons and daughters with children still living with their parents
  2. Destination of relocation
    - d. Relocation as previously agreed with PAPs to be within the village boundaries
    - e. Self-Resettlement within the Project Area of Influence
    - f. Self-Resettlement outside the Project Area of Influence
  2. If relocation within the village.
    - a. Traditional Lao Loum / on-storey raised house style
    - b. Traditional Hmong / on-storey non-raised house style
    - c. Mixed Style / two-storey house style
298. These decisions have to be taken sequentially and furthermore, each decision has certain conditions, which have to be presented by the Project, proven by the household, and agreed on by the RMU/PRLRC. This is a time-consuming and complex process, as outlined in the flowchart above (Figure 22).
299. This process has started in mid-2016 and will be concluded in Q3 2016. Consultations with 2UR villagers until now show that all households would like to relocate within their village boundaries. Now that unit rates have been finalised, the comparative options can be prepared and discussed with each household. A final date will be made for each household according to a consultation and decision making schedule of at least 14 days after the initial consultation. During this period, any family member is free to seek further clarification and/or advice from the RMU or the Project.

### 7.13 *Benefits Sharing*

300. PAPs from 2UR villages will gain from Project activities, other than from the overall compensation process, including but not limited to the following measures:
- i. Agricultural activities improvement trainings
  - ii. Training on market- and off-farm activities and expertise
  - iii. Setup of marketing structures together with the PAPs
  - iv. Provision of quality public infrastructure currently not available (e.g. water supply, market stall, bus stops, etc.)
  - v. Business opportunities as employees and entrepreneurs in connection with the Project
  - vi. 2-million USD scholarship program (to be shared with other directly impacted communities)
  - vii. Health programme
  - viii. After COD participation in the community development fund according to regulations to be set up in coordination between the Company, PAPs, and GoL.

### 7.14 *Transitional Measures*

301. Transitional assistance measures are as outlined in the overall REDP measures taken by the project to facilitate the transition by PAPs from their old to the new situation in 2UR area. Such transitions require specific attention, to make them go in as smooth a way as possible, minimizing adverse impacts on the PAPs. These transitional measures include:
- Transitional allowances for a period of 3 months;
  - Income substitution and transfer costs during re-establishment in case impacts cannot be mitigated by proper planning and provision of facilities by the Project (the Project's primary aim)

#### **7.14.1 Transitional allowance**

302. Transitional allowance will be provided for a period of three months starting from the month of physical relocation in the first half of 2017 and consists of:
- Essential nutrition items, such as cooking oil, salt, high protein items such as meat, eggs and other items as advised by a Nutritional expert
  - Cash support for electricity supply fees
  - Cash support for water supply fees
  - Cash support for solid waste collection fees
  - Rice support, milled rice, based on a provided consumption per household of 0.7kg per day per adult and 0.5kg per day per child (under 15 years).
303. For vulnerable households, transitional allowances will be extended up to 1 year.

## CHAPTER 8 - Income Restoration and Rehabilitation

### 8.1 *Income restoration programs, including multiple options for restoring all types of livelihoods*

#### 8.1.1 Framework

304. Livelihood and income restoration programs are planned to correspond with other mitigating measures of the Project for PAPs to comply with international safeguards standards and to reach targets set in the CA, Annex C. These targets include:
- i. Poverty Elimination: raising households above the national poverty line;
  - ii. Maintaining Economic Parity: a living standard of at least pre-project;
  - iii. Net Income Improvement: increase of average community net income by 200% within ten years from COD from what will be measured in the baseline socioeconomic survey, to be carried out after cut-off-date close to the effective date in Q4, 2014
305. Achievement of livelihoods targets will be regularly monitored and reported as outlined in Chapter 10 of the overall REDP. PAPs are entitled to participation in livelihood restoration programs based on priorities identified by affected households during consultations between individual PAPs, NNP1PC, and DCC, and will include (i) trainings for alternative livelihood activities or (ii) enhancement of current livelihoods based on the individual preference of the PAP or (iii) a combination of both.
306. Following the pre-construction period, income restoration programs extend for approximately 9 years, including preparatory and construction phases and for up to a five years stabilization phase after COD. First activities started in 2UR in 2015 following the setup of a project office and SMO team in the Zone 2UR.
307. Details are outlined in the overall REDP. PAPs from 2UR villages who need to resettle have expressed the desire and are expected to resettle within their village boundaries in 2017 and together with the PAPs losing agricultural lands, explore a range of activities to develop alternative rice fields, use the draw down zone (DDZ) during the dry season with the support of irrigation systems, improve current agricultural practices and explore alternative livelihood activities. The Project has started discussions with PAPs and GOL regarding the possible opportunities to pursue and develop and based on these discussions, initiated on-farm pilot programs with interested PAPs.
308. The Project adapts its programs to the Zone 2UR circumstances and the livelihood program is focusing on existing activities and experiences to facilitate ownership and sustainability. Gradual adaptations and improvement of existing techniques as well as cautious integration of new livelihood activities based on the preferences and requests of the PAPs are at the core of the Project's strategy, as indicated in Figure 27 Roadmap for livelihoods in 2UR Figure 27 below. The program uses an integrated approach, with a comprehensive roadmap from skills development to production to marketing and linkages. Skills of PAPs will be gradually build up, starting with model farmers who will become local trainers and resource people for those joining specific livelihood activities in a subsequent cycle, while their skills continue to be developed to the next level of technical expertise. Market linkages will be arranged with production groups connecting to wholesalers of products but also through road side market stalls (see Figure 17), allowing small holder to sell their products directly from the farm to traveller along the road. Processing of agricultural products, NTFPs and fish will add value to the raw products.

## 8.1.2 Livelihood Options

309. As outlined already, PAPs of 2UR villages have two major options
1. Relocation organized by the project within village boundaries or self-resettlement within the Project area of influence (Bolikhan, Hom, and Thathom Districts)
  2. Self-resettlement outside the Project area of influence
310. The final decision of PAPs is expected for in Q3 2016 and at the latest by early Q4 2016. Consultations over the last months with PAPs as well as their representatives, including village elders, suggest that all 6 PAPs will decide to relocate within their own village and the Project has planned accordingly.
311. The following sections provide an overview on activities the Project will implement over the next years, currently under discussion with some activities already started together with villagers of 2UR.
312. For strategy details, refer to the overall REDP Chapter 6.

## 8.1.3 Agriculture and horticulture livelihood activities

313. As outlined in the Entitlement Matrix, the Project will provide land-for-land compensation using project acquired land (purchased on the commercial market on a willing buyer willing seller principle) and in the majority of cases cash compensation, complemented by livelihood restoration programs that can include:
1. various intensive agriculture programmes
  2. array of plants, tree saplings and seeds as well as tools and equipment
  3. aquaculture program
  4. where feasible and appropriate, suitable and functioning irrigation systems for DDZ seasonal agriculture
314. In preparation of the loss of agricultural lands, a range of livelihood activities have already been initiated in 2UR, preparing PAPs for new opportunities. These livelihood activities mainly focused on quick income generation, using the marketing opportunities along the road. However, long term livelihood initiatives also started.
315. Livelihood development for 2UR villagers is articulated along 2 directions:
- Short term livelihood activities: (vegetable garden; mushroom culturing, aquaculture, poultry, water melon cultivation, sweet corn cultivation), aiming prior to impact at
    - Increasing self-consumption and quick cash income
    - starting pilot activities
    - identifying capable farmer, susceptible to become group leaders and trainers or small entrepreneurs
    - upgrading various technical skills, that will be of particular interest after impact occurs
  - Development of sustainable livelihood with the focus on rice seed and rice production, vegetable garden, intensive cattle production with appropriate husbandry (including improved grazing and feeding techniques) and veterinary practices, /goat raising, improved piglet production and pig raising, goat raising, mushroom cultivation, NTFPs sapling production and plantation, Off Farm/handicraft activities, integrated farming, etc.
316. Sustainable livelihood development implies to build up and strengthen technical knowledge and managerial capacity of PAP's. It starts with thorough discussion with villagers on their interests, the opportunities that will open along the road with increased traffic and the possible ways for villagers



to get prepared for taking advantage of these opportunities. This includes visits to other villages and demonstration activities to raise awareness about opportunities for livelihood improvements. It continues with identifying villagers technical and managerial shortcomings and providing relevant technical knowledge training based on their current level of skills and shortcomings and their need for application in the Zone 2UR after impoundment. Villagers progress step by step and some of them may be keen to become group leaders and trainers.

317. Regular exchange visit/study trip between production groups inside or outside project area will be organized, aiming at sharing their experiences.
318. Step by step, villagers may get involved in the group, with the aim of having them working together as one working unit and finally setting up production groups for which necessary provide regular various levels of training course of management will be provided. When they are ready, if they wish so they will be supported for become “cooperative” (ODOP).
319. A particular objective is that the project will promote and support local production of high quality agricultural inputs and services by these production groups or cooperatives for reducing overall dependency from outside traders, guaranteeing the use of quality inputs and increasing profit of the farmers.
320. A several activities have successfully started in 2UR villages. It concerns firstly rice seeds trials (together with the other zones), water melon cultivation, and sweet corn cultivation. More are in the pipeline, similar to the ones that have started in Zone 2LR and in Zone 3 and 5.



Figure 24 Rice seed varieties trials in 2UR villages (August 2015).

321. The introduction of a new or modification of existing livelihood activity, such as, for example

introducing a new animal breed, a new plant variety, a new weaving technique or material all require careful consideration and consultation with PAPs before trials are run and the introduction is accepted and successfully adopted. Consideration will be given to the labour requirement, handling requirements, transport requirements, supply chain, market chain, market demand, market prices and when working with plants and animals, nutritional requirements, climate requirements, susceptibility to pests and looks, smell, taste and ability to store produce after harvesting. During the trial phase, these and other factors will influence the decision if a new practise is accepted by the PAPs or not.

322. The project carefully considered this when working with improved, higher yielding rice variety. A pilot was started to test two potential varieties, which are successfully grown in neighbouring Khamouane province. A study tour was organized for farmers to meet local farmers there and seeds for the Thadockham 1, Thadockham 2 variety, originating from Khamouane province with flood tolerant properties and Xabangfai 1, 2 and 3 varieties where obtained from National Agriculture and Forestry Research Institute (NAFRI). The communities were trained and well informed of the advantages and disadvantages when introducing new rice varieties and new techniques of farming. A specialist from NAFRI, together with project staff guided the pilot farmers through the steps of the trial and provided technical training and advice as required (see Figure 25). On farm trials with pilot farmers on plots of 1000 m<sup>2</sup> resulted in a yield increase between 5 to 10%, while requiring similar amounts of water and fertilizers. Pest control was similar to the existing varieties grown. However, although the rice is accepted for its taste and grain size in Khamouane province, the pilot farmers participating in the pilot in 2UR did not like the taste of the two varieties. Following an evaluation of the program, prior to the 2016 wet season, the pilot farmers were taken to a study tour in Xiengkhuang province, from where the “Khou kainoy” variety seeds were purchased for piloting. This variety is popular in Houaphan and Xieng Khuang province because it requires a cooler climate to grow. These trails are currently ongoing and results are expected in Q4 2016.



Figure 25. Training of pilot farmers on on pest controle in 2UR

#### 8.1.4 Off-farm activities

323. Regarding off-farm activities, the Project has identified several key areas:

1. Shops and Transport
  2. Repair and other Services
  3. Handicraft
  4. Training and Education
324. **Shops and Transport:** a number of families have some small shops selling basic household stuff. With the ongoing development of the Xaysomboun Province, further opportunities will arise. The Project has made contact with respective training facilities and will provide trainings, for example in shop organization including financial measures and logistics. Opportunities in retail and transport business will open and amongst others, the Project will provide driving trainings for villagers.
325. **Repair and other Services:** with the increasing use of machinery such as motorbikes and tractors already in 2UR, repair shops will be even in more demand and may provide opportunities for villagers of 2UR. The Project will provide training in motorbike repairs, after households have chosen their preferred livelihood activities. Further service provisions are a possible business opportunity, for example food shops, beauty salons etc.
326. **Handicraft:** Handicraft activities are already ongoing in 2UR. However, the handicrafts market is fairly saturated in Laos, and next to skills enhancement, understanding and managing marketing activities are central to success, as other projects in Laos have shown. The Project has therefore hired a marketing officer to work on these issues together with an off-farm-activities officer. Weaving groups have been established in each village and training on weaving have been conducted to the group members (total 19 HH in 3 villages).
327. **Training and education:** the training and education program is one of the core components of the Project's livelihood programs with a volume of more than 2 million dollars for directly impacted communities, including 2UR villages. A large scholarship program with 370 allocated supported places for young people in vocational skills, higher diploma, and university education, is an essential element in this program, allowing students to graduate from technical colleges and universities. 40% of scholarships are reserved for female students. Further details are available in the REDP.
328. The scholarship program started already in 2014. For graduates from high school, the Project started by organizing the participation in entrance exams, providing support for related costs including transport and accommodation. The occupational skills program started with identifying and registering interested PAPs and coordination with the Project's contractors and subcontractors on necessary skills.
329. The scholarships provided are summarized by village (all project zones) and gender in the next table (Table 58). 2UR villages have a good share of participation in the program with one third in 2014-15 and about 40% in 2015-16. Similarly to other villages, girls access is rather low but reflecting the lower enrolment than for boys in secondary school.

Village	2014-2015			2015-2016		
	Men	Women	total	Men	Women	total
Houaypamom	1	0	1	2	0	2
Soppuane	1	0	1	0	0	0
Sopyouak	2	2	4	5	1	6
Namyouak	1	0	1	8	1	9

Hatsaykham	2	0	2	0	0	0
Hat Gniun	1	1	2	0	1	0
Thahuea	0	0	0	0	1	1
Pou	4	1	5	2	1	3
Piengta	1	1	2	2	1	3
Hatsamkhone	0	0	0	5	1	6
<b>Total</b>	<b>13</b>	<b>5</b>	<b>18</b>	<b>24</b>	<b>7</b>	<b>31</b>

Table 58 Scholarship provided to students for 2014-2015 and 2015-2016 in all project zones

### 8.1.5 Fisheries

330. Fisheries will be a core component of the Project's income restoration plan, with the need to support PAPs to adapt their organization and fishing techniques to the new conditions of the reservoir fisheries from late 2017. Also for that purpose the Project started a fish-catch monitoring program in mid-2015, and once a full year's monitoring information is available, this will feed into a fisheries co-management program. The setup of this program will include discussing with the GoL on the fishing rights for the resettlers and the UR communities on the reservoir.
331. To facilitate the sale of fish caught in the reservoir, fish landing sites will be developed (see Chapter 6.3). These fish landing sites must be accessible by road when the reservoir is full and access the current riverbed when the water level reduces and the current riverbed will provide access to the reservoir area at level reservoir levels. Several potential sites have been identified and will be further studied to take into consideration local preferences for landing of fish. Experiences from other projects indicates that the location of fish landings will develop over time and requires flexibility. In order not to create unused monuments, the initial fish landing sites will be supported with temporary structures until the fisheries market has established itself. Structures will include a shelter for waiting traders and road access to near the shoreline, to allow small trucks to access to the proximity of the water line to load fish.
332. Permanent structures will be constructed in 2019 or 2020, depending on the stability of the fisheries market and fish landing/trading practises as they develop



Figure 26 Fish Catch Monitoring Program - Fish catch monitoring survey in 2UR, October, 2015.

### 8.1.6 Participation and involvement in the livelihood program

Livelihood and income restoration programs started with a small number of pilot farmers (61 HH in 2016), who will become local experts in their activities. Programs proven to be successful will be gradually scaled up in the following years, until all eligible Households who are interested to join participate in the program (see Figure 27). Through the participation in the livelihood programs, incomes will be gradually improving, until income target are achieved. Community infrastructure, such as the roadside stalls will be constructed to facilitate the livelihood programs on marketing products.

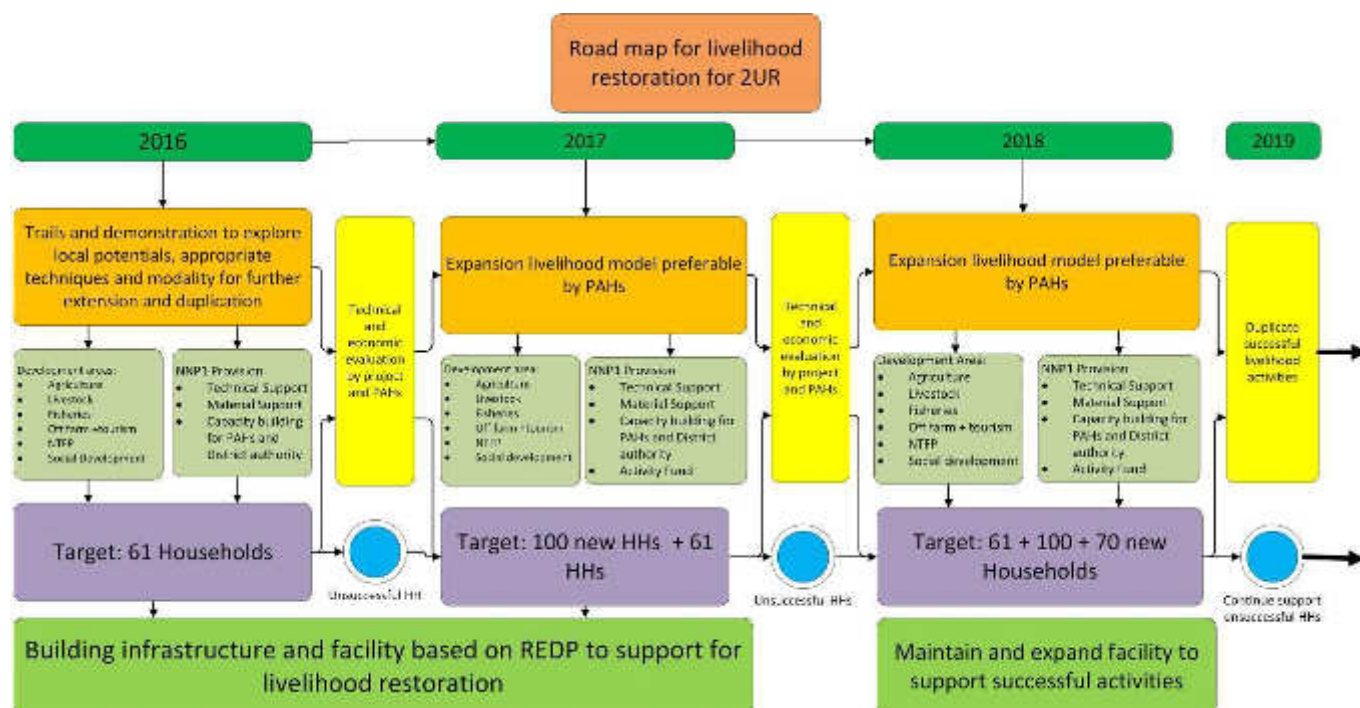


Figure 27 Roadmap for livelihoods in 2UR

## 8.2 Measures to provide social safety net

333. The Project is currently preparing a detailed social safety net. This will encompass a monitoring component to identify households struggling to reach the minimum income standards and an activity component tailored to the needs of the specific households. The Project has collected information on vulnerable households and their social links (relatives in other households).
334. The social safety net is a complementary means for the Project to comply with the poverty elimination test and adding to the overall income restoration programs outlined in previous sections and chapters.

## 8.3 Measures to address identified gender issues

335. Based on SDP's mitigation measures for women and gender issues, this REDP-U2UR includes specific actions under the Gender Action Plan (GAP) to address identified gender issues of 2UR villages. These actions identify such issues through consultations with affected women, who have already identified their priorities such as basic requirements for income restoration and other social issues such as health, education, and nutrition for Hmong women and girls.
336. As described in the SDP, the objectives of the GAP are to (i) promote the realization of gender equity, basic human rights and women's rights, (ii) ensure equal interests in all compensation and mitigation measures, (iii) promote girls' and women's access to education and capacity building programmes, including employment opportunities, (iv) promote active participation of women in all project development activities, encourage decision making and representing their own community related to social and political functions, (v) improve health safety and reduce health risk through improved

awareness on human trafficking and HIV/AIDS, and (vi) gather gender-disaggregated data and information, to enable equity monitoring over time.

The following measures are core Project components to achieve these aims:

- Consultation methodology to include women as well as of men to develop appropriate design and inputs to livelihoods programs
- Gender balance targeting
- Joint spousal authorization and receipt
- Support education programmes, girls' schooling and Lao language
  - a. Set target for adult literacy programs for women and men
  - b. Set target for school enrolment including secondary school attendance of girls
  - c. Set target for higher education (vocational schools) and university degrees
- Support women's skills development and increase income opportunities for women in the resettlement site
  - a. On-farms,
  - b. off-farms and
  - c. fisheries activities
- Supporting women's engagement in the project activities
- Community and Public Health: develop health programs focusing on maternal and child health, family planning and birth spacing
- Capacity Building to Promote Women's Leadership and Decision Making Power

### **8.3.1 Consultation**

337. All consultations with Zone 2UR women have been undertaken by female staff and in Hmong language with Hmong women. Visual aids have been used as most adult women are illiterate. Moreover, in public meetings women rarely raise their voices in front of men; therefore separate meetings have been essential not only to communicate information, but to obtain views that can feed into the Project's planning process.
338. Additionally, while the Project regularly interacts with male village leaders and elders, it has also adopted a strategy of household-by-household consultation, particularly on compensation and choices. This is necessary because women can make their views known within the family, and poorer families can discuss among themselves and make independent choices without alienating clan heads and elders. Good faith negotiations on compensation are thus gender-specific and family-centred, as well as respecting traditional leadership.

### **8.3.2 Gender balance targeting**

339. Gender balance targets are essential for improving equal participation of women and men in project activities. The targets are to encourage equal voices in decision making positions or livelihoods activities of the villagers. The measurement include higher attending rate of girls to complete at least the mandatory level (grade 5) of primary school and preferable secondary school as well. Planned improvement to 2UR schools is expected to increase high school attendance amongst PAPs.
340. To achieve the targeted education equality between boys and girls, there is a need to encourage parents to plan for the education of their children. Another importance balance targeting is to enhance skills and capacity of women and promote roles of women in income generating activities,

family financial management and other family management tasks, secure equity in tenure documents for replacement housing and land, ensure gender equity in procedures for cash compensation, and ensure open positions for local women.

341. The SDP states that in order to meet these targets, the Project will (i) use gender specific data and gender disaggregate all data collection, entry and analysis; (ii) increase women's activities in new areas; (iii) increase women's voices and authority in village level activities; (iv) support more women's representation in leadership and decision-making positions. The intended results are:
- improved girls' and women's health
  - improved gender equity in legal tenure of property and land
  - reduced workloads of girls and women
  - increase women's access to and control over resources
  - increase women and girls' levels of education and literacy
  - Joint spousal authorization, receipt and ownership

### **8.3.3 Joint spousal authorization, receipt and ownership**

342. The projects enforce the joint spousal authorization and receipt in all cases, as well as ownership rights to properties, rights to receive compensation, rights to participate in training or any development activities. Like other project sites, husband and wife in 2UR villages must be present when signing documents or receiving compensation, and both give their signatures, or thumbprints for those who cannot write their names, on any legal PAPs or claims. Where compensation payment is made into bank accounts, the account will be opened with the assistance of the project in both the husband and wife's joint names. Land titles will be issued in both husband's and wife's name or in case of a second or third wives in some households with more than one wife, the respective wife can choose to put her name as well as the names of one name of another family member, to be selected by the wife, on the document.

### **8.3.4 Support education programmes, girls' schooling and Lao language**

343. The project sets targets for adult literacy programs for women and men. So far, the project has conducted 1 adult literacy course in zone 2UR in the school year of 2015-2016. In the 2015-2016 school year, a total of 23 people joined the adult literacy classes, of whom 20 are female.

344.

### **8.3.5 Support women's engagement in the project activities, including women's skills development and income opportunities**

345. There are two different livelihoods options offered by NNP1 in Zone 2UR as follow: (i) self-resettlement outside the Project area of influence (ii) resettlement by NNP1 or self-resettlement within the Project area of influence (Bolikhan, Hom, and Thathom Districts). The gender action plan offers support and activities to PAPs who have chosen option (ii). Option (i) is a full-cash compensation and the PAP will lose their right to gain access to these offered livelihoods options.
346. The livelihood programmes is classified into three main categories: on-farm, off-farm and fisheries. The on-farm activities include but are not limited to the following: (i) cash crop production, (ii)



vegetables, bean, maize/corns/chick/peas and fruit crops, and (iii) other aquatic productions and aquaculture, (iv) raising livestock. Off-farm activities include shops and transport, repair and other services, handicraft, and other vocational training and education related to livelihood activities. An overall fisheries program to take advantage of the reservoir fisheries will be developed.

### **8.3.6 Community Health Awareness Programme**

347. The project develops health programmes focusing on maternal and child health. Both men and women will have equal access to health facilities provided by the project. Health/Dam Safety Procedures, Construction Health Risk Prevention toolkit, Camp Follower and Labour Management Plan and other Health Awareness Programmes are made available and accessible for all PAPs. Public Health Management is scheduled to be implemented from early 2016, with a focus on improving community health with a strong foundation of better hygiene, water and sanitation to underpin better nutritional outcomes.
348. A baseline SES for all project sites was undertaken in October/November 2014. The survey found that, like the rest of Laos, improving incomes and consumption, reducing poverty have not translated into improved health and nutritional outcomes. High levels of stunting in children under 5 years (34%) and anaemia in women (51%) suggest that the burden of diarrhoeal disease, parasitic infections, frequent births, and poor access to health facilities have counteracted the economic improvements. Improved sanitation, hygiene, parasite treatment, and improved access to better health services should dramatically improve the nutritional and health outcomes of the PAPs, particularly women and children.

### **8.3.7 Capacity Building to Promote Women's Leadership and Decision Making Power**

349. The project promotes the realization of leadership roles and decision making power of women within affected villages and beyond. In 2UR villages, the appointed leaders for Lao Women Union (LWU) have important roles in participating and engaging in development activities. They are actively seeking support from the project to advance their involvement in the project activities to ensure women benefits from the project. The project will not only encourage and support this existing incentive, but also will assist institutional arrangements strengthening to assure the LWU and other women's groups have recognized roles in the village structure and administration. Women will be trained in management skills to help them in leadership and decision making. Village level workshops will be provided by the project in order to promote women in 2R villages to gain equality among genders.

Work Plan	Resp. Agency	Beneficiaries	Targets	P r e	Construction Phase (year)					Operation Phase (year)			
					1	2	3	4	5	1	2	3	...
<b>Gender Mainstreaming</b>													
Gathering and Applying Gender Specific Data	SMO Monitoring / Gender	Female PAPs	100% disaggregated information on schooling, health and employment	+	+	+	+	+	+	+	+	+	+
Requiring Joint Spousal Authorization and Receipt	SMO Compensation / Gender	Female Head of Household	100% of Compensation Forms signed by both husband and wife <sup>13</sup> 100% bank books in names of both spouses	+	+	+	+	+	+	+			
Joint Tenure for Property and Land	SMO Compensation / Gender / PONRE	Wives and Daughters	100% land and property titles in names of both husband and wife Where more than 1 wife, title in name of wife and 1 other, selected by the wife		+	+	+	+	+				
Support Women and Girls' Schooling	SMO Education / Gender	Women (Income) Girls	At least 60% of girls conclude primary school 40% post-secondary scholarships reserved for girls			+	+	+	+	+	+	+	
Increase Income Opportunities for Women in the resettlement site	SMO Infrastructure / Resettlement / Gender	Women in resettlement site (Income)	At least 1 woman of 98% of affected households participates in Livelihood programs provided for households for who livelihood restoration activities apply			+	+	+	+	+	+		

<sup>13</sup> In case of deviation from the target reason for it will be provided by the Project.

Support Women's Engagement in the Project	SMO Gender Social Development	Women (Income + Livelihood)	40% female participation in overall project activities All illegal activities and exploitation of women will be investigated and penalized			+	+	+	+	+	+	+	+	
<b>Capacity Building to Promote Women's Leadership and Decision Making Power</b>														
Village Level Workshops on Gender Roles	SMO Gender	Men and Women	Every male and female PAP above 16 attended at least once a training				+	+	+	+	+	+	+	
Women Management Trainings	SMO Gender	Women (Leadership)	Every institution in the resettlement site includes women					+	+	+	+	+	+	

Figure 28 Gender Measurement Targets



Figure 29. Village Level Gender Workshop in B. Hatsamkhone, dated: 29 Jan 2016

## CHAPTER 9 - Consultations and Grievance Mechanism

350. Project consultations are described in the overall REDP. This section updates the continuing consultation process since May 2014. Disclosure of information and consultations occur particularly from early 2015 after the set of a specific 2UR team based in Thathom District. The team has ensured that PAPs and other stakeholders have timely information about land acquisition and compensation, as well as opportunities to participate in and express their preferences and concerns regarding the resettlement and livelihood programs.
351. NNP1PC and DCC with assistance from the village authorities are organizing meetings and consultation and distribute information to keep PAPs and VDCs informed about the impacts and schedule of compensation and resettlement. Discussions are continuous and at each meeting, more and relevant information is provided, including suggestions for possible agreements as to benefit-sharing and mitigation measures. These discussions will continue as major decision-making points in the process arise. Consultations also include information on the entitlement matrix, the compensation unit rates, grievance redress mechanism, and schedule of land acquisition.
352. There is BCS from all communities in Zone 2UR and agreement how to move forward. Evidence has been shown of information sharing in an atmosphere free from intimidation and inclusive of gender and wider diversity. Good faith negotiations are ongoing over the details, namely how the 7 households should relocate and choice of land-for-land or cash compensation, re-siting of graveyard and conducting associated spirit ceremonies, preparation of livelihoods strengthening for PAPs irrespective of their compensation choices. ADB has conducted due diligence and confirmed compliance with its SPS in achieving BCS in Zone 2UR.
353. Important tools of accountability for construction and in the LAR process are
- The asset registration including IOL calculations (Form A),
  - Declaration Forms (Forms F and G), and
  - Integrated Compensation Receipt Forms (last section of Form G).
354. Declaration Forms use and reprint the calculated figures from the IOL and Compensation Receipt Forms are directly attached to the Declaration Forms. These forms show clearly if the compensation procedures are followed properly and if the PAPs are informed about their rights.

## 9.1 Consultations in 2UR villages

No	Date	Location	Total	Activities	Content
1	1/4/2014	Pou	84	Entitlement Matrix dissemination	PAPs showed high interest in the compensation rates
2	2/4/2014	Hatsamkhone	67	Entitlement Matrix dissemination	PAPs agreed with the calculation with project, but would like to ask project to help for village development.
3	3/4/2014	Piengta	60	Entitlement Matrix dissemination	PAPs agree with the calculation from the project for compensation unit rate
4	15/7/2014	Hatsamkhone	66	Consultation on draft of Compensation unit rates	PAPs commented that some compensation rates in the draft are low
5	15/7/2014	Pou	95	Consultation on draft Compensation unit rates	PAPs did not have any immediate comments on the compensation unit rates
6	16/7/2014	Piengta	73	Consultation on draft of compensation unit rates	Price for compensation of rice field 7,000 Kip/m <sup>2</sup> is low and PAPs request to increase it.
7	18/8/2015	Pou	126	Dissemination for Cut-Off-Date and deadline for grave registration	Water level 320 m is close to the house that is risky. Village head asked for improvement of infrastructure in the village.
8	18/8/2015	Hatsamkhone	74	Dissemination for Cut-Off-Date and deadline for grave registration.	Disseminate Cut-Off-Date and deadline for grave registration. PAPs agreed and understood
9	21/8/2015	Piengta	72	Dissemination for Cut-Off-Date and deadline for grave registration.	PAPs agreed and understood
10	08/09/2015	Piengta	49	Dissemination of the decree of compensation unit rates for PAPs	PAPs questioned why the price of rotating upland rice field is different between other locations and Houaysoup
11	08/09/2015	Hatsamkhone	51	Dissemination of the decree of compensation unit rate for PAPs	Villagers' comment: Price for compensation to the construction land, not enough for buying new

No	Date	Location	Total	Activities	Content
					construction land.
12	09/09/2015	Pou	115	Dissemination of the decree of compensation unit rates	Villagers' comment: Some cash price from the compensation list not enough to buy at other places.
13	15/09/2016	Piengta	22	Meeting with VDC about NNP1 initial Activities	Building capacity with VDC (Village development commissioners). Clarified the per diem rate to involve local authorizations and other involve parts to deeply acknowledge of the per diem rate.
14	22/09/2015	Pou	25	Meeting with VDC about NNP1 initial Activities	Building capacity with VDC (Village development commissioners). Rice and mushroom planting monitoring. Data collection of final year of high school (year 7). Fisheries data collection workshop for village representative.
15	23/09/2015	Pou	19	Meeting with women, elders, and youth	Building capacity with women, elders, youth
16	29/09/2015	Hatsamkhone	19	Meeting with VDC about NNP1 initial Activities	Building capacity with VDC
17	08/10/2015	Thathom District	28	Second quarterly meeting with DCC	Summary on past 3 month activities and next 3 months activities
18	20/10/2015	Hatsamkhone	20	Consultation with VDC 3 village about updated REDP and sub plan	To build one bridge between Piengta and Hatsamkhone. To build a market, public health place at Pou. To build Bus-stop at Piengta and Hatsamkhone.
19	21/10/2015	Thathom District	9	Discussion with Thathom Governor about REDP	To build one bridge between Piengta and Hatsamkhone. To build a market, public health place at Pou. To build Bus-stop at Piengta and

No	Date	Location	Total	Activities	Content
					Hatsamkhone.
20	12-01-2016	Thathom (Military hall)	44	3 <sup>rd</sup> Quarter Meeting between the state and the NNP1	Mushroom cultivation demonstration selection for 15 HHs.
21	13-01-2016	Pou	16	Mediation on Grave	Resolution of the new proposal of 137 graves
22	13-01-2016	Pou	10	Mediation on Grave	Check the location and eligibility to register 137/ 195 graves
23	27/01/2016	Pou	22	Monthly Meeting with village Coordination Committee	<p>Hatsamkhone: Define production land at Houaysaikhao where inundated.</p> <p>Pou: Namche to D1 (Animal feeding, and Houay doo.</p> <p>How will fish pond be compensated?</p> <p>Paddy field of Touly at Piengta before not state inundated but now 320 m will be inundated.</p>
24	02-02-2016	Thathom	7	Thathom district Coordination Meeting	<ul style="list-style-type: none"> <li>- Road path survey will start 08/02/2016</li> <li>- Discuss with a three new area.</li> </ul>
25	11-02-2016	Pou	N/A	Grave relocation ceremony	Collect information on Lao and Hmong ceremonial rituals
26	24-02-2016	Hatsamkhone	26	Weekly meeting with villagers	<ul style="list-style-type: none"> <li>- Unclear land at Kao village can be changed.</li> <li>- New resettlement and agriculture area identification.</li> <li>- Agree to build one bridge located between Hatsamkhone and Piengta.</li> </ul>
27	29-02-2016	Thathom	11	Construction and agriculture land for 15 HHs	<ul style="list-style-type: none"> <li>- Pou: survey to Road 1 D and Upper reservoir Pou</li> <li>- Hatsamkhone: Thonglerth and Houaysaikhao area</li> <li>- Piengta: Yotou area</li> <li>- Construction land Village land.</li> </ul>

No	Date	Location	Total	Activities	Content
28	10-03-2016	Hatsamkhone	173	New agriculture zone and determination of suspension bridge crossing Namngiep river	<ul style="list-style-type: none"> <li>- Model 1: the Model proposed by the project in this meeting.</li> <li>- Model 1D design maximum load of bridge-3 tons and can be used by Hyundai truck.</li> </ul>
29	23/03/2016	Pou	N/A	Grave compensation	Decree 1003/Gov.XB dated 21-08-2015 states the unite rate for grave of 3,000,000 Kip per grave. PAPs propose to protect grave from water level erosion.
30	24/03/2016	Piengta	N/A	Weekly meeting with villagers	Land and fruit tree compensation based on - 1003/Gov.XB-21/08/2015. Road access to the village required to match with the first survey.
31	26/05/2016	Pou	19	Monthly activity review for May	Reviewed monthly progress on activities implemented in May 2016

Table 59 Consultations in 2UR

## 9.2 Information Disclosure

355. In addition to these meetings, the Project discloses all its plans including this LACP-U2UR in the different Project information points as well as on the Company and ADB websites.
356. An official letter announcing the Final Unit Rates together with the cut-off date for all villages involved has been provided to all affected villages. The cut-off date is announced in 2 ways: verbally during final IOL data collection, and by the Head of Village to the villagers after receipt of the letter from the DCC.
357. NNP1 recognizes that the affected people, including the villagers in 2UR, have the right to support or deny their **consent** related to any activities proposed by the project. The information on potential risks and benefits was strongly communicated with the villagers, especially since late 2013 when the development of access roads to the dam site started. Villagers were informed of the project components including the construction of hydropower development, the main dam and regulating dam, the livelihood restoration and development programmes, infrastructure development in the resettlement site and host community, capacity building and training programmes, community health awareness campaigns including health and disability screening such as child nutrition and weigh status and child development, and other assistances.
358. During the **Broad Community Support** consultation (described fully in the 2014 REDP), the villagers in Zone 2UR expressed their support for the development of hydropower development and their willingness to participate in project's implementation in order to gain benefits in an informed manner. They believe that the earlier they were engaged and informed of project activities and timetable, the better the transparency process and development outcomes they will gain. NNP1 fully

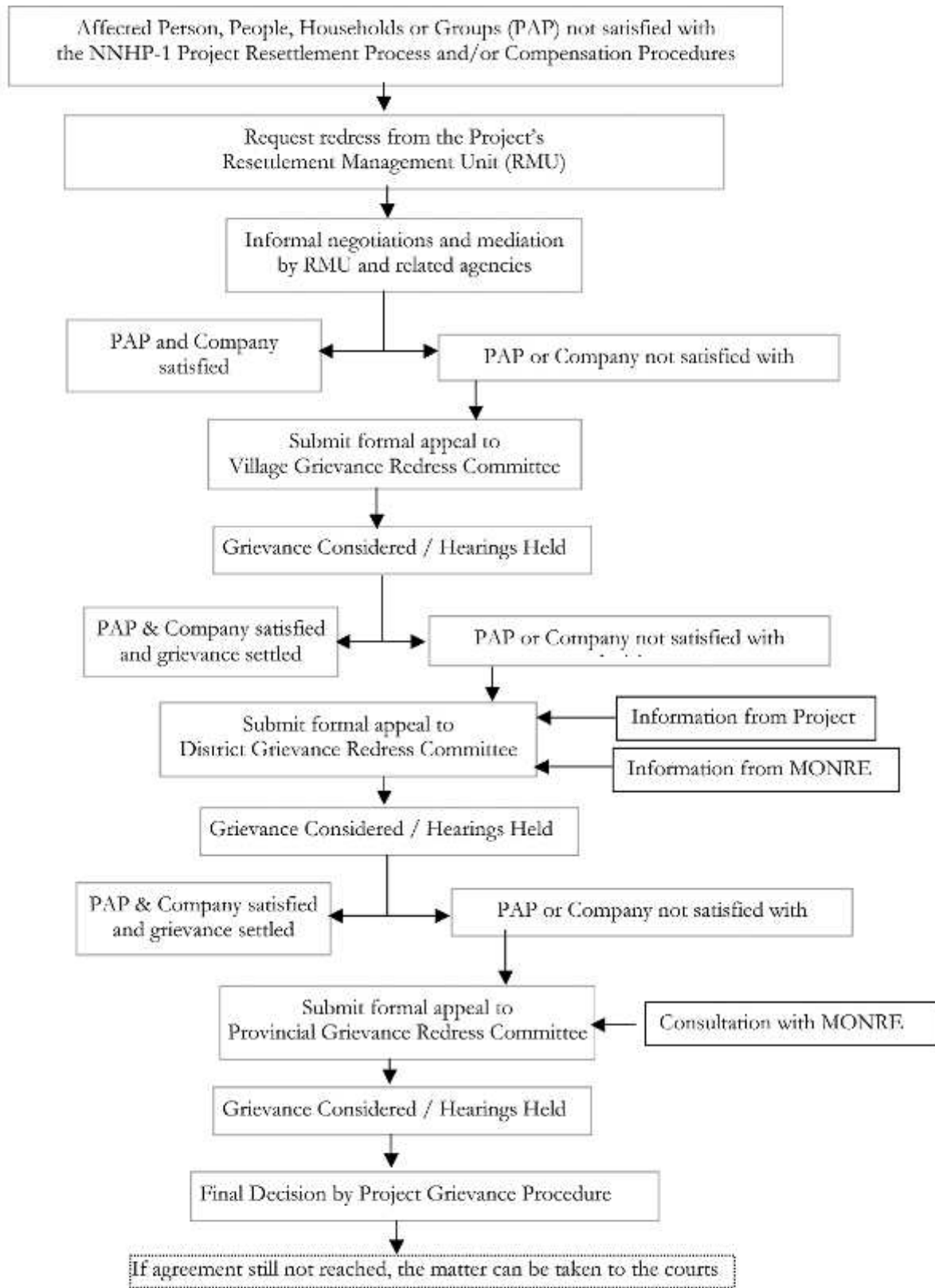


supports the active involvement of men and women and believe this will help to develop appropriate design and inputs to livelihoods programmes.

359. Consultations continue on a routine basis, and good faith negotiations have been taking place over the past 1.5 years on matters important to PAPs, particularly the public infrastructure improvements, unit rates of compensation, livelihoods priorities, etc. Of all 2UR households, the ones supposed to resettle have already requested to relocate in the village. All PAPs losing agricultural have expressed during the indicative choice survey that they wish cash compensation as they feel it will enable them to restore their livelihood better than through company acquired replacement land.
360. Appendix 8 of CA's Annex C presents the GRM of NNP1. This GRM requires each affected village to establish grievance committees, which are established Lao village institutions pre-existing any projects. The committees in Zones 2UR 3, 4 and 5 have already been established and training provided to them by the Project and District Coordinating Committee (DCC) as to how they function in relation to the Project. NNP1 supports the existing Village Grievance Committees and had the Thathom District issue a letter to suggest their role also on NNP1 although GoL initially hesitated to have GRC run in full scale. The Thathom District Grievance Committee has been established, under the Decree 624 dated on the 11<sup>th</sup> of July 2014 and the village grievance committees of zone 2UR has been established as well under the Decree 625 dated on the 11<sup>th</sup> of July 2014. The plan schedules that a refresher training of the GRM will be implemented in Q3 2016.
361. The GRM system is based first on customary methods of dispute resolution in Lao PDR as well as among ethnic communities, including Hmong, which is through consultation with elders and respected persons at village level. Most disputes are resolved at this level, and the process is well accepted by GoL.
362. Care is being taken to ensure that women and poorer households are able to access the Project's GRM if they choose; this is even more acute in Hmong communities that are under an authority system of male elders. This has been prepared by the Project through individual household discussions as well as separate men and women's meetings, where Project processes are explained to PAPs. If the complainant is not satisfied with the outcome through customary, village dispute resolution methods, a grievance can be submitted to the next level, which is to the Village Grievance Redress Committee (VGRC). A representative of the LWU is appointed to each committee.
363. The grievance procedure manual, approved by the provincial governor of Bolikhamxay, was issued in 2011 for the Project to address and resolve any issue, concern, problem, or claim by individual or group of people raised due to the implementation of land acquisition, compensation, construction or other social and economic components of the project.
364. Dissemination of information on the above grievance procedure was done during village consultation meetings in the project area to inform or invite PAPs how to access it. To date, there is no formal claim by individual HHs from 2UR.

No.	Grievance Redress Procedures
1	<p>Stage 1: In the first instance, PAPs will address complaints on any aspect of compensation, relocation or unaddressed losses to the Village Grievance Committee. The unit will organize a meeting within 15 days from the date of formal receipt of the grievance with the complainants to resolve the issue using its traditional methods of conciliation and negotiation; the meeting will be held in a public place and will be open to other PAPs and villagers to ensure transparency. The report on the decision of the Village Grievance Committee must be in writing and must be signed by the members of the committee. If any members of the committee dissent from the opinion of the majority, those members can note their dissent as part of the report of the decision. The aggrieved party and the Project representatives should also sign and indicate their agreement or disagreement with the decision.</p>
2	<p>Stage 2: If either the PAP or the Company is not satisfied with the decision of the Village Grievance Committee, or if the project is not abiding with the decision of the Village Grievance Committee, then either party can appeal to the District Grievance Committee. The appeal can be made directly by the Project or by the PAP, or by the Village Grievance Committee on behalf of the PAP. Other persons or organizations, such as local NGOs, mass organizations like Lao Women's Union, or other representatives of the PAP, can ensure that the appeals are forwarded to the District Grievance Committee. The District Grievance Committee will keep a public log of all claims and grievances it receives, including a summary of the decisions made, and must also make public all reports on the decisions made by the committee. The meeting of the District Grievance Committee will be held in a public place, no more than 20 days from the date of formal receipt of the grievance. Representatives from the Company must be available to provide any necessary information to the committee on entitlements, compensation rates, mitigation measures, and any other relevant information concerning the grievance. The report on the decision of the District Grievance Committee must be in writing and must be signed by the members of the committee</p>
3	<p>Stage 3: If the PAP is still not satisfied with the decision of the DGC or if the Project does not abide by the decision of the District Grievance Committee, an appeal can be made to the Provincial Grievance Redress Committee (PGRC). The PGRC will examine and consider the complaint or grievance in consultation with representatives of MONRE and the Company within 20 days after filing the complaint.</p>
4	<p>Stage 4: If the PAP is still not satisfied with the decision of the PGRC, or in the absence of any response within the stipulated time, the PAP can submit his/her grievance to the Court of Law at the request of the PAPs and/or representative of local non-profit organizations or mass organizations or the Village Grievance Committee on behalf of the PAPs, or at the request of the Project. The Court of Law will follow up with relevant authorities to make the final and binding decision.</p>
5	<p>Stage 5: In case that the Project is found responsible for negligence of compensation, the Project will cover in full all administrative and legal fees incurred by the PAPs in the grievance redress process at the district, provincial and MONRE levels and in the Court of Law. Claim for such payment should be made by the PAPs to the Project staff of ESD, and a copy of such claims also submitted to MONRE for record and information. Complaints and grievances concerning impacts during construction will be considered up to and for no more than one year after the official date of completion of construction.</p>

Table 60 Grievance Redress Procedures



Schematic of the Grievance Procedure for the NNHP 1 Project

Figure 30 Grievance Redress Mechanisms flow chart

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## CHAPTER 10 - Social Inclusion

### 10.1 *Gender*

365. The project will have positive influence on some of the issues described in previous sections such as replacement land titles in both husband and wife's names and compensation via bank accounts in both husband and wife's names.
366. To facilitate good integration into information disclosure, project activity coverage and equitable decision making, the Project gives equal weight to recruiting female field staff, prioritising those with knowledge of Hmong language. The Project's community consultation and development team is composed of people of Hmong and Khmu origin. Communication methodologies include translation into Lao and Hmong languages, and reliance on visual communication guides for illiterate women or those with only functional literacy skills, as well as more formal written information (more details are outlined in the Social Impact Assessment).

### 10.2 *Ethnic Groups*

367. Lao Loum make the bulk of households in 2UR but the Hmong constitute two thirds of Ban Pou. Therefore it falls under ADB SR3. An assessment of ethnic groups in the Project area as well as policies and activities to address the Project's compliance with Indigenous People's safeguards can be found in the overall REDP, chapter 7. This chapter also includes a discussion of Broad Community Support of 2UR villages for the Project's commencement.

### 10.3 *Consultation with ethnic groups*

368. Recent consultations have been held in accordance with the policies outlined in the overall REDP with a summary presented in the previous chapter. Consultations have been held in Hmong language wherever necessary (Ban Pou). Hmong staff with a diverse background in community development has been hired, facilitating meaningful consultations. As outlined above, the Project's Hmong architect, who participated in the consultation on house designs with 2LR and Hatsaykham will do the same with 2UR households in mid-2016.
369. The Project also undertook a desk review and prepared a risk analysis of potential indirect impacts on other ethnic communities. The analysis showed that (i) no other villages access natural resources close to the Nam Ngiep river. Instead they use their own large water and forest resources nearer their own communities rather than walking several hours to the Nam Ngiep and areas occupied by villages in the PIZ (ii) no cultural systems or identities other than those identified in the REDP are substantially impacted by Project-inspired resettlement. Maps and a detailed analysis have been integrated into the Project's SIA (Chapter 16).

### 10.4 *Cultural appropriateness of project activities and mitigation measures*

370. As a result of meaningful consultations, the Project has adapted its plans and programs in accordance with requests by the PAPs with a special focus on cultural appropriateness addressed during several consultation meetings. This includes:

- i. land use planning
- ii. livelihood programs
- iii. measures to address vulnerability including poverty

371. The project has held intensive consultations with PAPs from zone 3 and 2LR on the house design and will have in mid-2016 consultations with the concerned 2UR households. There are a number of house designs that could be suitable for the different ethnic groups in 2UR and the final design should be close to what has been presented to the other zones.

### ***10.5 Additional measures regarding ethnicity***

372. Measures in addition to measures in relations to consultations and project adaptations, as outlined above, encompass:

- i. Implementation of a cultural awareness program including training of young people in recording history as well as a collection and sorting of consequent recordings
- ii. Presentation of results in the resettlement site as essential part of the library/museum/cultural building
- iii. An appropriate area for a cemetery will be selected by PAPs
- iv. Impacts on graves is compensated by providing registered grave owner cash compensation to organize appropriate cultural ceremonies to transfer the spirits prior to impacts on land

### ***10.6 Culturally appropriate Benefits***

373. SPS SR3 requires sharing of project benefits in a culturally appropriate way. As most of the PAPs impacted by Land Acquisition and Resettlement, the majority of benefits described in this document goes to Hmong PAPs. In addition to what has already been described, these further include:

- i. Raising income and housing to the nationally defined minimum standards, with a focus on culturally appropriate livelihood and house design choices
- ii. Offering culturally appropriate livelihood development activities
- iii. Establishing a cultural awareness program outlined in the SDP
- iv. Implementing a scholarship program with quotas for (female) ethnic group students

374. The agreed payment of \$195,000 USD per year during the Project's operation period into a community development program shall, according to Project policy, be used for community driven development and thus available to ethnic groups in the key Project villages. The affected communities shall be involved in the design of this program, as will local public institutions.

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## CHAPTER 11 - Institutional Arrangements

### 11.1 *The Institutions*

375. While it is the responsibility of the project owners and developers to mitigate any adverse social and environmental impacts and enhance the lives and livelihoods of the people in the project area, it is also the task of provincial, district, and village authorities to be directly involved in implementing resettlement and environmental and social development programs in close consultation with the developer. External monitoring by MONRE and Lenders will further support this process. This includes the public authorities' monitoring of the effectiveness of the mitigation measures, of public participation and involvement, and of the protection of rights and livelihoods of the people affected by the Project. Furthermore, to the extent possible, mitigation measures and development activities are to be carried out through or with the cooperation of the government at the local, district, provincial and national levels.
376. The overall institutional arrangements for NNP1 are laid down in the Concession Agreement based on standard arrangements for hydropower projects in Laos. The institutional arrangements are intended to ensure effective collaboration and cooperation among the involved Government organizations and the Company and thereby support effective implementation of the environmental and social mitigation measures, development activities, and monitoring programmes, while also building the capacity of local residents, administrative organizations, and government agencies. The Project is implemented in Xaysomboun and Bolikhamxay provinces, and representatives of both provincial authorities are included in both decision-making as well as day-to-day implementation, structures.
377. NNP1 implementation arrangements are set up in such a way as to facilitate a process of addressing the concerns and needs of the main stakeholders – the PAPs, the project owners and developers, and the government – and to provide a framework for the participation of PAPs, for the resolution of any grievances that may arise, and for the involvement of any other project stakeholders in the process.
378. At the project level, the Company has established an Environment and Social Division (ESD), responsible for implementing the relevant programs for the implementation of the mitigation measures. An Environmental Management Office (EMO) in the ESD is responsible for environmental mitigation measures and monitoring, while a Social Management Office (SMO) is responsible for social and economic mitigation measures and monitoring, including cooperation with the RMU on the resettlement process. The SMO encompasses several units: a resettlement and livelihood restoration section for the lower reservoir and resettlement site; a livelihood restoration section for the upper reservoir area; and geographically cross-cutting a social development section. A GIS and information-analysis-and-documentation section, sits with the ESD, to provide services to both EMO and SMO (See Figure 33).
379. The overall framework of GOL-Project-cooperation is shown in Figure 31 – Government Institutional Arrangements.. This framework is indicative and might be modified during the implementation phase as agreed between the parties, while the detailed structure of ESD is outlined in Figure 33.
380. Each action plan outlined below will describe in more details how these and any other relevant institutions will be included for a cooperative approach on mitigation measures.

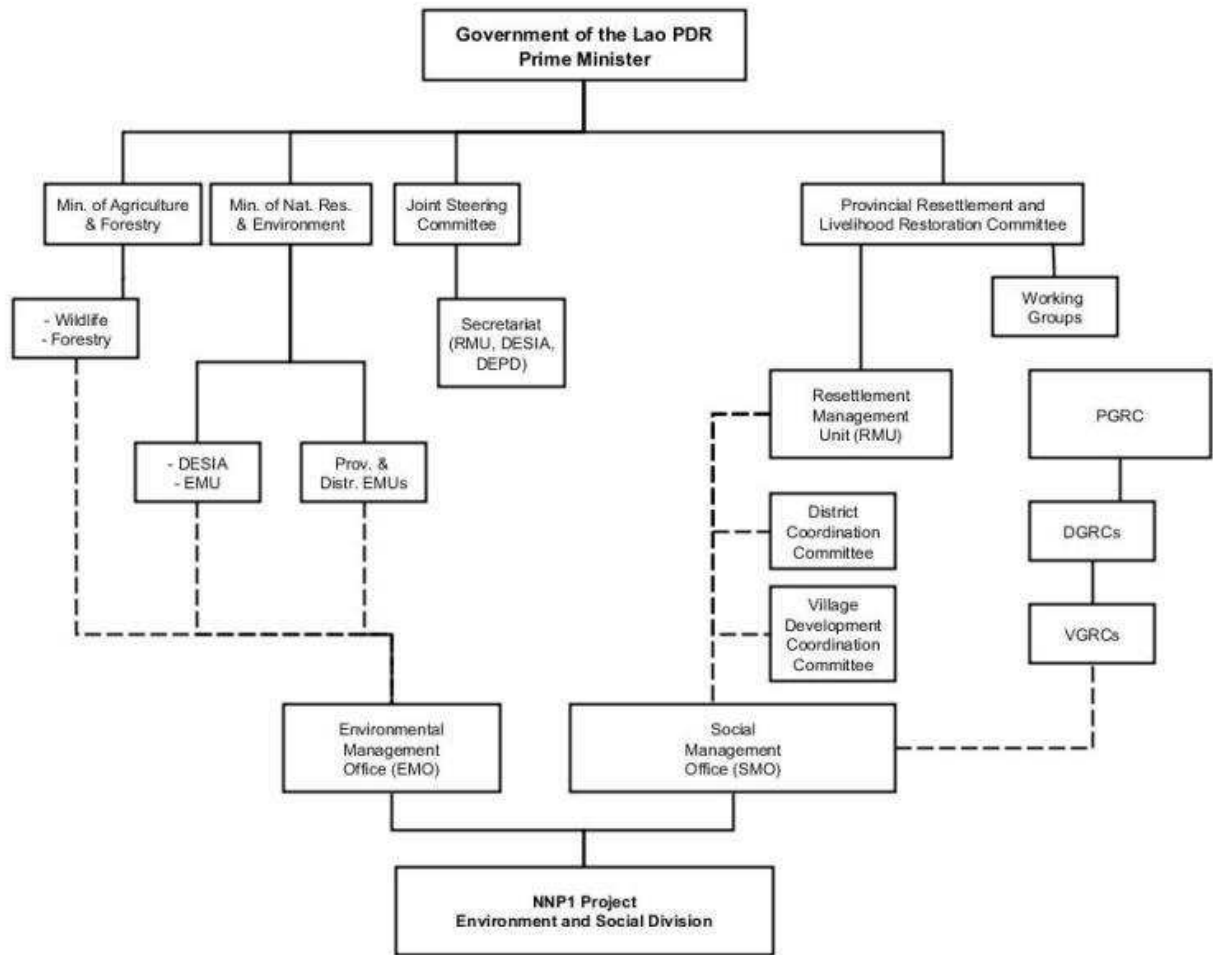


Figure 31 – Government Institutional Arrangements.

381. The structure on the operational level under the ESD, with the Project Lands Team managed by the SMO, and how it coordinates on land acquisition and compensation in Zone 2LR with the provincial RMU, is presented in Figure 32. A process coordinator on site is responsible for the implementation of the registration and compensation process. The day-to-day work is carried out under the coordinator’s supervision mainly by three different teams: the Household Interview Team consults with the DPs on general information, bank accounts, grievances, and socioeconomic data. Based on this data, the Land Investigation Team assesses and measures impacts. The database and drawing team then processes this data by entering it into the database, preparing technical drawings of land impacts, calculating compensation values and preparing and printing the registration and compensation agreement forms, before they are returned to DPs and GoL for agreement. All these teams are now based in Paksan, provincial capital of Bolikhamxay province, to facilitate daily interaction with the RMU. A site office in Sop Youak functions as a base for the Land Investigation Team, where staff and GoL counterparts are based during the asset inventory. A site office in Phalaveck (Hom district) facilitates the coordination with the DCC in Hom.

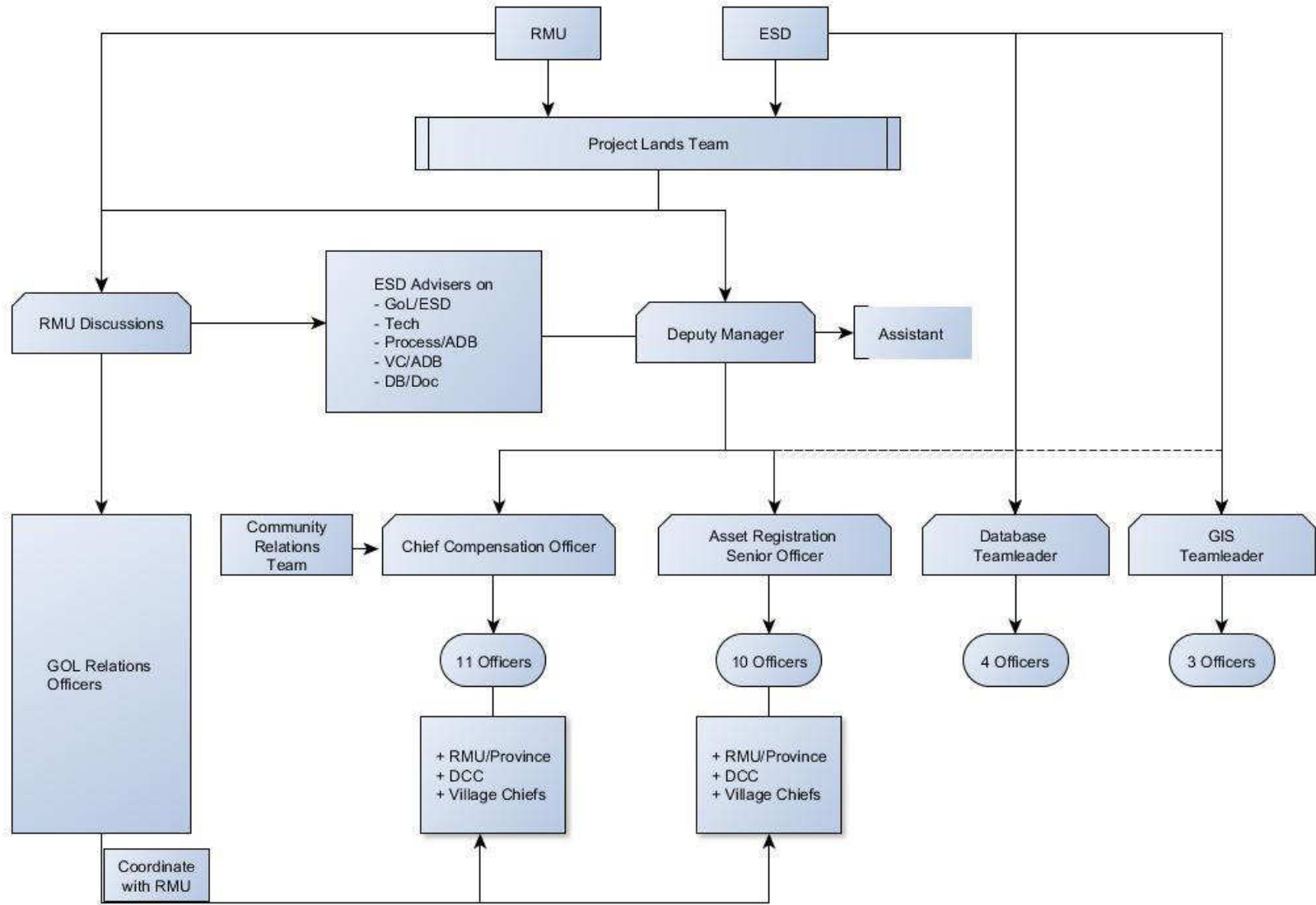


Figure 32 Institutional Arrangement on Operational Level



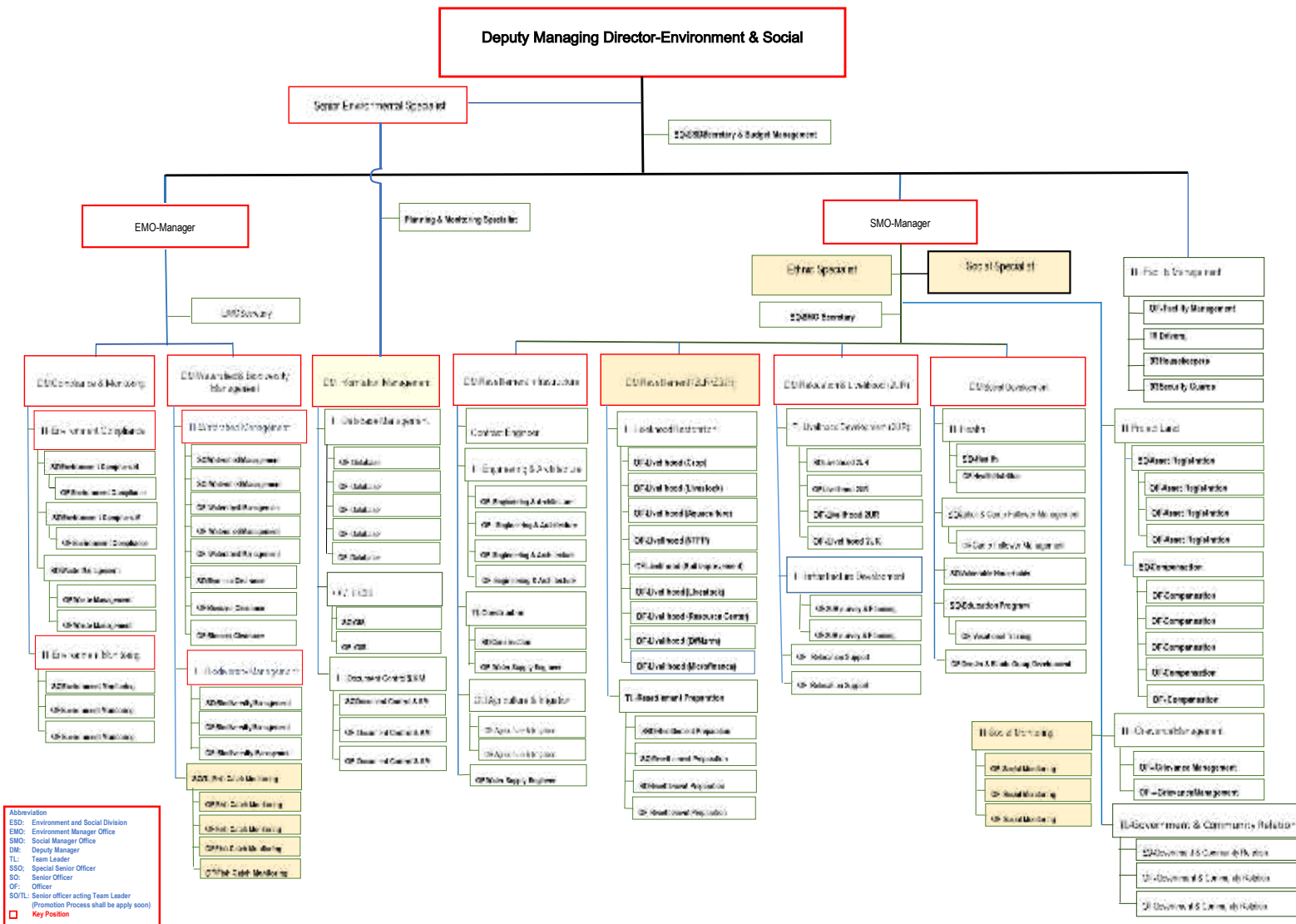


Figure 33. Organizational chart of the Environmental And social Division (2016)

## ***11.2 Government Institutional Arrangements for the Project***

382. GOL has established the national level organizations responsible for setting policy and directions, for supervising and monitoring NNP1. The project provides additional resources so that these organizations can provide efficient and effective support to the implementation and monitoring of the mitigation measures and development programs under the Project.

### **11.2.1 Joint Steering Committee and Environmental Management Unit**

383. The Nam Ngiep 1 Project Joint Steering Committee (JSC) has been established by GOL to serve as a task force for the implementation of the NNP1 Project. It is attached to the Department of Energy Promotion and Development under the Ministry of Energy and Mines (MEM). Other members include representatives from MONRE and the Resettlement Management Unit of the Project. The JSC will lead GOL's public relations work and disclosure for the Project; provide GOL engineering staff and facilitate their work; coordinate with GOL project units and various government entities at national, provincial, and district levels; and monitor progress of the Project.
384. The Environmental Management Unit (EMU) has been established by MONRE to monitor the environmental components and mitigation measures of the Project and is described in details in the EIA and here just included for reasons of comprehensiveness.

### **11.2.2 Provincial Resettlement and Livelihood Restoration Committee**

385. GOL has established a Provincial Resettlement and Livelihood Restoration Committee (PRLRC) to oversee and monitor the planning and implementation of resettlement, compensation, livelihood restoration, and other social development activities of the Project according to the provisions in the CA, Annex C, Appendix 5. The PRLRC has established the Resettlement Management Unit (RMU), the District Coordination Committees (DCC), and the Provincial, District, and Village Grievance Redress Committees (PRGC, DGRC, VGRC); and will supervise and instruct the RMU, the DCCs, and the Village Development Coordination Committees (VDCs) concerning the implementation of the resettlement, compensation, livelihood restoration, and other social measures. The VDCs will be established by the DCC. The PRLRC, now chaired by the Governor of Xaysomboun, will be responsible for these activities in all areas affected by the Project, and will work closely with the Environment and Social Division of the Project.
386. Other members of the PRLRC are District Heads of all the Districts affected by the Project, Directors of the relevant Provincial government offices, and a representative from the Lao Front for National Reconstruction. The Head of the RMU will serve as Secretary to the Committee.
387. As outlined above and to repeat here, the PRLRC and the RMU described below are involved in all activities with social aspects the Project is linked with, and not just Land Acquisition and Resettlement topics.

### **11.2.3 Resettlement Management Unit**

388. A Resettlement Management Unit (RMU) has been established by and serves under the direction of the PRLRC, consisting of officials seconded from relevant GOL agencies or personnel hired directly by the RMU. The RMU administers the resettlement, compensation, livelihood restoration, and other social development activities of the Project and ensure participation of all relevant GOL agencies in

these activities. A list of according activities has been outlined in the CA, Annex C, Appendix 5. The RMU works in coordination with the Social Management Office (SMO) of the Project. The RMU and SMO will have, according to the CA, its office in a District in each of the Xaysomboun and Bolikhamxay Provinces to be determined by the PRLRC.

389. The RMU is headed by a Manager, who has first-hand experience with resettlement, compensation and rural development issues. Two RMU Co-Coordination shall be senior qualified officials, one from each Province (Bolikhamxay, Xaysomboun), with first-hand experience with resettlement, compensation and rural development issues, and selected from GOL line agencies at the provincial level, to work under the direction of the RMU Manager and coordinate the implementation of the social measures in their respective provinces. RMU Members will be selected from GOL line agencies at the provincial level, with other technical staff contracted to assist as needed with the implementation of the social measures.

### **11.2.4 District Coordination Committees**

390. The PRLRC has established District Coordination Committees (DCC) on recommendation of the RMU in districts affected by the Project. The DCCs work under the supervision of the PRLRC and the RMU, and in cooperation with the SMO. The DCCs help implement the various registration surveys, resettlement, compensation, livelihood restoration, and other social development works of the Project. This includes the construction or provision of roads, buildings, rural electrification, bridges, water supply, and other infrastructure projects related to resettlement and livelihood restoration works; provision of health services, education, occupational training, and other social development programs; agricultural development programs; and cultural and ethnic minority programs. Furthermore, the DCC will participate in the grievance redress processes.
391. The DCCs consists of the District Governor, as Chairperson, and representatives from the District Natural Resources and Environment Office, the District Public Works and Transportation Office, the District Agriculture and Forestry Office (DAFO), the District Health Office, the District Education Office, the District Information, Culture and Tourism Office, the District Labour and Social Welfare Office, Police, Militia and Army, the Lao Youth Union, the Lao Women Union (LWU), Lao Front for National Construction (LFNC), and other contract staffs required.

### **11.2.5 Village Development Coordination Committees**

392. The DCCs will establish Village Development Coordination Committees (VDC) as necessary in those villages affected by the Project. With the support of the SMO and DCCs, the VDCs shall be the implementing body for the management and implementation of the resettlement, livelihood restoration, and other social development works and activities. The VDCs are expected to represent the villagers in the affected areas, and to voice their concerns and assure their needs are met.
393. The VDCs will consist of the Head of the Village as Leader of the committee, and village authorities (Mass organizations, public security, defence, etc.), village elder representatives (Naew-Hom), Lao Women's Union representatives, other skilled members of the community, representatives of all ethnic groups, and representatives of all vulnerable groups, as members.

## 11.3 Overall Project Institutional Arrangements

### 11.3.1 Environment and Social Division

394. NNP1PC has established an Environment and Social Division (ESD) of the Project. The ESD consists of an Environmental Management Office (EMO) to enable the Project to meet all its environmental obligations, and a Social Management Office (SMO) to enable the Project to meet all of its social obligations, including resettlement, compensation, livelihood restoration, and other social development works. For combined information management, a GIS-Database-knowledge management team is established under the ESD Information Management section. The tasks of ESD are all to be carried out in close cooperation and in coordination with the relevant government organizations set up to implement environmental and social aspects of the Project, such as the EMU, the PRLRC, the RMU, the DCCs and the VDCs, and government agencies responsible for various works as described above.
395. The responsibilities of the ESD include:
- Manage the environmental, social, labour, economic, and resettlement components;
  - Monitor and report to the developer on the effectiveness of implementation of the mitigation measures, social development activities, and resettlement program; and
  - Coordinate activities during construction and after construction with relevant government agencies, with the aim of improving the environmental performance of the project during its operating phase.
396. The ESD will act as the first point of contact for the EMU and other offices of MONRE and the RMU and indirectly (through the EMU and MONRE) for all other government agencies or offices, corporations, or NGOs involved in the mitigation of environmental, social, and economic impacts of the Project and/or sustainable economic and social development of the people affected by the NNP1 Project. The ESD will be the main contact between the Project and the projected affected people.
397. An ESD Deputy Managing Director (DMD) heads the ESD on a full time basis. He or she works closely with the SMO and EMO Managers, who are responsible for the work of their respective units. The DMD reports directly to the Managing Director of the Company. His or her role is to ensure that the mitigation and monitoring measures are implemented according to agreed plans, and that the applicable standards in the schedules of the EMP, SDP, and REDP and those also applicable to the operation of the Project, are applied. Breaches of the standards detected during compliance monitoring and mitigation measures undertaken to resolve the problem and the success or otherwise of these measures will be reported to the NNP1PC Managing Director by the DMD.
398. Further duties of the DMD are:
- Coordination, supervision, monitoring and reporting on activities undertaken in the EMP, SDP and REDP
  - Liaising between the Managing Director, SMO and EMO Manager, the Government Agencies, and the contractors for implementation of E&S requirements, and concerned or contracted NGOs.
  - Supervising and monitoring, together with the managers of SMO and EMO, field activities of ESD staff in relation to implementing the EMP, SDP and REDP.
  - Supervising specific routine technical tasks of the ESD such as water quality monitoring
  - Reporting to the Managing Director.

399. To implement these tasks, the DMD will be aided by full and part time national and international staff and consultants in SMO and EMO; as well as by GOL Relations officers and an ESD administration support. The Senior Environmental Specialist will assist with coordination with external monitors and manage the Safeguard and Monitoring section.

### **11.3.2 Information Management Section**

400. The Information Management section is a cross-cutting section, cooperating with all other sections in collecting data, managing its storage, analyse data and provide resulting information back to the other sections. This data will be used, too, to compile the social planning and reporting documents, thereby analysing compliance with national and international standards and providing advice to the SMO management team for a decisive analysis. The section will furthermore store all information and documentation along data and document security system. Particular attention will be paid to ensuring all data gathered and entered in the Project database, is gender disaggregated. The Information Management section consists of the following 3 Teams:

- Database
- Knowledge Management
- GIS

### **11.3.3 Database Team**

401. The database team has the following tasks:
- Operation of a database server system
  - Operation of an ICT data management system
  - Development of Social Databases: Census, Asset Registration Access Road, Asset registration 2UR, Asset registration 2LR, Asset registration Houaysoup, Socioeconomic Survey Access Road, Broad Socioeconomic Survey, Health Survey, Grievances, Other DB as necessary
  - Development of Environmental Databases: Water Quality Monitoring database, Compliance database, Waste Management database, Flood Erosion Sediment Landslide database and other DB as necessary

### **11.3.4 Knowledge Management Team**

402. The knowledge management team has the following tasks:
- Establishment of a conceptual knowledge management system for SMO
  - Implementation as an ICT-based knowledge management system for SMO accordingly
  - Processing of field reports and other internal information qualitative information as requested
  - Monitoring of the knowledge management system for SMO
  - Analysis of data and provision of results to other sections
  - Preparation of lessons-learned/best practices reports and tool-kits
  - Maintains final copies of EMO and SMO reports
  - Request posting of final EMO and SMO documents on the company website.

### **11.3.5 GIS Team**

403. The GIS team has the following tasks:
-

- Production of general maps of the project area, activity locations and facilities made available upon request
- Production of detailed Asset registration information available in a GIS system, for impact analysis and compensation procedures
- Production of Land Use and Participatory Land Use Planning (PLUP) tools available for the resettlement area and 2UR and analysis of activities above full supply level in 2LR, based on national PLUP guidelines and prior experience in other hydropower projects
- Production of economic, poverty, vulnerability, livelihood and agricultural productivity and other social mapping
- Production of maps for the EMO, including, but not limited to water quality monitoring maps, hydrological station maps, biomass clearance planning and progress maps, biodiversity offset maps, watershed management maps and other maps as required.

### 11.3.6 Environmental Management Office

404. Major tasks of the Environmental Management Office's (EMO), mentioned here for reasons of comprehensiveness and described in details in the environmental documents, are to collect all the baseline data and information and conduct subsequent monitoring of all aspects of the environment that could be affected by the Project, such as fish and other aquatic resources, hydrology, water quality, river bank erosion, forest cover, etc., and implement the mitigation measures in the EMP.
405. Thereby, monitoring environmental indicators in the project area is one task, while monitoring of construction is another. The later includes the preparation of detailed plans with the contractors on the management and mitigation of environmental aspects of different construction sites, including access roads and transmission lines, ensuring the contractors provide adequate environmental facilities and management for the work sites, and monitoring safety of the workers in the work sites; the latter links to activities of the SMO.

### 11.3.7 Social Management Office

406. The social aspects of the Project are being planned, implemented, and monitored by the Social Management Office together with PAPs and GOL authorities. It encompasses a resettlement section for the resettlement of villages in the lower reservoir area; a livelihood restoration section for the upper reservoir area; an infrastructure section; a social development section; a Government Relation section and a Community Relation and Grievance section.
407. The SMO is headed by an experienced manager, with extensive experience in managing large scale projects, including work with other Hydropower companies. His work is assisted by an Ethnic Specialist, a Social Specialist, four Deputy Managers, each leading a specific section of the SMO program and four Team leaders, each leading a specific team. Support is provided by the secretary and budget management officer (See Figure 33).
408. The Ethnic Specialist will support the SMO Manager with his vast knowledge of the Hmong culture, communicating in Hmong language with PAPs while building bridges and improving mutual understanding between the PAPs and the project. He will inform the project regarding rituals, ceremonies and other cultural aspects of importance for the resettlement preparation and implementation.
409. The Social Specialist will support the SMO Manager with his knowledge of safeguard policies

extensive experience in implementing resettlement programs and detailed knowledge on the social documents.

### **11.3.8 Infrastructure Section**

410. The Infrastructure section works with the RMU to provide technical and financial assistance in all infrastructure development related to compensation and mitigation measures for host and affected people, including infrastructure for the provision of all livelihood planning and programs and technical advice for the implementation and monitoring of the relocation process for households to the new resettlement area.
411. The Unit is headed by a Deputy SMO Manager with proven infrastructure development experience, who reports directly to the SMO Manager, and works closely with the RMU and other GOL support staff (see below).
412. The tasks of the team in the Infrastructure Section include:
  - Coordination with the RMU on infrastructure issues
  - Ensure access to new sites/adjacent villages through the construction of new bridges and roads; and rehabilitation or upgrading of existing transportation facilities
  - Develop low land paddy fields with well-organized irrigation systems and non-acid soil
  - Ensure that effective water supply is provided to all new sites/adjacent villages, through the installation of wells and piping systems
  - Ensure irrigation is well constructed, water is available when appropriate, and operational at new sites
  - Ensure that housing and other relevant structures are constructed at the resettlement site and for villages with relocation inside village boundaries; and that community and service buildings for resettled people are constructed or rehabilitated
  - Ensure that the resettlement site has reliable electricity supplies and is linked to the Lao grid in accordance with GOL planning

### **11.3.9 Resettlement Section**

413. The Resettlement section works with the RMU to prepare compensation and resettlement to the new resettlement site, to organize the resettlement process itself, and to provide all resettlement-related livelihood programs. Together with the RMU, it carries primary responsibility for livelihood restoration and improvement for affected villages in Bolikhamxay. In addition, it will coordinate with the RMU in all compensation and relocation issues related to Project Construction Lands in Bolikhamxay Province, and for those PAPs opting to remain within affected districts of Bolikham (Bolikhamxay), Thathom and Hom (Xaysomboun), who will continue to be eligible for livelihood support as part of the total compensation package.
414. The section is headed by a Deputy Manager who reports directly to the SMO Manager, and works closely with the RMU and other GOL staff. The section includes a livelihood team and a resettlement preparation team. The teams may be split to provide the necessary field support in both Project-affected provinces.

### **11.3.10 Resettlement Preparation Team**

415. The activities of the resettlement preparation team encompass all activities to implement a successful

resettlement of people from 2LR and Z3 to the Houaysoup resettlement site, to provide pre- and post-impacts livelihoods support, and to ensure cooperation with host communities including but not limited to:

- Coordination with the RMU on resettlement and compensation issues
- Ensure establishment of necessary baseline information
- Prepare all logistical arrangements for resettlement and compensation
- Coordinate resettlement preparation together with the resettlement infrastructure team, including the development of residential and agricultural areas as well as the preparation of public infrastructure
- Coordinate the assistance provided to Self-Resettlers for preparation of their Self-Resettlement plans
- Further tasks of every team of the resettlement section as outlined below

### 11.3.11 Livelihood Team

416. The Livelihood Team coordinates with the RMU and the Resettlement Team to develop suitable agricultural systems and carries out extension and technical support work to ensure food security and income targets for resettled people and villagers in eligible villages, in line with entitlements outlined in zone-specific entitlement matrices (see REDP). Core tasks are:

- Support of agricultural activity development
- Ensure sustainable livestock and aquaculture development for all households (resettled people and adjacent population) by training and coaching
- Support of GOL veterinary and agricultural extension services
- Establish project nursery(s) for the development of tree crops and domesticated NTFPs and support their proliferation with extension work
- Facilitate management of the village forest resources through zoning, regulations and raising awareness, and through clarifying rights and responsibilities over different land zone areas
- Investigate markets and marketing-chains for agricultural produce and forge links with middlemen and cash crop companies
- Facilitate the implementation of savings and credit schemes.
- Assist villagers in developing off-farm livelihood alternatives including handicraft and small-scale business opportunities and identify market channels
- Together with the Monitoring Section, monitor livelihood development until income targets are reached and sustained

### 11.3.12 Relocation and Livelihood 2UR

417. In Zone 2UR, a site-office of the SMO was established and has been operational since 2015. From this site office, the Deputy Managers for 2UR coordinates all activities taking place in 2UR. This includes directly managing the 2UR livelihoods Team, 2UR Relocation team and 2UR infrastructure team and coordinating the works of the thematic cross cutting teams who do not have staff permanently based in 2UR.

418. The main tasks include:

- Conduct regular consultation with the DPs, VDC and DCC, reviewing activities implemented and scheduling for upcoming activities.
- Implementing all aspects of the Livelihood program in 2UR, including pilot farmer selection,



implementing farmer training programs, provision of material and technical support

- Design and implement the construction of public and private infrastructure in 2UR, including upgrade of village access roads, upgrade of clinic, upgrade and expansion of schools, upgrade of village water supply systems, construction of bridge across the Nam Ngiep river, construction of agricultural road on the right bank of the Nam Ngiep.
- Preparation for land acquisition and compensation program
- Support the implementation of activities from the Social Development Section

### **11.3.13 Social Development Section**

419. The Social Development Section is considered a cross-cutting section which works in all project zones. Accordingly, most of the staff of the Social Development Section will be moving between the different fields offices, depending on the tasks needed to be implemented at that point in time.
420. The Social Development (SD) Section has primary responsibility for all health programs, education programs, labour Management and camp followers, vulnerable households and gender & ethnic development.
421. The Section is headed by an experienced Deputy Manager with proven social mitigation and development project experience, who reports directly to the SMO Manager and works closely with the relevant GOL agencies and staff. The SD section will seek intermittent input from external specialists as required, both during detailed planning, and the commencement of implementation, in order to ensure that ethnic and gender aspects are mainstreamed. The SD section will also ensure that the needs of vulnerable groups are addressed.
422. The main tasks of the four teams in the Social Development and Monitoring Section will consist of the following:

### **11.3.14 Health Team**

423. The Health Team has the following tasks:
- Facilitate preparation of a comprehensive long-term health strategy and annual implementation plan for resettled people and other project affected groups.
  - Oversee construction of new and upgrading of existing health facilities and the transfer to and orientation/training of Ministry of Health (MoH) staff for these facilities.
  - Establish baseline data on the health status of the population in project affected villages; facilitate pre and post resettlement health checks to detect any changes in health status against the baseline; report to the project proponent, MoH and any other relevant GOL line ministry on changes in health status.
  - Liaise with MoH at national, provincial and district level to link project supported activities with GOL health initiatives.
  - Provide direct monitoring and support to Provincial Health Office (PHO) and District Health Office (DHO) staffs to conduct regular monitoring and supervision of health facilities and service delivery standards.
  - Liaise with health and safety officers appointed by dam site construction companies on issues related to effects on the population of adjacent villages of risks to health

such as water pollution, dusts, and vehicular accidents, and potential risks of STD/HIV/AIDS and other communicable diseases.

- Liaise with multilateral, bilateral and NGO agencies active in health sector programs, to maximize cooperation and minimize duplication;

### **11.3.15 Education Team**

424. The Education Team has the following tasks:

- Facilitate development of a comprehensive education and training strategy and plan, for resettled people and other project affected groups
- Oversee the reestablishment and upgrading of school facilities
- Assist District and Provincial education authorities in recruiting teachers and link up with GOL education initiatives
- Monitor education programs and school attendance
- Implement the Project's scholarship program

### **11.3.16 Ethnic and Gender Team**

425. The Ethnic and Gender Team has the following tasks:

- Ensure ethnic-sensitive planning and implementation by advising and controlling all other project activities
- Implement programs outlined in the Ethnic Development Plan including cultural awareness programs
- Ensure gender-mainstreaming by advising and implementing all other project activities to mainstream measures that will provide opportunities and/or empower women
- Implement programs outlined in the Gender Action Plan

### **11.3.17 Labour Management and Camp followers Team**

426. The Labour Management and Camp followers Unit has the following tasks:

- Coordinate with other members of the CCC to ensure the implementation of the Labour Management Plan and camp followers program
- Support PAPs if they would like to work for the Project
- Coordinate with livelihood activities teams regarding employment trainings and opportunities
- Initiate and facilitate necessary awareness programs
- Conduct site inspections together with EMO to ensure
- Monitors employment targets and recruitment, wages and benefits in coordination with the monitoring team
- Provide a contact persons for worker's grievances directed towards the CCC
- Coordinate support for the Lao Labour Union
- Coordinate with Lao Labour Union if they request for conflict resolution
- Support DCC and VDC in setting up protocols for camp followers

- Support GOL authorities in monitoring and controlling camp followers activities
- Support the Social Development section in supporting respective teams in all issues relating to camp followers
- Implement the various camp followers awareness programs
- Coordinate with the police stationed in Hat Gniun police office
- Coordinate with the District Health department on implementation of STD/HIV trainings and regular monitoring of the camp followers area.

Besides the above mentioned four sections headed by experience Deputy Managers, the following 4 team report directly to the SMO Manager:

### **11.3.18 Project Lands and Compensation Team**

427. The Project Lands and Compensation Team has the task to:

- Consult with the PAPs on impacts and the process of land acquisition and compensation

Coordinate with the RMU to register the assets lost due to construction activities in Project Construction Lands as well as the assets lost to acquire resettlement and relocation sites

- Prepare all necessary papers to document the asset registration and the agreements with the PAPs
- Undertake the indicative and final choice survey.
- Coordinate with the RMU to undertake cash compensation to entitled PAPs via Bank Accounts

### **11.3.19 Grievance Team**

428. The Grievance Team will be responsible on the Developer's side for handling all complaints and grievances that may arise in the course of the implementation of the Environmental Management Plan, the Social Development Plan, and/or the Resettlement and Ethnic Development Plan, and will endeavour to resolve the problems with the offended parties as well as the Grievance Redress institutions along the Grievance Redress Mechanism outlined below. This includes the following tasks:

- Establishment and strengthening of the GRM, including training of VGC and DGC
- Ensure that all affected households are familiar with content and mechanisms of the Grievance Procedure.
- Support the district grievance committee through the provision of relevant project and field data as evidence for Grievance investigations
- Maintain the project record of Grievance cases
- Inform the compensation team if a grievance is found to be valid, to make compensation payments accordingly.

### **11.3.20 Government Relation and Community Relations Team**

429. The government and community relation team is the team coordinating between the Government counterparts, the community and the SMO. They arrange, prepare for, schedule and follow up with the minutes of meetings for regular coordination meetings as well as for topic specific meeting with the Village representatives, DCC, RMU and PRLRC. An in-house translator provides translation of

the various GOL decrees and policies issued by the various counterparts.

### **11.3.21 Socio Economic Monitoring Team**

430. The socio economic monitoring team is responsible for implementing the socio economic monitoring programme, which was initiated in 2014. The programme consists of two main activities: (i) collection of the baseline survey (2014) and subsequent bi-annual large scale socio economic survey, the Biennial Socio-Economic Survey. This is a detailed and large-scale household survey (>1400 households) undertaken every two years by external contractors to evaluate household incomes and well-being in accordance with CA requirements; and (ii) implement the Ongoing Social Economic Monitoring survey, which consists of a series of small scale surveys and monitoring activities designed to identify emerging socio-economic issues and track household well-being in the short-term cycle. An international consultant is contracted to analyse the data collected and report on it accordingly.

431. .

## CHAPTER 12 - Monitoring and Reporting

432. There are four broad elements of monitoring and reporting pertinent to the resettlement of 2UR villages:
- Acquisition of Lands and Compensation;
  - Re-establishment of Livelihoods; and
  - Community, Ethnic and Gender Development.
  - External Monitoring

### 12.1 *Internal Monitoring of Land Acquisition and Development*

433. The objective of internal monitoring is to ensure compliance with NNP1 policies and to resolve or remedy any outstanding issues. The Project's compensation database maintains a record of all compensation data which is then used to update quarterly Project monitoring reports. Specifically, internal monitoring for Zone 2UR addresses:
- i. Changes in the numbers of PAPs and the types and extent of affected assets.
  - ii. Details on the types and amounts of compensation and assistance (in cash and/or in kind); and evaluation of whether this assistance meets the NNP1 principle of replacement cost
  - iii. Information provided to PAPs and outstanding issues
  - iv. The level of satisfaction and/or concerns and needs of PAPs with the process to relocate their houses if any
  - v. The identification of vulnerable households and respective follow up on their livelihood restoration
  - vi. Grievances lodged and time taken to resolve them
  - vii. Gender, livelihoods and social targets
434. The establishment of the internal monitoring section under ESD is covered in the REDP. The scope of work of the internal monitoring section in relation to Zone 2UR will be to assess compliance to meeting income targets as set by the CA.
435. The Project's Land team prepares monthly progress reports on the land acquisition and compensation activities using results from the database and the GIS system (household-specific compensation maps, database-generated compensation lists for finance, progress statistics on asset registration and compensation etc.), and submits it to the SMO manager. The report includes information on key monitoring indicators, namely:
- i. Affected people and compensation: the number of PAPs by category of impact; the status of delivery of compensation and subsistence, moving and other allowances; timely provision of compensation before impact;
  - ii. Information disclosure and consultation: number and scope of public meetings and/or consultations with PAPs; status of notifications to PAPs; summary of PAP needs, preference and concerns raised and agreements reached during meetings and consultations.
  - iii. Complaints and grievances: numbers of complaints received; summary of types of complaints received; steps taken to resolve them; length of time taken to resolve a grievance; outcomes; and, any outstanding issues requiring further management by district or provincial authorities or ADB assistance.
  - iv. Resettlement schedule: completed activities as per schedule; delays and deviances, including reasons; revised resettlement schedule.
  - v. Coordination of resettlement activities with award of contract for civil works: status of completion of resettlement activities and projected date for award of civil works contracts.

- vi. Implementation problems: problems that have arisen, reasons and proposed strategies to remedy; outstanding issues.
436. Management assesses compensation progress and provides additional resources if necessary. All monitoring indicators have output data disaggregated by gender and ethnicity. On a regular basis, the SMO collates the monthly progress reports and prepares a quarterly Project monitoring report to be submitted to the EMU/RMU, MoNRE, and ADB.

## 12.2 *Livelihood Restoration Monitoring*

437. There are two component of livelihood monitoring program
- i. Long-term monitoring of household income and consumption to indicate if the CA targets have been reached; and
  - ii. Intensive short term monitoring of household well-being during the relocation and reestablishment of the resettlement villages.
438. In terms of long term monitoring, the project is committed to 3 targets specified by the Concession Agreement:
- i. Poverty Elimination Target
  - ii. Income Parity Target
  - iii. Income Growth Target
439. The CA targets are high level targets that reflect the net impact of project activities, that is the sum of the negative impacts from land acquisition and resettlement and the positive impacts arising from the various mitigation measures, the Livelihood Development programs, plus the effects of the education, health, gender, ethnic and community development programs.
440. Overall impact is measured through the comprehensive Biannual Socio Economic Survey. The baseline of this survey was undertaken shortly after financial closure, in October/November 2014. The survey will be undertaken every 2 years to assess whether the CA targets have been met. This survey includes evaluation of household income, consumption, savings, debt, education and health.
441. The Monitoring and Evaluation Team is also undertaking medium term monitoring of household economic status using a simplified consumption survey. Food consumption, savings, debt and other issues are also be included in the survey. Past experience has also shown that the presence of known, and experienced monitoring personnel in the resettlement village on a regular basis allows the monitoring team to identify and report emerging issues in the community.

## 12.3 *External Monitoring*

442. Annex C of the CA requires external monitoring of all Project activities, including those relating to Zone 2UR, to be carried out by the Independent Advisory Panel (IAP). Its task is to assess twice a year whether the Project is in compliance in its social and environmental mitigation measures with the obligations outlined in the Concession Agreement and to advice on necessary corrective actions. The IAP liaises closely together with RMU and DCC Bolikhan towards this goal. Their reports are publicly available on the Project's website. The IAP has been appointed and completed its seventh monitoring mission in May 2016. Further monitoring is carried out by the lenders, including by the ADB and the Lenders Technical Advisory (LTA), whose social expert last visited in December 2015. An Independent Monitoring Agency (IMA) has been recruited by GoL and the first exploratory mission

of the IMA was conducted in June 2016.

443. The report from the IAP on their seventh monitoring mission in May 2016 is posted on the company website together with NNP1PC responses to their report. An extract from their report with the main concerns for Zone 2UR can be found in Table 61 below.

No.	Issue	Status	IAP comments and recommendations	Level of concern <sup>14</sup>	NNP1PC Response
R7	<ul style="list-style-type: none"> <li>Demarcation of full supply level of the Nam Ngiep 1 reservoir in villages in Zone 2UR</li> <li>Livelihood restoration of PAP in three villages in Zone 2UR</li> <li>Policy level clarification is needed related to islands in the NNP1 reservoir and use of drawdown zones</li> <li>Development of replacement agricultural lands for PAP</li> <li>Expropriation of additional land around the NNP1 reservoir to construct embankments</li> </ul>	<ul style="list-style-type: none"> <li>A suitably detailed demarcation of the full supply level of the reservoir has not yet been completed and is causing serious concern to PAP and district officials</li> <li>NNP1PC &amp; RMU need to clarify to PAP about expropriation of additional land around the NNP1 reservoir to construct erosion control embankments</li> <li>Issues related to use of islands and drawdown zones remain unresolved and is causing serious concern to PAP and district authorities</li> <li>Livelihood development team at 2UR is being strengthened</li> </ul>	<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>The IAP recommends that the detailed demarcation of the full supply level of the NNP1 reservoir by NNP1PC engineers should be completed immediately. As pointed out six months ago, the current demarcation is insufficient to finalize the asset survey and is causing confusion among PAP and district authorities.</li> <li>NNP1PC Technical Division should immediately clarify the need for expropriating additional land around the NNP1 reservoir to construct erosion control embankments.</li> </ul> <p>NNP1PC managers and Thathom district officials and the Xaysomboun RMU should decide</p>	High	<ul style="list-style-type: none"> <li>Noted, NNP1PC is dealing with the demarcation issue</li> <li>NNP1PC has completed preliminary studies and field surveys in Zone 2UR to identify erosion control areas and to determine erosion protection measures. No additional land acquisition is foreseen.</li> <li>Thathom District has decided not to provide replacement agriculture land to PAPs as part of the compensation package as this may create land disputes between PAPs and non-PAPs. The District supports that the PAPs are</li> </ul>

<sup>14</sup> Level of Concern: Low - action recommended within 6 months; Medium - action recommended within 1-2 months; High - immediate action recommended

No.	Issue	Status	IAP comments and recommendations	Level of concern <sup>14</sup>	NNP1PC Response
			about the need and urgency of developing agricultural replacement land for PAP at 2UR.		given the choice between: (1) replacement land; and (2) cash compensation
S1	<ul style="list-style-type: none"> <li>Livelihood Programs Agricultural products and markets</li> </ul>	<ul style="list-style-type: none"> <li>Livelihood programs support important activities for the PAP. In Zone 5, Ban Thahuea, programs have significantly improved the quality of life of the PAP. Their lives are much better than in the past. They earn more money from the programs and better manage and adjust themselves into the modern economy. In Zone 2UR, PAP of Ban Pou have requested the Project to support the village as follows: village water supply tanks; village meeting room; vegetable and mushroom growing; fish, chicken, pig, and duck raising; better school classrooms; and, a community market. The PAP require organic and mixed agricultural</li> </ul>	<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>The IAP recommends that the livelihood programs be supported more strongly, specifically: modern rice seeds and planting techniques, fish, duck, pig, and chicken raisings, mushroom, rattan, and vegetable growing; all are important sources of food and generate income for the PAP. The PAP of Zone 3 are satisfied and appreciated the programs. PAP of Zone 2UR are also requesting the Project support programs for them, as well. These PAP in the 2 zones might exchange information with one another. The livelihood programs are about building good image and</li> </ul>	Very high	<ul style="list-style-type: none"> <li>NNP1-PC will continue all these livelihood activities for food security and income generation including with respect to Zone 2UR.</li> <li>In HSRA agriculture land (paddy field, cash crop and tree planting) has been developed and allocated to individual households for cultivation. All resettlers at HSRA have received training and material support for agriculture production and are currently successfully cultivating their land.</li> </ul>



No.	Issue	Status	IAP comments and recommendations	Level of concern <sup>14</sup>	NNP1PC Response
		farming. According to PAP of Ban Pou, the most important issues are village water supply tanks and village meeting room.	reputation for the Project. The Project should support the livelihood programs for the PAP in every zone as many as possible.		

Table 61. Main recommendations from IAP mission in May 2016 (responses to IAP recommendation 2016)

444.

## CHAPTER 13 - Consolidated Budget and Schedule of Activities

### 13.1 Compensation and Resettlement steps and timeline

445. The number of affected households to be resettled is low (6 households). These households have indicated during the indicative choice survey that they wanted to relocate within the village boundaries, to houses constructed by the company on locations identified by each household. This will have to be re-confirmed in the final choice survey.

Key dates for 2UR resettlement include (see timeline in Figure 34 **Error! Reference source not found.**):

- i. Asset Registration completed in Q2 2016 and decision by PAPs on their resettlement choice to be finalized in Q3 2016.
- ii. Housing construction for 2UR will be completed by early 2017.
- iii. 2UR PAPs will physically relocated to their new housing in Q2 2017.
- iv. Self-resettlement if any is scheduled for the same time.
- v. Land-for-land compensation should be effective before rainy season 2017 so that the land can be UXO cleared prior to the cultivation season. Assets not compensated in kind will be compensated in cash at the time of resettlement to ensure effective investment for livelihoods.

Compensation and Resettlement steps are summarized in Table 62 and Table 63 respectively, complementing the timeline in the Gantt-Chart of Figure 34

Step	Activity	Responsible	Related document	Tentative time frame
Overall Census	Collect census data as well as village profile information in impacted areas of Zone 2UR	SMO	Census Database	Q4 2014
Preparation	Develop this REDP-U2UR for ADB's review. ADB to advice on whether it meets ADB SPS requirements for a satisfactory LACP.	SMO	This REDP Update, with regular updates if required.	Q3 2016
Step 1	Update of training of ESD staff and DCC in Confirmation Survey Training in compensation procedure to DCC	Supervisor Engineer Compensation team of SMO	Census HH lists Grievance procedures Part III, Annex C, CA	Q4 2014

Step	Activity	Responsible	Related document	Tentative time frame
Step 2	Asset registration / IOL	Compensation team of SMO DCC VDCC/VRC PAPs	Census incl. household lists	Q2 2016
Step 3	Final IOLs in sections resulting from Confirmation Survey	Compensation Team of SMO ESD team	Final IOLs	Q2 2016
Step 4	Calculate compensation amounts based on the approved rate by PRLRC and IOLs; print compensation declaration forms for every PAP including final calculations and total amount of compensation	Compensation Team of SMO RMU/DCC to approve	Declaration for Affected People Form F and G.	Q3 until Q4 2016
Step 5	Sharing REDP U2UR with the ADB and RMU;	SMO Manager	REDP U2UR	August 2016
Step 6	Signatures on Compensation Forms F and G and collection of bank books	Compensation Team of SMO	Forms F and G.	Q3- and Q4 2016
Step 7	Compensation payment to the PAPs	Compensation Team of SMO PAPs, VDC DCC, RMU	Receipt of Compensation Payment on Form G.	Q3 - Q4 2016
Step 8	Handover of bank account book to PAPs and sign on copy to verify correct bank transfer  Objections will be directed to Village Head following grievance procedures	PAPs  PAPs, VDC/VGC DCC, RMU	Form G / Bank account book  Grievance procedures	Q3- Q4 2016
Step 9	Original Compensation payment forms and receipts/documentation to be kept at ESD and copy should go to RMU	Compensation Team of SMO	Receipt of Compensation Payment in Form G.	From Q4 2016 onwards
Step 10	Submission of final compensation report to ADB and GoL.	ESD Manager	Final compensation report	Q1-Q2 2017

Table 62 Compensation Steps

Step	Activity	Responsible	Related document	Tentative time frame
1	Meeting with each PAP on choice survey, self-relocation or moving to company build house, house dismantling house, transportation	Resettlement and Project Lands teams		Q3-2016
2	Establish Village Relocation Committee (VRC): establish, training organize relocation, quality and quantity checking training	Resettlement Preparation team		Q3-2016
3	Detail budget plan for support, transportation	Resettlement Preparation team		Q4-2016
4	Contract sign with suppliers	NNP1 Procurement		Q4-2016
5	Awareness training on using water supply, electricity, new house	Resettlement Preparation team		Q4-2016
6	Schedule of dismantling house and moving to new house; provide transition support,	Resettlement Preparation team and Village Relocation Committee (VRC)		Q1-2017
7	Relocation	Resettlement Preparation team and VRC		Q1-Q2-2017
8	Receiving transition support for period of 3 months	Resettlement Preparation team		Q1-Q2-2017

Table 63 Resettlement Steps

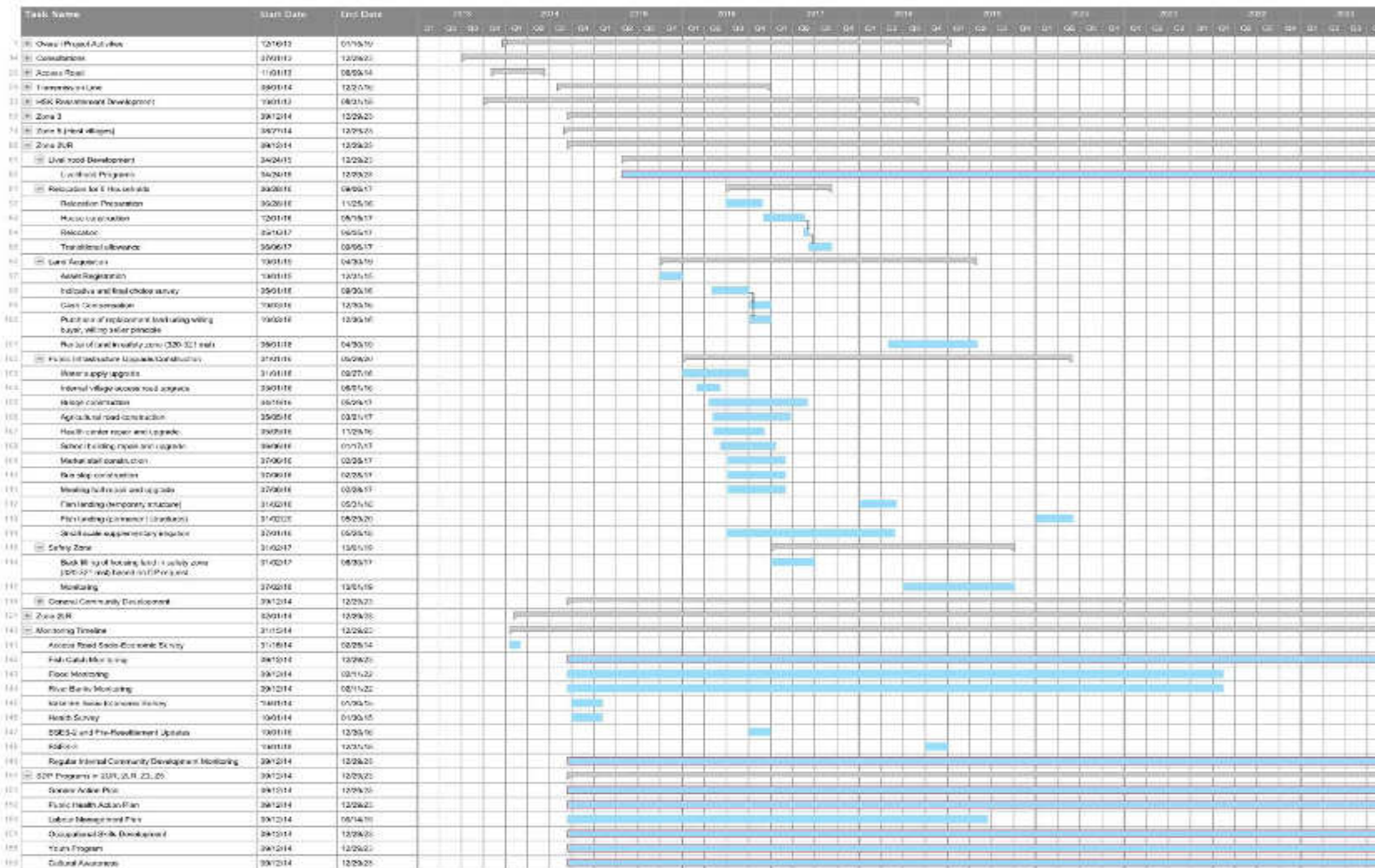


Figure 34 Implementation schedule / timeline of 2UR Resettlement (Update: June 2016)

## 13.2 Overall SMO Budget

446. The environmental and social budgets are connected in the way that by avoiding, mitigating, and minimizing environmental impacts, it can be considered that the social impacts will be less severe. The social budgets of the Project are projected to be USD\$44M before COD and USD\$14.4M post-COD during the stabilization phase. An amount of USD\$1.9M before COD and USD\$1.7M after COD is for the contingencies of both environmental and social components. The environmental budget can be found in the EIA. Overall ESD costs and costs for GoL-Project institutions are also outlined in the EIA.
447. The budget is organized along the projected budget in the Concession Agreement. Budget figures are divided into pre-COD, i.e. before January 2019, and post-COD stabilization phase (5 years after COD). Additional monitoring will continue until 10 years after COD, for which additional costs of USD\$2.1M are estimated, not included in the overall budget presented. An update of the budget is currently being conducted and will require approval by the Board of Directors of NNP1PC. The budget is insofar indicative as all social mitigation measures are limited by scope.

Overall Budget	Pre-COD in USD\$	Post-COD Stabilization Phase in USD	Total in USD\$
Resettlement site development	18,108,000	80,000	18,188,000
Compensation	8,669,388	1,445,000	10,114,388
Livelihood restoration programs	4,022,600	3,360,000	7,382,600
ESD – SMO incl. staffing	13,238,000	9,466,000	22,704,000
<b>Total</b>	<b>44,037,988</b>	<b>14,351,000</b>	<b>58,388,988</b>
<b>ESD Contingencies (SMO + EMO)</b>	<b>1,903,963</b>	<b>1,734,998</b>	<b>3,638,961</b>

Table 64 Overall NNP1 SMO Budget

448. Details on reallocation of funds, updates of budgets and disbursement of funds are presented in Chapter 19 of the overall REDP.
449. Prices used in this budget calculation are the ones of the Access Road compensation unit rates and other market prices of the first half of 2014.

### 13.3 Infrastructures and replacement land development

450. The budget for the construction or the upgrade of infrastructure and the development of replacement land is USD\$2,253,000, all pre-COD and is just here reprinted from the overall REDP (Table 65 **Error! Reference source not found.**).

Plan components	Assumptions made in the preparation of the budget	Pre-COD	Post-COD
<b>Construction and Upgrade of Infrastructure / Development of replacement land</b>		<b>2,253,000</b>	
<b>UXO survey</b>	<i>Lump sum of 780,000\$ (in Environment budget)</i>		
<b>Education facilities</b>			
Budget covers renovation of schools in 3 villages	The renovation covers a nursery, 2 primary schools and a secondary school for 115,000\$	115,000	-
<b>Health facilities</b>			
Renovation of health centre and water supply upgrade	Renovation of health centre for a lump sum of 16,000\$ and upgrade of water supply for 75,000\$	91,000	-
<b>Communications facilities</b>			
Budget covers: suspension bridge, access and internal roads, bus stop	suspension bridge 360,000\$ with maintenance, about 19 km of access or internal roads at 15,000\$/km and maintenance	766,000	-
<b>Other public facilities</b>			
It covers Village office, playground, market	Renovation of 2 and new 1 village offices (73,000), construction of 1 new market and 2 roadside stalls areas (105,000\$) and 1 playground	183,000	-
<b>Protection facilities</b>			
1m ring bund for protecting the area for potential increase of reservoir level	25 locations at 2,500\$ each	62,500	-
<b>New agricultural lands</b>		500,000	-
Development of new paddy fields, gardens & fish ponds including UXO survey and soil improvement	Provision of lump sums of 200,000\$ for land development and 175,000\$ for soil improvement. To be recalculated following confirmation survey.		
<b>Other agricultural facilities</b>			
Weir and irrigation according to feasibility Rice facilities	3 units at 70,000\$ each for 210,000\$ with maintenance and 1 lump sum of 63,000\$ for rice facilities	287,000	-

Plan components	Assumptions made in the preparation of the budget	Pre-COD	Post-COD
<b>New houses</b>			
Houses for 15 PAPs	Assuming 18,500\$ per durable house	277,500	-

Table 65 Sub-Budget Infrastructure and Replacement Assets 2UR

451. The overall timeline is found in Figure 34.

### 13.4 Unit Rates

452. Unit rates have taken time for the PRLRC to finalise. Rates for the Access Road were agreed in early 2014 by the PRLRC, then chaired by the Bolikhamxay Provincial Governor. However, reorganisation of provinces and transfer of some districts where Project impacts would be felt, from other provinces to Xaysomboun, led to the Chair being transferred to the newly established province and new District Coordination Committees and RMU being appointed in Xaysomboun. This meant that earlier agreed unit rates and cut-off date had to be revised and re-issued based on extensive negotiations with PAPs in Zones 2LR, 2UR and 3.
453. Unit rates were finally agreed between PAPs and GoL in July 2015. The revised rates were confirmed in August 2015 and disseminated in August and September 2015 to all PAPs in all Zones, and are included in this REDP-Z2UR as Annex A. After asset registration was completed, the Project prepared comparative household packages for Zone 2UR PAPs, to provide them with the full information of what they are entitled to if they choose land for land compensation or if they opt to take cash compensation. The packages have been discussed on a household-by-household basis during the indicative choice survey and households are expected to make the final decision during the final choice survey in Q3 2016.



### 13.5 Compensation and Livelihood Budget

454. The number of households presented in this REDP update comes from the census that has been organized in mid-2014 after the completion of the REDP, but the final compensation rates have just been acknowledged by the PRLRC and disseminated in early September 2015.
455. Therefore the budget figures provided here are from the main REDP in 2014 as an updated budget will need to combine updated numbers of households, assets and compensation unit rates. For budgeting purposes the Project estimated cost of LAR for Zone 2UR based on the land acquisition impacts outlined above (from 2011 field survey results). The estimated compensation costs are outlined in Table 66 and the Livelihood Restoration Program costs are in Table 67. These numbers do not include the overall construction costs for replacement of housing, community assets, irrigation systems, etc. It also does not include the Project's implementation costs, which are paid from the overall staffing budget of the SMO.

Plan components	Assumptions made in the preparation of the budget	Pre-COD	Post-COD
<b>Compensation Budget</b>		<b>1,750,000</b>	<b>45,000</b>
• Land	320 ha of land including 300 ha of paddy field & garden in equal proportion	1,300,000	-
• Structures including dismantling 15 houses	A sum of 80,000\$ for structures	80,000	-
• Fruit trees & industrial trees	34,000\$ for fruit trees and industrial trees and others	34,000	-
• Community and Cultural Sites and others	A lump sum of 24,000\$ for irrigation and a sum of 20,000\$ for 650 ha of grazing land at 30\$/ha	44,000	-
• Reserve for newcomers	Lump sum of 10%	145,000	-
• Fisheries Co-Management: 7 years program involving also Zone 1	4 years before COD and 3 years after COD at 15,000\$/year	60,000	45,000
• Update of land titling	200 PAP with 3 plots each at 150\$/plot	90,000	-

Table 66 Cost calculation for expected Zone 2UR compensation (according to 2011 field survey figures and updated rates of January 2014)

456. All land acquisition, compensation and resettlement costs for Zone 2UR are financed using resettlement compensation funds of NNP1.
457. The Project's obligations to mitigate impacts are limited by scope and therefore the final budget will be presented in the "Final Compensation Report for Zone 2UR" at the end of 2017.
458. The budget for the Resettlement of 2UR villages encompasses several positions in the overall SMO budget. This includes budget for compensation and livelihood activities. Additionally, the Project will invest in qualified staff in appropriate numbers to support these different activities; staffing budget is

presented together with the overall SMO Budget above. Overhead costs for surveys are also included there. Health education and training, camp followers, labour management, and education programs are described in detail in the SDP, as is the cultural awareness program and respective budgets can also be found in the overall REDP, Chapter 19. They overlap strongly with livelihood restoration programs for PAPs addressed in this REDP U2UR.

459. Below numbers (Table 67) are based on the overall livelihood program, divided among the beneficiaries, which include in different quantities PAPs from Zone 2UR, Zone 2LR, Zone 3, and Zone 5 based on number of households in the 2014 REDP.

Plan components	Assumptions made in the preparation of the budget	Total Pre-COD	Total Post-COD	Estimated Quota 2UR	2UR Pre-COD	2UR Post-COD
<b>Livelihood restoration programs</b>					<b>309,590</b>	<b>18,207</b>
<b>Transitional Allowance</b>		201,000		3.4%	6,834	-
The budget covers: <ul style="list-style-type: none"> <li>• 3 month allowance in cash</li> <li>• 3 month allowance in kind</li> <li>• 1 year support for Vulnerable PAPs (cash and food support other than rice)</li> </ul>	400 PAH at 30\$ each for 12,000\$ 3,000 PAP at 46\$ each for 137,250\$ 50 PAH at 120\$ each for 6,000\$ 250 PAP at 180\$ each for 47,750\$				-	-
<b>Resettlement preparation</b>						
Budget covers study tours, training, focus groups, etc. for preparing PAPs to new livelihoods	Lump sum	50,000		28.9%	14,450	-
<b>Agricultural extension &amp; on-farm trials</b>						
Budget covers trials, demonstration, study tours, farmers' schools	Lump sum	100,000		28.9%	28,900	-
<b>Support to PAPs initiatives for establishment of providers of agricultural inputs &amp; services</b>						
This budget covers equipment and facilities for farmers' groups initiatives regarding seedlings/ seeds and fingerlings/young animals production, mechanized services for planting/drying, etc.	Lump sum of 137,600\$	137,600		28.9%	39,766	-

Plan components	Assumptions made in the preparation of the budget	Total Pre-COD	Total Post-COD	Estimated Quota 2UR	2UR Pre-COD	2UR Post-COD
Income restoration: the budget is indicative as the allocation will be dictated by the wishes coming from the communities For <b>Rice</b> it involves particularly the provision of seeds, agricultural tools, and soil improvement and training in the different zones For <b>Cash crops &amp; fruit trees</b> it includes particularly the provision of seeds/seedlings/saplings, bio-fertilizers, lime or bio-pesticides and training For <b>Livestock</b> it includes the provision of animals (breeders), pens, vaccination, pasture development and training. For Aquaculture it includes the provision of fingerlings, ponds/cages and feeds as well as training and fisheries co-management.	198,000\$ is booked for the Rice component, 61,000\$ is booked for Cash crops & fruit trees, 386,000\$ is booked for Livestock and 178,000\$ is booked for Aquaculture.	760,000	63,000	28.9%	219,640	18,207

Table 67 Sub-Budget Livelihood Restoration Program Zone 2UR

This version of the REDP-U2UR has been published in October 2016.

This REDP-U2UR will be revised whenever major mile stones have been reached and/or new information is available to integrate.

## Part VI – Annexes

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## List of Annexes

Annex A: Compensation Unit Rates provides the agreed compensation unit rates as set by the PRLRC following consultations with PAPs, GoL, and Project. This includes Decree 1003 and the Addendum 792. Unofficial English translation is included

Annex B1: Census information on People, Zone 2UR

This information has been removed as it falls within exceptions to disclosure specified in paragraph 97, (x) of ADB's Public Communications Policy (2011).

The Full information has been provided to monitoring agencies with the agreement of strict confidentiality. Aggregated data is presented in the main text of this REDP Update

Annex B2: Inventory of Loss on Land and other assets, Zone 2UR

Annex C: Updated Consultations Documentation: provides documentation of community consultations since the publication of the main REDP

Annex D: Government of Lao Decrees (mandate 694 and 695)

Annex E: Map of location of site identified by relocation PAP for their new house in Pou village, Zone 2UR

This information has been removed as it falls within exceptions to disclosure specified in paragraph 97, (x) of ADB's Public Communications Policy (2011).

The Full information has been provided to monitoring agencies with the agreement of strict confidentiality. Aggregated data is presented in the main text of this REDP Update