

LAO PEOPLE'S DEMOCRATIC REPUBLIC

PAKLAY HYDROPOWER PROJECT

Environmental and Social Impact Assessment
Social Management and Monitoring Plan
(SMMP)

Final - February 2020



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Acronyms

ASEAN	Association of Southeast Asian Nations
BOT	Build, Operation, and Transfer
CA	Concession Agreement
DAFO	District Authorities and forestry office
DAFEO	District Agriculture and Forestry Extension Office
DARO	District Agriculture and Forestry Office
DHCU	Downstream, Headpond and Catchments Unit
DHO	District Health Office
DIP	Department of Investment Promotion
DLF	Department of Livestock and Fisheries
DoF	Department of Fishery
DOL	Department of Land
DOE	Department of Electricity
DOF	Department of Forestry
DPA	District Protected Area
DPRA	Development Project Responsible Agency
DWG(s)	District Working Group(s)
DCPTC	District Communications, Post, Transport and Construction Office
DHO	District Health Office
DICO	District Information and Culture Office
DEO	District Education Office
ECCD	Early Childhood Care for Development
EDL	Electricite Du Laos
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EFOs	Environmental Field Officers
EM	Environmental Manager
EMC	Environmental Management Committee
EMO	Energy Management Office
EMP	Environmental Management Plan
EMU	Environmental Management Unit
EMMU	Environmental Management and Monitoring Units
EO	Environmental Office
EPDP	Ethnic Peoples' Development Plan
ESI	Environmental Site Inspectors
ESMD	Environmental and Social Management Division
ESM	Environmental and Social Management
ESMMU	Environmental and Social Management and Monitoring Unit
FSL	Full Supply Level
GC	Grievance Committee
GOL	Government of Lao PDR
GPS	Geographic Positioning System
GWh	Gigawatt-hour
HPP	Hydropower Project
IEE	Initial Environmental Examination
Kip	Currency Unit of Lao P.D.R
kV	Kilovolt
Lao P.D.R	Lao People's Democratic Republic
LFNC	Lao Front for National Construction
LNFC	Lao National Front for Construction
LWU	Lao Woman Union
MAF	Ministry of Agriculture and Forestry

PLHPP	Paklay Hydropower Project
MEM	Ministry of Energy and Mines
masl	Metres above sea-level
m ²	Square-meters
MOL	Minimum Operation Level
MRC	Mekong River Commission
MVA	Mega Volt-Amperes
MW	Megawatt
MOH	Ministry of Health
MONRE	Ministry of Natural Resources and Environment
N/A	Not Available
NAFRI	National Agriculture and Forestry Research Institute
NCG	National Consulting Group
NBCAs	National Biodiversity and Conservation Areas
NESMC	National Environment and Social Management Committee
NGO	Non-Governmental Organization
NGPES	National Growth and Poverty Eradication Strategy
NSC	National Statistical Centre
NTFPs	Non-Timber Forestry Products
PAFEC	Provincial Agricultural and Forestry Extension Centre
PAFO	Provincial Agriculture and Forestry Office
PAPs	Project Affected Persons
PESMC	Provincial Environment and Social Management Committee
PMO	Prime Minister's Office
PSPD	Power Systems Planning Division
RAP	Resettlement Action Plan
SDU	Social Development Unit
SDP	Social Development Plan
SIA	Social Impact Assessment
SMMP	Social Management and Monitoring Plan
TL	Transmission Line
UXO	Unexploded Ordinance
VDCs	Village Development Committees / or Villages Level
WREA	Water Resources and Environment Administration
WCS	Wildlife Conservation Society
WREA	Water Resources and Environment Administration
WWF	World Wildlife Fund

1 INTRODUCTION

1.1 Objectives of the Social Management and Monitoring Plan

The Social Management and Monitoring Plan (SMMP) is developed from the Social Impact Assessment (SIA) study and is a project requirement under the laws and guidelines of the Government of Lao PDR (GOL). The overall objective of the SMMP is to improve the welfare of the people living in the project area who might be adversely affected by the project. The report defines and recommends the procedures that the project proponent should follow during and after construction.

Public consultations are prescribed by the GOL and are central to the preparation of environmental and social assessments for hydropower projects; such consultations have been carried out with the local community to gather data and learn their initial reactions to the project.

Lao national policy (561/NPA) encourages the involvement of stakeholders at the local level to ensure that benefits reach the people concerned. The recommendation of appropriate and sufficient mitigation measures, and management plans are required in order to make sure all anticipated and unforeseen impacts caused by the project are taken into account and included in the project design.

1.2 The SMMP Process

The SMMP is developed under the following guiding principles:

- Minimize the resettlement of the Project Affected Persons (PAPs).
- Provide adequate funding and support from the project to ensure that the living standard of PAPs is restored to at least the same level as prior to the project development.
- Allow PAPs to participate in the design, planning and implementation of the Resettlement Action Plan (RAP).
- Identify gender and ethnic group concerns and include their specific needs and perspectives to be included in all components, strategies and planned activities.
- Maintain the social and cultural cohesion of villages to minimize cultural and livelihood disturbance.
- Provide adequate livelihood restoration activities and infrastructure to minimize livelihood disturbance.
- Have a transparent methodology for all planning, implementation and compensation tasks.

SMMP will also include:

- Institutional responsibilities.
- Budget estimation.
- Time and duration schedules.
- Internal and external monitoring plan.

2 PROJECT DESCRIPTION

2.1 Alternative Project Options Analysed and Impact Avoidance

The valley of the dam site is broader and wider, and the river course is U-shaped in sequent valley. The main river course is located on the left side of river course. When in normal pool level, the width of water surface is about 230m, and lots of reef flat on the right side and in the middle of riverbed emerge. When the normal pool level is 240.00m, the width of water surface is about 790.00m.

The main river channel at the dam site is on the left bank. The overburden in the river channel is thick and is around 17.2m. Considering that the foundation base of the powerhouse is relatively low, quantities of earth-rock excavation and concrete used can be reduced if the powerhouse is arranged within the scope of the main river channel on the left bank; In the meanwhile, since the whole river course 800m downstream of the dam site is main river course, it is feasible to arrange the navigation lock on the reef flat on the right bank, so that the navigation lock can be easily connected with the downstream main river course via the downstream approach channel. After comprehensive consideration of the layout condition of construction diversion, scheme for layout of hydroproject of the dam site at this phase is: powerhouse is arranged on the left bank, navigation lock is arranged on the right bank, and overflow dam is arranged at the right in the middle.

The dam is a normal concrete gravity dam, with the crest elevation of 245.20m, and length of 931.50m. The layout from the left to the right is: non-overflow section on the left bank, water retaining type powerhouse section, non-overflow dam between powerhouse and dam, overflow section (stilling basin is arranged downstream), navigation lock dam section and overflow section on the right bank.

The total length of the water release structure is 243.50m and 12-hole open type spillweir is adopted. Energy dissipation by underflow should be adopted. The length of the stilling basin is 90.00m with 3.00m thick base slab. Slotted flip bucket is arranged at the tail part of the stilling basin. Concrete protection section is connected after the bucket.

The powerhouse is water retaining powerhouse which is installed with 14 bulb hydraulic generator units with capacity per unit of 55MW and total installed capacity of 770MW. The length of the powerhouse is 397.00m in total. Dimension of the main powerhouse is 397.00m×22.50m×52.44m (length × width × height). Spacing between units is 21.50m. Total width of powerhouse section along the water flow direction is 83.05m. Elevation of installed units is 208.50m. Water retaining type intake should be arranged on the upstream side of the generator hall, while on the downstream side of the generator hall is usually arranged with auxiliary powerhouse ①. Erection bay ① is arranged on the left side of the generator hall, and erection bay ② is arranged between unit i and unit . Erection bay ① is 52.00m long with floor elevation of 228.50m. Central control building is arranged 26m downstream of the erection bay ① on the right side, and turnaround loop is arranged 26m on the left side. Powerhouse access road leads to the site horizontally from the downstream and connected with the turnaround, via which direct access to the floor of erection bay ① is provided. Erection bay ② is 39.00m long. Blower room is arranged at the upstream side of the erection bay ② and auxiliary powerhouse ② is arranged on the downstream side.

Navigation lock should be arranged on reef flat on the right bank. The water retaining front is 42.00m wide. The navigation lock can be smoothly connected with the downstream main waterway via the downstream approach channel.

Generally, the population impacted by inundation in the lower dam site scheme is larger than the population in the dam site scheme by 9,648, and the difference is large. The resettlement problem which is related to the local people's livelihood and social stability, has a lot of uncertainties and increases investment risk, thus, the dam site is recommended for the phase.

2.2 Project location

Located on the middle Mekong River in Laos, Paklay Hydropower Station is the fourth hydropower station (from upstream to downstream) of the 11 Hydropower Stations planned for the main stream of Mekong River. Xaiyaburi Hydropower Station is located upstream of it while Sanakham Hydropower Station is located downstream. The dam site of Paklay Hydropower Station is located at 1829km (to the estuary) on the main stream of Mekong River, about 31km upstream from Paklay County and about 241km from Vientiane, the capital city of Laos. The control drainage area at the dam site is about 278,400 km² for the geographical location of Paklay Hydropower Station.

As a famous international river in Southeast Asia, Mekong River, known as Lancang River within the Chinese territory, is originated from the north piedmont of Tanggula Mountains in China, passes Qinghai, Tibet and Yunan Provinces (autonomous regions) and leaves China at Mengla County, Xishuangbanna Prefecture, Yunnan Province, from where it is called Mekong River, passes Myanmar, Thailand, Laos and Cambodia from north to south and converges in the South China Sea in Ho Chi Minh City, Vietnam.

With a drop of about 480m, Mekong River has a total length of about 2720km and a control drainage area of 621,000 km². The mean annual discharge at estuary is 15062m³/s and annual runoff is 475 billion m³. According to statistics of relevant data, the reserve of waterpower resources of Mekong River is about 58,000MW in theory, of which the exploitable waterpower resources are about 37,000MW. The exploitable waterpower resources of Mekong River mainly concentrates in Laos and Cambodia, accounting for 51% and 33% respectively, as well as in other countries (Myanmar, Thailand and Vietnam) accounting for 16%. At present, the exploited waterpower resources of Mekong River accounts for only 1% of the total.

In accordance with the *Study on Development of Run-of-River Hydroelectric Projects on Mekong River Main Stream* released by Mekong River Commission Secretariat in 1994, 11 hydropower stations are planned on the main stream of Mekong River, including five hydropower stations in Laos, namely, Pak Beng, Luang Prabang, Sayaburi, Paklay and Sanakham.

The figure below shows the location of the dam site:

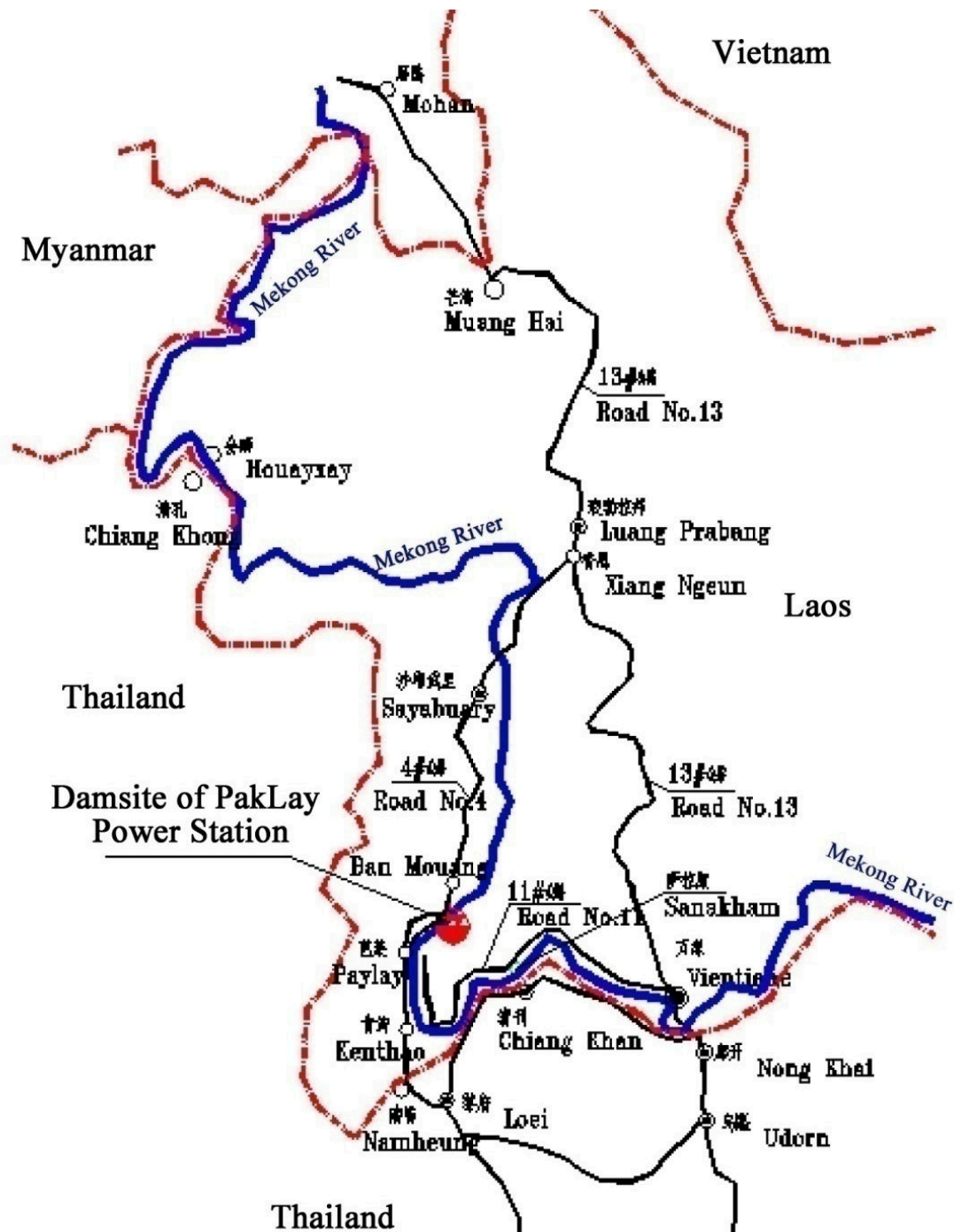


Figure 1: Project location

2.3 Major Features of the Proposed Project

The dam site has the following characteristics:

- The normal pool level is 240.00 m, and the minimum pool level is 239.00 m.
- Bulb unit and water retaining type powerhouse are applied for the unit. Its installed capacity is 770MW, and capacity per unit is 55MW. And there are 14 units.
- This project has low water head and high flood discharge.
- Fish pass to be installed according to MRC's regulations.
- Single-stage ship lock is used for navigation structure, with the effective dimension of 120.00m×12.00m×4.00m (effective length × effective width × water depth on sill). Fish way is not involved in the selection of dam axis.
- Run of River dam design.

2.4 Summary of Project Components

- Normal concrete gravity dam.
- Power House on right side.
- Generator set is a bulb generator set and uses a water retaining powerhouse.
- Installed capacity is 770MW.
- Independent capacity is 55MW.
- Number of Generators is 14.
- Overflow dam will be on the middle left.
- Ship lock on left bank.

2.5 Number of People to be Resettled and Relocated

Construction of the Paklay Hydropower Project will require the resettlement or relocation of households. The total numbers of persons to be moved depends on what projects site is ultimately selected.

There will be 860 families totalling 4,193 people would have to be resettled or relocated. See Tables 4 and 5 for the numbers of affected people and villages that need to be resettled and located.

Table 4: Severely Impacted Villages Requiring Resettlement of the Whole Village

Zone	Province	District	Cluster	Village (Lao)	Village (Eng)	HH	FM	AFFECTED FM	POPULATION		COORDINATES			REMARKS
									TOTAL	FEMALE	N	E	ELV (m)	
Reservoir (RS)	Xayaboury	Paklay	Meuagpa-Phaliap	ປາກຕຸງ	Paktoung	158	147	147	742	358	18°42'57.88"N	101°48'34.42"E	241	Resettled
				ໜອງໄຕ້	Nongkhai	104	100	100	529	261	18°34'16.07"N	101°45'30.88"E	241	Resettled
				ຜາລຽບ	Phaliap	148	140	140	735	352	18°28'47.03"N	101°38'47.81"E	240	Resettled
	Total					410	387	387	2,006	971				
	Vientiane	Med	Muangkh	ປາກຍັນ	Pakyan	125	129	129	621	278	18°46'6.63"N	101°50'33.62"E	246	Flood 3 FM and Village will be
				ປາກແຜນ	Pakpan	92	115	115	472	250	18°36'40.88"N	101°47'3.01"E	241	Resettled
				ດອນຊາຍງາມ	Donexaingarm	83	96	96	376	180	18°30'37.84"N	101°43'50.88"E	241	Resettled
				ເມືອງຄີ	Muangkhi						18°27'38.06"N	101°45'54.94"E	251	Flood Rice Field 27 FM
				ນາອຸດົມໃຕ້	Naoudom Tai	150	180	180	718	352	18°27'24.24"N	101°43'13.26"E	238	Resettled
	Total					450	520	520	2,187	1,060				
TOTAL RESERVOIR					860	907	907	4,193	2,031					

Source: Data Collection 2020 and approved by Committee

Table 5: Partially Impacted Villages Requiring Compensation for Lands and Assets

Damsite		
District/Province	Families	People
<u>Paklay/Xayaboury</u>	27	128
Muangkhi	27	128
Total	27	128

Source: Data Collection 2020 and approved by Committee

2.6 Overview of the Social Environment

Lao PDR has the population of 7.28 million (about 1,276,771 Households). There are 4 main language groups, comprising 49 ethnic groups that make up the population: namely, Tai-Lao (60% of the population), Mon Khmer, Sino-Tibetan (5% of the population) and Hmong-Ewmien (10% of the population). The main religion is Buddhism. The general socio-cultural information can be summarized as below:

Land Area:	236,800 km ²
Provinces	18 Provinces
Districts	148 Districts
Village	8,447 Village
Households	1,276,771 Households
Population:	7.28 Million people (2020)
Population Density:	25 persons/km ²
Labor Force:	3.1 Millions
Ethnicity:	49 groups
Religion:	Buddhism

Based on the Lao administrative map, the Mekong Paklay HPP is within the boundary of two provinces of Lao PDR, Xayaboury and Vientiane provinces. Xayaboury is located on the right bank of the Mekong River while Vientiane is situated on the left bank of the Mekong River. Xayaboury has 10 districts with 543 villages with a total population of 333,000, including 151,982 female, in 52,52,079 families. The landscape of the Xayaboury is magnificent having several peaks with altitudes of more than 1,000 meters as well beautiful meadows and pastures.

According to SIA, this report has divided the community and people in the project area into three social groups.

- Group 1 – Upstream and communities residing near construction/quarry sites.
- Group 2 – Downstream communities.
- Group 3 – Resettlement and host communities.

2.7 Environmental & Social Impact Assessment

Lao PDR is one of the 10 countries in ASEAN that has advance environmental laws and regulations. Key organizations and agencies involved in the EIA process include the Government of Lao PDR (GOL); the Prime Minister's Office (PMO); the Ministry of Natural Resources and Environment (MONRE) especially the Department of Environment and the Department of EIA; the Ministry of Agriculture and Forestry (MAF) especially the Department of Forestry; the Ministry of Energy and Mines (MEM) especially the Department of Mines; the Ministry of Finance; the National Land Management Authority especially the Department of Land Development and Planning; the Ministry of Culture, the Ministry of Health, the Provincial

Administration, District administration and Village administration of the project location.

Since the establishment of Lao PDR in 1975 and adopted a new constitution in August 1991, a number of laws and regulations were on boarded. The main ones related to ESIA are as follows:

a) **The Lao Environmental Protection Law (2012)**

Article 1 Purpose (revised): The Environmental Protection Law defines principles, regulations and measures related to environmental management, monitoring of protection, control, preservation and rehabilitation, with quality, of mitigating impacts and pollution created by anthropogenic loads or by nature, aiming to provide balance between social and natural environment, to sustain and to protect natural resources and public health; and contribution into the national socio-economic development and reduction of global warming.

Article 5 Environmental Protection Policy(s) (new): The State promotes protection and rehabilitation of social and natural environment through dissemination of regulations and environmental information, building of awareness and knowledge, training and conducting campaigns for individuals and organizations, both domestic and international, to recognize importance of social and natural environment in daily livelihoods and in strictly implement the environmental protection regulations, methods and measures.

The State encourages investments into clean production and technology, green economy, and environmental protection via policies, particularly provisions of credits, technical assistance, information, and exemptions or reduction of duties-taxes based on regulations.

Article 7 Commitment in Environmental Protection (revised): Persons, households, legal entities and organizations have commitments of protecting, improving, rehabilitating, controlling, monitoring and inspecting the environment based on regulations to avoid creating impacts on the environment, causing degradation and polluting that exceeds the Pollution Control Standard and the National Environmental Quality Standard, aiming to ensure good quality of the environment and sustainable development.

Article 22 Environmental Impact Assessment (revised): Environment Impact Assessment (EIA) shall be a process of addressing an issue in order to anticipate impacts that may affect the environment, society and nature, derived from investment projects or activities, along with considerations related to climate change in Lao PDR, and development of reports. Apart from reporting, there shall be development of Environmental Social Management and Monitoring Plans.

Both the report and the plan shall be approved by MONRE prior to functioning investment projects and activities.

The process of assessing impacts from the investment project and the activity on the environment, society and nature, shall comply with the specific regulations.

b) The Lao Amended Forestry Law (No. 64/NA-June.2019)

The Amended Forestry Law, No 64/NA (June. 2019): determines basic principles, regulations and measures on sustainable management, preservation, development, utilization and inspection of forest resources and forestland. At the same time it promotes regeneration of forest and tree planting, and increase of forest resources in the Lao PDR with aiming to maintain the balance of nature, making forest and forestland a stable source of living and use of people, ensuring sustainable preservation of water sources, prevention of soil erosion and maintenance of soil quality, conserving plant and tree species, wildlife species as well as environment and contributing to the national socio-economic development.

c) The Lao Wildlife and Aquatics Law (No. 07/NA-Dec.2007)

Wildlife and Aquatics Law, No 07/NA (Dec. 2007) The Wildlife and Aquatic law determines principles, regulations and measures on wildlife and aquatic life in nature to promote the sustainable regeneration and utilization of wildlife and aquatic, without any harmful impact on natural resources or habitats and to restrict anthropogenic pressure on decreasing species and the extinction of wildlife and aquatic, by encouraging people as a whole to understand and recognise the significance, with enhancing the conscientious love, care and treatment of animals. To engage in managing, monitoring, conserving, protecting, developing and utilizing wildlife and aquatic in sustainable manner. To guarantee plenteousness and richness of ecological natural equilibrium systems, to contribute in upgrading the condition of livelihoods for multi-ethnic people, which has the potential to develop and realise the national social-economic goals.

The Water and Water Resources Law (No.010/NA - 11 May 2017)

The amended law defines principles, regulations and measures relating to the management, prevention, development and use of water and water resources to ensure they are effective and sustainable in response to the living conditions of people, agriculture, industry production, and regional and international integration. It also aims to contribute to national safeguarding, construction and development.

d) The Lao Amended Land Law (No. 04/NA-Oct.2003)

The GoL grants rights to individuals, families or organizations pursuant to the Land Law (2003). These grants are either temporary “right to use” grants for up to five years or as thirty year “leases”. The National Land Management Authority (NLMA), in conjunction with the Prime minister’s office (PMO), has the responsibility for land titling, registration and leasing of land. The MAF manages the use of the land. **Decree 37/PM** specifies that the MAF provincial office shall determine which parts of the resettlement area shall be used for what purpose.

Subsequently, the land will be surveyed by the Department of Land Development and Planning (NLMA) which can grant a thirty years lease on land for housing and agricultural development.

2.8 Decree on the Assessment of Environment Impacts no. 21/GO, dated 31 January 2019

This decree defines the principles, regulations, and measures for the management and monitoring the environmental impact assessment in order to ensure that the activity is implemented properly, transparently and uniformly. This decree aims to prevent, reduce and solve negative environmental impacts; to ensure the reasonable compensation; to allocate the settlement and occupation, and rehabilitate the lives of affected people; to enhance the management and utilization of natural resources to progress in the most effective manner; and to contribute to the national social-economic development.

This decree can be used in all investment projects identified in the guideline of the ESIA process and approved agreement that declared a list of investment project whether the project must conduct the IEE or ESIA.

- *Category 1:* Investment projects which are small or create less impacts on environment and society, but require initial environmental examination;
- *Category 2:* Large - sized investment projects which are complicated or create substantial impacts on environment and society but require environmental impact assessment.

2.9 Hydropower Environmental & Social Sustainability

The 2005 National Policy on Environment and Social Sustainability of the Hydropower Sector in Lao PDR – An important GOL's environmental policy improvement was found on the new national policy on Environment and Social Sustainability of the Hydropower Sector in Lao PDR which was recently adopted in June 2005. It applies to all large hydropower dams (installed capacity more than 50 MW or inundated area more than 10,000 hectares) that constructed after 1990.

This policy employed the development principle based on Nam Theun 2 Hydropower Project with the integrated approaches to river basin where cumulated impacts and mitigation with appropriate institutional and financing mechanism were mentioned.

2.10 Law on Resettlement and Vocation (No. 45/NA,c dated 15June2018)

This Law sets out principles, rules and measures regarding the supervision, inspection and monitoring of resettlement and vocation in order to enhance its efficiency, effectiveness, compliance, and to be consistent with locality condition and development to ensure Lao multi-ethnic persons who live in resettlement and vocational area have place to stay, place to earn a living and sustainable vocation which aim to solve illegal relocation problem, reduce poverty, improve livelihood of Lao multi-ethnic persons physically and mentally, develop social discipline, become development village and agglomerate big villages into small town in rural areas therefore contribute to national socio-economic development as well as to safeguard national defence and security.

Resettlement and Vocation:

Resettlement is an arrangement of place to live and to earn a living for persons in urban and rural areas who have displaced or migrated from their original residence to a new residence, to ensure the balance and consistency with the development.

Vocation is to build facility and capacity to make a living for persons in urban and rural areas who displaced or migrated from their original residence to a new residence, to ensure that they have stable sources of income, have a better livelihood and are graduated from poverty.

2.11 Ethnic Groups

The 1991 Constitution defined Lao PDR as a Multi-Ethnic State with "Equality among all ethnic groups" as described under Article 8 of the Constitution below:

The State pursues the policy of promoting Unity and Equality among all ethnic groups. All ethnic groups have the rights to protect, preserve and promote the fine customs and cultures of their own tribes and the nation. All Acts of creating Division and Discrimination among ethnic groups are forbidden. The State implements every measure to gradually develop and upgrade the economic and social level of all ethnic groups".

The 1992 ethnic policy, in the Resolution of the Central Politic Bureau of the Party concerning Ethnic Affairs in the new era, focuses on gradually improving the living conditions of the ethnic groups, while promoting their ethnic identity and cultural heritage.

2.12 Cultural & Archaeology

Relevant policy, legal and regulatory framework for archaeology and cultural heritage included Cultural and Natural Heritage in Lao People's Democratic Republic (Lao PDR) is controlled by the following laws and regulations:

- The national Heritage Laws of Lao PDR on the preservation of culture, historical and natural heritage. Complete set of regulations concerning the management of culture, historical and natural heritage was agreed from National Assembly Number 08/NA on dated 09 November 2005.
- The Decree of the President of the Lao People's Democratic Republic on the preservation of culture, historical and natural heritage. Complete set of regulations concerning the management of cultural, historical and natural heritage.
- Constitution. Article 19: The management of national heritage is a State study.
- Penal Code. Article 103: Sanction to law offenders in particular in the cases of damage and destruction of cultural sites, export and trade of antiquities.
- Law on the protection of environment. Article 16: Developers must abide by laws and regulations concerning the material culture sites that might be affected by their development projects.
- The Ministry of Information, Culture and Tourism , on behalf of the council of Ministers implements the National policy on culture and cultural heritage. It is

represented at provincial and district level by the Office of Information and Culture of province and district, respectively. Laws and regulations on cultural heritage are enforced under the guidance and control of Ministry of Information and Culture. Lawsuits are filed by Ministry of Information and Culture and transmitted to courts for trials and sanctions against offenders.

2.13 Tourism

Key issues of the 2005 Law on Tourism related to Paklay tourism aspect are as follows:

Article 1: Purposes - The Law on tourism sets the principles, procedures and measures on the establishment, activity and administration of tourism aiming to promote and develop the cultural, historical and eco-tourisms in extending, sustainable ways, transforming to modern tourism industry and contributing the national protection and development, to promotion of mutual understanding, peace, friendship and to cooperate in international development, tourism's services.

2.14 Other Lao Laws/Policies Relevant to ESIA

- **Land Law (2003)**

The objectives of the Land Law are to determine the regime on the management, protection and use of land in order to ensure efficiency and conformity with [land-use] objectives¹ and with laws and regulations[,] and to contribute to national socio-economic development as well as to the protection of the environment and national borders of the Lao People's Democratic Republic.

- **Road Law (1999)**

Environmental protection is required during road activities. National and provincial authorities of the Ministry of Communications, Transport, Post and Construction are responsible for environmental protection on road projects. Reasonable compensation must be paid to individuals whose land is expropriated for road rights-of-way, relocation of replacement structures, and loss of trees and crops.

- **The Amended Forestry Law, No 64/NA (June 2019)**

Determines basic principles, regulations and measures on sustainable management, preservation, development, utilization and inspection of forest resources and forest land, promotion of regeneration and tree planting, and increase of forest resources in the Lao People's Democratic Republic aiming for maintaining the balance of nature, making forest and Forestland a stable source of living and use of people, ensuring sustainable preservation of water sources, prevention of soil erosion and maintenance of soil quality, conserving plant and tree species, wildlife species as well as environment and contributing to the national socio-economic development.

- **Prime Minister Decision No. 81/MP (2008) on Endorsement of the Prohibited and Controlled Species List of Wildlife and Aquatic Animals**

- With reference to the Article 22 of the Wildlife and Aquatics Law of

the Lao PDR, the Prime Minister' Decision has endorsed the prohibited species namely List-1 which include 44 species of mammals, 9 species of reptiles, 36 species of birds, 6 species of aquatics and 1 species of amphibian. While the Decision has also set the controlled species namely List-2 which include 15 species of mammals, 13 species of reptiles, 22 species of birds, 9 species of aquatics and 7 species of insects.

- **MAF Decision No. 0070/MAF (2008) on endorsement of General or Common Species List of Wildlife and Aquatics**

- With reference to the Article 22 of the Wildlife and Aquatics Law of the Lao PDR, the Ministry of Agriculture and Forestry (MAF) has also issued the decision No. 0070/MAF to endorse the general or common species list of wildlife and aquatics namely List-3 which include 6 species of mammals, 8 species of reptiles, 5 species of birds, 18 species of aquatics, 3 species of amphibians and 5 species of insects.

- **MAF Regulation No. 0360/MAF on Management of National Biodiversity Conservation Areas (NBCAs)**

MAF' Regulation N° 0360/MAF on Management of National Biodiversity Conservation Areas, Aquatic Animals and Wildlife provides guidelines on NBCA establishment and zoning and also on restricted activities and development fund establishment and the rights and duties of state agencies in NBCA management.

2.15 LAW ON HYGIENE, DISEASE PREVENTION AND HEALTH PROMOTION No. 73 /NA, dated 22 No2019)

This Law determines the principles, rules and measures relating to the organization and activities on hygiene disease prevention and health promotion in order to maintain the good health, quality of life and longevity of the citizens, aiming at reduction of the rates of morbidity and mortality; prevention of diseases of all types; internal, regional and international integrations; and access to networks of hygiene, disease prevention and health promotion for reaching international standards and contribution into the national protection and development.

b) Decree of Prime Minister, No:54/MP, 23/03/2006 on the Declaration of use and Implementation of National Policy on HIA

2.16 Law Electricity (Amended) No.19/NA, dated 09May2017

The Law on Electricity determines the principles, rules and measures on the organization, operation, management and inspection of electrical activities for the high effectiveness of electricity generation and business operation with the aims to use the natural resource potentials in economical and sustainable manner, to encourage the implementation of the national socio-economic development plan and to improve the living conditions of the multi-ethnic people.

Electricity is a type of energy which is comprised of electricity power, electricity current, voltage and frequency produced by the sources from natural resources, such as: hydropower, wind power, solar energy, fuel, lignite, biomass energy, thermal, gas, Palm oils and nucleus energy and others.

2.17 Regional Agreement

The regional agreement is found on "*The Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin (1995)*" This agreement was signed on 5 April 2005 by four Mekong riparian countries, namely, the Kingdom of Cambodia, the Lao People's Democratic Republic, the Kingdom of Thailand and the Socialist Republic of Viet Nam.

The agreement has set a new mandate for organization to cooperate in all fields of sustainable development, utilization, management and conservation of the water and related resources of the Mekong River Basin. Signatories to this treaty agree that transfer of the Mekong River and tributary water outside the Mekong River Basin can occur only by consensus among the four country members. The member countries therefore agree to coordinate in water project planning and monitoring of the basin waters.

Also important is to start a process of reasonable and equitable use of the Mekong River System in each country to develop procedures for water utilization. The Mekong River Commission (MRC) is supporting a joint basin-wide planning process with the four countries called The Basin Development Plan, which is the basis of its Integrated Water Resources Development Program. The MRC has included the following topics: fishery management, the promotion of safe navigation, irrigated agriculture, watershed management, environmental monitoring, flood management and exploring hydropower alternatives.

The agreement outlines three sets of procedures:

- 1) Procedures for Notification, prior to Consultation and Agreement, requires member countries to alert each other on planned river development that could significantly affect their neighbors, and to provide information regarding the developments, including technical specifications and environmental assessments.
- 2) Procedures for Water Use Monitoring which can provide a legal basis for a water use monitoring system to be established in the lower Mekong Basin.
- 3) Procedures for the Maintenance of Flows on the Mainstream.

These agreed procedures provide a definition of water use, covering uses of the Mekong that may have a significant impact on water quality and hydrological regimes on the mainstream of the Mekong.

2.18 Population and Villages in the Project Area

The project study area is divided in 4 different zones according to project impacts. These area are described as following:

- **Zone 1: The area upstream of the reservoir.**

There are five villages of indirectly impacted by the project with total population of about 256 households and 1,377 populations.

- **Zone 2: The area of the reservoir.**
There are 8 villages but there is only 7 villages will be resettled and 1 village will need only compensate with about 860 household and 4,193 people will be impacted from the impoundment of the reservoir of the project.
- **Zone 3: The area downstream of the reservoir.**
About 12 villages with about 2,913 households and 15,942 people will be indirect impacted as downstream villages of the reservoir of the project.
- **Zone 4: The area of the potential resettlement site or host community.**
There are 3 villages with about 367 households and 1,758 people will be in impacted as host community villages of the population for resettlement from reservoir of the project.

For more detail please see below tables Population and Number of Households in the Project Area and Potential impacts and mitigation measures for the PLHPP.

Table 1: Summary of the Potential Project Impacted Villages

Zone	Province	District	Cluster	Village (Lao)	Village (Eng)	HH	FM	AFFECTED FM	POPULATION		COORDINATES			REMARKS
									TOTAL	FEMALE	N	E	ELV (m)	
Upstream (UP)	Xayaboury	Xayaboury	Houaykhualuang	ຫ້ວຍຂົວຫຼວງ	Houaykhualuang	91	110	-	452	227	19° 2'49.83"N	101°47'57.86"E	265	Upstream Village
				ຄົກຝາກ	Kokphak	42	48	-	218	110	19° 0'8.99"N	101°47'37.14"E	263	Upstream Village
				ປາກປູຍ	Pakpouy	18	18	-	84	47	18°56'36.94"N	101°47'49.28"E	264	Upstream Village
				ໂພນສີດາ	Phonsida	50	48	-	313	148	18°53'14.40"N	101°47'18.36"E	259	Upstream Village
				ນາຂອນແກ່ນ	Nakhonkaen	55	55	-	310	146	18°52'1.46"N	101°47'46.46"E	262	Upstream Village
TOTAL UPSTREAM						256	279	-	1,377	678				

Reservoir (RS)	Xayaboury	Paklay	Meuagpa-Phaliap	ປາກຕຸງ	Paktoung	158	147	147	742	358	18°42'57.88"N	101°48'34.42"E	241	Resettled
				ໜອງໄຕ້	Nongkhai	104	100	100	529	261	18°34'16.07"N	101°45'30.88"E	241	Resettled
				ຜາລູບ	Phaliap	148	140	140	735	352	18°28'47.03"N	101°38'47.81"E	240	Resettled
	Vientiane	Med	Muangkhi	ປາກຍັນ	Pakyan	125	129	129	621	278	18°46'6.63"N	101°50'33.62"E	246	Flood 3 FM and Village will be come Island
				ປາກແຜນ	Pakpan	92	115	115	472	250	18°36'40.88"N	101°47'3.01"E	241	Resettled
				ດອນຊາຍງາມ	Donexaingarm	83	96	96	376	180	18°30'37.84"N	101°43'50.88"E	241	Resettled
				ເມືອງຄື	Muangkhi	249	249	27	1,205	572	18°27'38.06"N	101°45'54.94"E	251	Flood Rice Field 27 FM
				ນາອຸດົມໃຕ້	Naoudom Tai	150	180	180	718	352	18°27'24.24"N	101°43'13.26"E	238	Resettled

TOTAL RESERVOIR				1,109	1,156	934	5,398	2,603						
Downstream (DS)	Xayaboury	Paklay	Souvannaphoum - Ban Kang	ສຸວັນນະພູມ	Souvannaphoum	601	628	-	3,319	1,627	18°24'10.62"N	101°30'19.25"E	239	Downstream Village
				ກາງ	Kang	201	203	-	1,177	587	18°24'3.56"N	101°31'5.01"E	238	Downstream Village
				ໂພນໄຊ	Phonexay	181	183	-	1,193	587	18°23'23.23"N	101°31'23.00"E	236	Downstream Village
				ທ່ານາ	Thana	83	86	-	478	240	18°23'19.10"N	101°32'0.61"E	240	Downstream Village
				ທ່າປີ	Thapor	109	113	-	583	289	18°23'10.68"N	101°31'56.78"E	234	Downstream Village
				ນ້ຳຊຶ້ງ	Namxong	565	565	-	2,676	1,325	18°15'26.71"N	101°25'48.07"E	253	Downstream Village
			Mouang	ມ່ວງເໜືອ	Mouang Neua	249	255	-	1,592	791	18°21'40.87"N	101°33'10.32"E	239	Downstream Village

				ມ່ວງໃຕ້	Mouang Tai	243	245	-	1,564	799	18°21'8.53"N	101°32'41.60"E	237	Downstream Village
				ດອນ	Done	177	186	-	1,119	566	18°19'8.19"N	101°30'3.24"E	241	Downstream Village
				ແຄ	Khae	254	247	-	1,173	589	18°18'32.99"N	101°28'31.12"E	245	Downstream Village
	Vientiane	Med	Khokkaodor	ຫ້ວຍຂະແຍງ	Houaykhangeng	105	112	-	429	223	18°17'26.61"N	101°28'5.11"E	240	Downstream Village
				ຄົກງ້ວ	Khokngew	145	155	-	639	312	18°15'15.85"N	101°26'21.66"E	231	Downstream Village
TOTAL DOWNSTREAM						2,913	2,978	-	15,942	7,935				
Host Community (HC)	Xayaboury	Paklay	Meuagpa-Phaliap	ນາຈັນ	Nachan	159	159	-	765	385	18° 34.550'N	101° 37.857'E	305	Host Community of Paktoung, Nongkhai, Phaliap
	Vientiane	Med		ນາດີ	Nadi	101	101	-	475	223	18°47'02.7"N	101°53'44.8"E	249	Host Community of Pakyan

				ສີສະອາດໃຕ້	Si Saat Tai	107	107	-	518	234	18°36'52.7"N	101°49'24.6"E	263	Host Community of Pakpan
TOTAL HOST COMMUNITY						367	367	-	1,758	842				
GRAND TOTAL						4,645	4,780	934	24,475	12,058				

Sources: Data Collection 2020

Figure 2: Some of pictures show current situation



Table 2: Potential impacts and mitigation measures for the PLHPP

Duration (Phases)	Component concerned	Potential Impacts	Significance	Mitigating Measure	Responsibility
Design and Construction phases	Resettlement of 7 villages; 860 household and 4,193 people	Loss of land and changed livelihoods	Major negative	Full compensation for lands, resources and livelihood lost with aim that PAPs will be better off than before the project.	PLHPP, EMC, ESMMU
		Resource access restriction and altered livelihood and social stress caused by resettlement	Major negative	Livelihood packages, livestock, fisheries and forestry development. Improved land tenure. Exclusive rights for resettled people in relation to natural resource management.	PLHPP, EMC, ESMMU
		Competition for resources (infrastructure and natural resources, reduced capacity of local authorities and marginalization of ethnic groups	Moderate negative.	Improved institutional capacity for local people, regional and national institutions for implementing resettlement and livelihood development plans Community or livelihoods development initiatives for resettlement.	PLHPP, EMC, ESMMU
		Improved livelihoods from provision of access to markets and government and private services	Major beneficial	Affected and host villages to be provided with houses, access, schools and medical facilities	PLHPP, EMC, ESMMU
	Population migration to project	Influx of people (during the construction and operation) could create inflation, price increases and shortage of goods and services due to increased demand	Minor negative	Proactive approach and prepare an influx management plan in association with Social Development Plan (SDP) initiatives as part of the overall project impact assessment.	PLHPP, EMC, ESMMU
	Voluntary migration to improved access	Movement of communities to improved services in resettlement areas causing	Moderate negative	Close monitoring of voluntary resettlement. Extension of road system and services to remote areas.	

	in resettlement areas	decline in environmental values and resources.			
	Public Health and safety	Health impacts include STDs (esp. spread of HIV/AIDS) drug use, alcoholism, poor sanitation, spread of other communicable diseases and human trafficking	Minor negative	Human trafficking, HIV/AIDS, drug use awareness and preventive education programmes for communities, workers and spontaneous settlers	PLHPP, EMC, ESMMU
		Water quality, noise, vibration, dust and social interruption	Minor negative	Mainly applies to workers. Village warnings for rock blasting, appropriate safety measures.	
		Road accidents	Minor negative	Proper road system design and sign and awareness	
Operation phase	Education	Increase in students attending schools	Major beneficial	Construction of new secondary and primary schools for resettled families. Assist improving existing facilities to required standard and capacity to accommodate student population from workers families	PLHPP, EMC, ESMMU, Provincial and District Education Offices.
	Economic opportunity	Increased employment opportunities Commercial opportunities	Moderate beneficial	Contract specification: priority is given to hiring local labour. Training for local people.	Contractor, PLHPP, EMC, ESMMU
Operation phase	Socio-Livelihood	Changes in ecology and accessibility to rivers for people dependent on aquatic resources for nutrition	Moderate negative	Fishery monitoring and compensation as needed, alternative protein replacement programme	PLHPP EMC, ESMMU
	Public Health and safety	Improved health and nutrition of surrounding communities	Major beneficial	Provision of health facilities to surrounding communities. Supported by Community Development Fund	PLHPP EMC, ESMMU

		Drinking water quality	Major beneficial	Construction of village drinking water supply. Supported by Community Development Fund	
		Road accidents	Minor negative	Proper road system design and sign and awareness	
	Access	Improved access	Major beneficial	Roads will need maintenance program. Supported by Community Development Fund	PLHPP, EMC
	Education	Good access to educational facilities	Major beneficial	Construction of secondary and primary schools. Supported by Community Development Fund	Project proponent, PLHPP, EMC
	Rural electrification	Access to electricity	Major beneficial	Electrical system extended as required to other remote areas. Supported by Community Development Fund	Project proponent PLHPP EMC
	Establishment of Community Development Fund	Ensuring sustainability of resettled and surrounding communities	Major beneficial	Community Development Fund	Project proponent PLHPP, EMC

3 EXISTING SOCIO-ECONOMIC DEVELOPMENT PLANS

3.1 Socio-Economic Development in Xayaboury Province

Xayaboury Province comprises 10 districts, of which Xayaboury and Xienghon are on the government's list of 47 poorest districts nationwide. Locals have been farming for many centuries and district officials believe combining local knowledge with modern farming techniques is key for poverty reduction. Although the number of poor families is steadily declining year by year the district cannot achieve basic poverty alleviation this year because some people still live in poor conditions and are waiting for assistance. However, district officials are confident they will be able to declare basic poverty reduction by 2012.

The district has more than 3,000 hectares of rice fields and 2,600 hectares of Job's tears which are expected to increase in the future as villagers boost production for sale. Villagers compete to grow Job's tears to sell to a Chinese-owned factory in the district. A Chinese company also has a concession of about 4,500 hectares to grow rubber trees, which provides local people with employment. It is believed that infrastructure development and teaching new farming methods to poor families helped them to expand their farming and animal husbandry activities, and are important factors in improving their living standards.

3.2 Socio-Economic Development in Vientiane Province

The Vientiane Province's fourth five-year development plan (2011-2015) focused on the development of agricultural processing industry, and to create prerequisite factors for rural development in order to make a comprehensive change by focusing all efforts to family, village, and focal villages as centre for development. Economic development progress in the past five years can be figured from the average annual per capita of approximately US\$330 to over US\$750. The value of the province's exports reached US\$30 million, 24 percent increase over that of five years ago, while imports were valued at US\$14 million this year, an increase of 14 percent over the previous year's same period. There are now 5,968 poor families in 88 villages of Vientiane Province, accounting for 7.2 percent of the total provincial population. It should be noted that a target has been set to achieve an average annual per capita income of US\$1,400, with an average growth rate of 9 percent for the next five years.

4 SOCIAL DEVELOPMENT PLAN

4.1 Introduction

Resettlement is a serious disruption to communities, both for those that will relocate and those that host newcomers. While livelihood support and infrastructure development are major aspects of the re-building process, communities have other needs as well. Relocation can be destructive of carefully developed longstanding social networks and the local economy. The severity of the disruption can, to some degree, be mitigated by early intervention, and participation of the village in the process of planning and decision-making.

The Social Development Plan (SDP) includes necessary initiatives that prevent social ills, ensure harmony within and among communities and generally provide the social support required for resettled communities to thrive. Most programs in the SDP will be conducted in a new communities formed by the combination of host villages and resettled households. Some activities will need to be conducted in each sub-community.

4.2 Community Organizations

As previously described in the resettlement strategy, strong local institutions are central to a successful resettlement process. Overall village leadership will continue to be the responsibility of Village Administration Committees (VAC). In addition, Village Development Committees (VDC) will form in order to manage relocation, transition and their village's long-term social and economic development. The VDC will include representatives of various village interest groups, such as water user groups, fishery groups, parents groups, savings groups, livestock producer groups, weaving groups, etc. Village Facilitators will also be represented on the committee. Participation of village organizations in communities formed out of the combining of hosts with resettled populations will be carefully facilitated through the Social Team of the Project to ensure that all groups are equitably represented in public decision making. The timing of new village elections will be determined on a village-by-village basis through the consultation process.

4.3 Vulnerable People in Resettlement

All PAPs are at risk of increased vulnerability due to changes brought about by the project. However, some groups in each community are more likely to be less capable of adapting to change and taking advantage of benefits provided by the Project.

The Project recognizes that some individuals, families, or groups will face greater difficulty than others in preparing for and coping with resettlement. While recognizing that vulnerability is multi-faceted, for the purposes of planning and resettlement support, the RAP classifies female headed households and households without sufficient labour as 'vulnerable households' and will provide additional assistance these households require to successfully transition to new sites and livelihoods.

- Vulnerability can be caused by a number of criteria; significant constraints include lack of productive labour, heavy care burdens due to disability or illness,

loss of one household head, drug abuse, extreme poverty, etc. Villagers participating in the consultation process during the data collection in Paklay of Xayaboury province and Met District of Vientiane Provinces were asked to identify which community members they felt were most vulnerable. Most commonly, they identified: Those who lack agricultural labour those who lack land and/or necessary tools. Those with disabled family members (resulting additional care burden and labour deficit).

Special assistance to vulnerable groups will determined by those implemented relocation and livelihood programs and may consist of the following: separate and confidential consultation, priority in site selection in the host area, labour to construct their new house, assistance salvaging materials from their original home, priority access to all other mitigation and development assistance, and monitoring of nutritional and health status to ensure successful integration into the resettled community.

Villagers themselves suggested a range of actions: additional support in form of both cash and rice to vulnerable families during the transition period, providing them a full land allotment and livelihood restoration package adapted to their special needs, preferential access to water and electricity connections, and/or additional housing materials. Some suggested providing these families priority access to credit or grant funds to help them improve their standard of living and productivity in the short-term. In almost every village, participants stressed that the village itself could provide additional labour inputs where necessary through traditional communal labour arraignments as well as providing additional production advice on an informal basis.

4.4 Cultural Heritage Preservation

The RAP recognizes that items of cultural heritage in sites to be inundated must be preserved, as per GOL policy. “The EIA process will include provisions for field based surveys of archaeological, historical and/or sacred sites. These surveys will provide the cultural resources section of the SIA. The SIA should also include provisions for “chance find” procedures to address measures to be taken when unknown cultural materials are encountered during the course of project implementation or operation. The implementation of EIA activities related to cultural heritage would be coordinated with the Ministry of Culture and Information.

4.5 Religious Needs for Resettled Villages

Religious, spiritual, and cultural needs of communities in resettlement may be easily overlooked. In fact, overall resettlement success is dependent upon community satisfaction that their religious or traditional needs are met. Villages to be resettled have significant concerns about the spiritual and religious impact of their relocation.

The majority of those to be resettled are Buddhists but also practice traditional spirit worship. As Buddhists, they want temples at new locations (and assistance getting them fully functional, including monks in residence). Spirit worship encompasses a range of activities and beliefs. Most communities to be resettled have houses for village spirits that will need to be appeased, moved and re-built. Most families also worship house spirits which require special ceremonies for relocation.

Cemeteries are also very important sacred sites. In a number of villages, locals feel cemeteries can be left as long as proper rituals and offerings are made beforehand and a new cemetery is established at the relocation site. In other villages, Ceremonies to properly move and inter remains at new locations will need significant planning, time, and resources. The specific requests of many resettlement communities are described in the table below.

4.6 Men's and Women's Needs in Resettlement

Gender is a central organizing principle of people's lives and the local economy. As such, it has a significant imprint on the resettlement process. Women's relative low levels of education, access to information, and public representation all combine to result in women suffering more than men when resettlement is unsuccessful. In order to deal with the practical impacts of local gender norms and roles, resettlement planning needs to provide for basic needs for women in addition to those of men. In Paklay and Met Districts, this would include livelihood systems designed to provide sufficient and convenient supplies of fuel wood and fodder, rice mills and threshing machines, free or low cost provision of push carts so women can trade in local markets, some child care provision to free them to participate in livelihoods training, daily production and community management, and health care services (including family planning) close enough to be readily accessible to women and children.

In addition, ensuring women have access to compensation equal with men is of course critical. However, the provision of women's basic needs alone is insufficient to ensure equitable outcomes from resettlement in the long run. Beyond support to adapt to the resettlement site, there needs to be support for strategic changes to discriminatory gender norms. Programs like women's literacy classes, scholarships for young women to attend higher education, training and appointment of women village facilitators, provision of women in leadership training, and policies that specify women's equal access to compensation, their status as co-household head for signatures of land titles and other agreements, employment opportunities.

Gender, the socially determined relations between women and men, is ever changing, just as the greater culture of which it is a part is ever-changing. In periods of cultural turmoil the pace of changes to gender norms and roles usually increases, either more equitably or, more likely, less equitably. Resettlement is a process of major social change. Without explicit plans and mechanisms meant to ensure positive gender equitable processes and outcomes, gender relations are likely to become even less favourable for women. Women's needs are mainstreamed throughout livelihood restoration programs described below.

4.7 Enhancing Health at Village Level

The SDP provides additional village-level health inputs. Each village will be provided with complete village health kits and there will be regular re-stocking of this important local resource. Stipends for VHV will also receive small stipends during the transition process to ensure villagers have access to first aid; after new communities are stable, they will be responsible for compensating their local VHVs.

4.8 Reproductive Health Education

Training will include issues such as contraceptives and prevention of STIs including HIV/AIDS and to be effective, reproductive education should target youth and young couples through a life-skills approach. The GOL's Youth Centre in Vientiane has a proven curriculum and experienced trainers and could be contracted to conduct training of trainers (TOT) for Village Facilitators and local mass organization representatives who will then directly implement training at the village level.

4.9 Public Health Education

The increased population density of new communities, combined with the introduction of improved water systems and latrines, necessitate education in public health principles, including sanitation and waste water management. Basic public health trainings help maintain hygienic village surrounds, reduce mosquito breeding sites, and prevent stomach ailments, particularly among children.

4.10 Educational Needs

Government guidelines on resettlement recognize the impact resettlement has on education and the need to plan accordingly. "Shifting to new location may also disrupt education system and school of children, Attention needs to be paid to establish new schools or to increase the capacity of existing schools in the vicinity of resettlement sites. Specific measures that are necessary for institutional strengthening and capacity building include the following:

- Reconstruct new school for resettled people and host community, including supplies and educational material, and ensuring that adequate number of teachers are available and that they are adequately compensated.
- Focus on adult education in order to improve the general standard of education and their ability to read and cope with economic and social change...¹

Relocation planning also needs to be sensitive to educational needs of children. While it may be advantageous of encourage villagers to move to their new location before it has been fully prepared (for greater decision-making, participation, and opportunities to earn wages for construction, etc), this may unintentionally result in the reduction of school attendance. The significant distance between villages to be inundated and host communities would likely mean that families will move in pursuit of wage opportunities before schools have been built or expanded and sufficient teachers assigned. Though some families may chose to split, with the male adult resettling first, this is untenable for a longer period and would have another negative unintentional result of denying adult women wage opportunities in the resettlement process. Feasible solutions to this conflict will be developed participatory through consultations with members of communities that will relocate.

¹ GOL. Technical Guidelines on Resettlement. 2006. p.62

4.11 Enhancing Formal Education

Successful schools are vital for the future of resettled children and youth, and benefit the wider community by bringing together newcomers and hosts as parents with a common stake in the operation of their local school.

Building Schools: The RAP includes detailed plans for the improved schools in all new communities so all affected children will enjoy attending a school of permanent construction, conducive to learning.

Ensuring sufficient teaching staff: While the responsibility for assigning teachers rests with the district government, the Project will work closely together with the district on the issue. Newly built schools will also have accommodation for teachers assigned from elsewhere in the district. The Project will also help ensure there are local teachers in the long-term by supporting local young people to attend teacher training college and become qualified teachers for their communities.

Educational Materials: Providing school books, teaching aids, and basic stationary for reconstruction school. Better equipped classrooms also help stimulate children's interest in learning and are important to maintain high attendance levels.

Enrichment Programmes: Providing sports equipment and a stipend for competitions in order to provide more opportunities for children to establish friendships with new neighbours and relieve anxiety caused by the upheaval of relocation. Experience in Lao P.D.R has shown that school feeding programs help boost attendance and improve child nutrition. A portion of food supplements provided to the village during the transition process should be distributed to children in school.

4.12 Early Childhood Care and Development

Early Childhood Care for Development (ECCD) is a relatively new field and combines elements from the fields of child development, early childhood education, health and nutrition, parent education, women's development, and economics.

ECCD is a powerful social and economic investment. Research from the Consultative Group on ECCD shows that the benefits to society of ECCD programs include: lower child morbidity rate, higher school enrolment, lower grade repetition rates, fewer school drop-outs, improved school performance, higher future income, freeing of mothers to participate in the work force, freeing of older sisters to attend school rather than staying home to take care of younger siblings, and lower crime rates. In addition, ECCD programs provide useful entry points for community participation because communities work together to provide the supports children need to develop and thrive. Participation in ECCD is helpful to parents, especially mothers and the poor, because it links these often marginalized individuals to community programs while simultaneously freeing them for productive work and further participation in the community.²

² The Consultative Group on ECCD. Early Childhood Counts: Programming Resources for Early Childhood Care and Development. WashingtonDC: World Bank, 1999. Available at: www.ecdgroup.com

Methodology: No one ECCD methodology is superior for all contexts. Programming in affected communities will be planned in detail by the ECCD officer, in close consultation with each community. The infrastructure plans of the RAP call for improved school buildings to include a ‘nursery school’ room that can become a local ECCD centre. Alternatively, if preferred by parents, caregivers may operate from their homes with some small refurbishment. Depending on the size of the local child population, ECCD centres will need to be staffed by 1-3 adult caregivers (best practice calls for no more than 8 children to one caregiver, one lead caregiver and an assistant can cope with 15 children and some models have used 3 caregivers for 30 children). Children attending ECCD centres will receive supplemental food (meals or snacks) to ensure daily nutritional needs are met. Local health personnel can be coordinated to visit centres regularly to monitor the health and development of local children. The operation hours and days of the centre should be determined by parents, according to local demand and caregivers’ schedules.

Parent Education: Parenting and child-rearing practices differ from culture to culture, and are in fact taught from one generation to the next. This becomes problematic when cultural contexts have been disrupted, as they are in resettlement. Also, for most communities resettlement will also mean a rapid lifestyle change and traditional childrearing practices may no longer be adequate to enable children to thrive in the rapidly modernizing society in which they will grow up. Parent education programming will help develop the skills necessary to support their children’s healthy and holistic development, in ways that are culturally respectful but also respectful of a child’s rights. Strong parent interest groups borne from parent education, in turn, provide for lasting support and management of their local ECCD program once outside support is withdrawn.

Local Caregivers: To provide training to create ECCD caregivers within each community; generally young women are most promising candidates. Those interested can be nominated for training by their VDC; training should be at least 40 hours and final selection of caregivers should be determined by training results, with parents participating in the selection process.

4.13 Adult Educational Needs

4.13.1 Adult Literacy Programs

Adult literacy in the reservoir area is low, particularly among women and ethnic. Adult literacy had broad-reaching consequences for both social and economic development. Worldwide, empirical research has proven that adult literacy is vital to human and economic development and reducing gender inequality and it is necessary for the healthy development and education of children, especially girls.

Adult Literacy training will be provided at the village-level; a teacher from the community will be employed to lead courses. It is anticipated that most learners will be women, but interested men will also be able to participate. Trainings will coordinate with livelihoods training by basing lessons, in part, on materials explaining agronomy techniques and other new livelihoods information. International best practice affirms that literacy training is more likely to be successful if it directly relates to learners’ livelihoods and helps them improve their economic status.

4.14 Village Management Training

Local community leaders will need enhanced skills to guide their communities through relocation and resettlement. The RAP Supported Self Management strategy provides a comprehensive framework for improving local administration capacity.

4.15 Livelihood Training & Extension: Ensuring Access

The Livelihood Restoration and Improvement Plan of the RAP outline provision of training and extension to affected communities. Training will be targeted to those involved in specific livelihood activities. Access to training will be by the individual, a number of youth and adults from a single family can participate if interested. Training methodologies will be optimized for adult learners with low-literacy. Women trainers will be recruited to ensure local gender norms do not hinder learning. In addition, training programs will specifically encourage the participation of young people as their generation will be wholly dependent on the newly created livelihood systems and land allocations for their economic futures.

4.16 Environmental Education

The GOL policy on sustainable hydropower calls for “comprehensive environmental education and awareness activities” as part of the community consultation process. Environmental education needs to reach men and women, particularly younger people. The knowledge imparted will complement livelihood restoration and improvement activities which have been designed to not degrade the surrounding environment (halting swiddens, over-harvesting of NTFPs, etc.). Environmental education will complement new livelihoods while raising communities’ awareness of the need to protect their natural resources for the future.

Training will be conducted through the Village Facilitator system, with the technical assistance from NGOs or other agencies that have conducted similar education programs elsewhere in the Lao P.D.R³. Existing curriculum can be reviewed, adapted to the Paklay and Met Districts context and TOT training provided to enable Village Facilitators to share the curriculum with their community.

4.17 Women’s Needs

Most programmes outlined are designed to benefit women equally (or more than) men, directly and indirectly. By ensuring equitable participation in all training programs, women in affected communities will gain greater access to knowledge and skills. Improved schools and ECCD centres will mean a reduction in women’s childcare burden. Literacy classes while open to men will likely consist mainly of women. Savings and credit groups are often considered a feminine activity in rural Lao. Training and salary for ECCD caregivers will likely accrue to women of the community.

³ Some organizations that have conducted environmental education include, CUSO, WCS, IUCN. CUSO, for example, has developed Lao educational resources on Humans and the Environment; Energy and the Environment; Wildlife, Biodiversity and the Environment; as well as a resource books for facilitators and youths and guides to waste management and composting.

Regardless, of the benefits women will enjoy from equitable participation, however, gender bias in local leadership and decision making will likely remain a significant barrier to women's advancement. The creation of a gender-balanced pool of trained village (development) facilitators (see RAP strategy: Supported Self-Management) will be a significant step for improving women's participation in community leadership. In order to ensure lasting gains in women's local representation, the plan also includes a women's leadership programme. Women from affected communities active in community development and/or administration (WU representative, interest group members, heads of savings and credit groups, etc) will be brought together at a regular women's leadership training. The training will allow them to improve their skills in a supportive environment as well as network and share experiences with women in similar positions from other communities. Of course, women's low public participation rates are not caused simply by women's low capacity, reluctance of male leaders to take women and their views seriously are a large part of the problem. In order to reduce this barrier, gender and development training will be provided to village administration and village development committee members.

4.18 Monitoring and evaluation

Good practice in resettlement requires continuously incorporating the learning that takes place in programs using a variety of implementation strategies and institutional models. Monitoring provides the mechanism by which to do this. Monitoring and evaluation will occur as part of the overall RAP Monitoring and Evaluation Plan. Participatory self-monitoring by affected people will be essential to accurate monitoring as individuals own personal assessment of their community's health is the issue to be assessed. Qualitative monitoring should help to capture the following questions at minimum:

- *Have any people used the grievance redress procedures? What were the outcomes?*
- *Have any intra-community conflicts been reported? How were they resolved?*
- *Were special measures for ethnic peoples implemented?*
- *What changes have taken place in key social and cultural parameters relating to living standards?*
- *What changes have occurred for vulnerable groups?*
- *Are people able to access schools, health services, cultural sites and activities?*
- *What is the extent and quality of participation in community groups?*
- *Has access to cultural sites and events been restored?*
- *Have perceptions of "community" been restored?*
- *Do people believe local spiritual needs are being met?*
- *Have people achieved replacement of key social and cultural elements?*
- *Have people reported incidents of corruption?*
- *Are women taking increasing roles in public decision making?*

In addition, to qualitative participatory self-monitoring (organized, facilitated and documented by the Project Monitoring team), quantitative data collection will provide another important source of data to assess progress and improve implementation. Quantitative data collected should include, but not be limited to: school attendance, ECCD centre attendance, teacher attendance (ensuring all schools have sufficient teaching staff assigned and active), number of classrooms with adequate learning materials, participation rate in adult literacy classes, village literacy rate, ratio of women to men on village committees, etc. All of the above should be sex-disaggregated as well.

5 INSTITUTIONAL ARRANGEMENTS

The aim of the PLHPP is to ensure that the project conforms to the environmental and social management policies and regulation of the GOL. EIA and SIA has been prepared in according to current legislation, policies, directives and procedures. Institutional issues on the PLHPP Project are cantered upon the GOL's roles in instituting mitigation measures and monitoring their effectiveness. The GOL's responsibilities will be primarily in the area of human issues and public participation and involvement. These roles for GOL will be provided through Environmental Management Unit (EMU) and the National Environment and Social Management Committee (NESMC). These two organizations are responsible for providing direction, overseeing implementation and monitoring. The PLHPP team or Environment-Social Management and Monitoring Unit (ESMMU) will be responsible for monitoring of the construction aspects of the project. Overall of the institutional frameworks are shown here below.

5.1 GOVERNMENT INSTITUTIONAL ARRANGEMENT FOR THE PROJECT

On behalf of the Government, there are some levels of organization to be established for implementation of the Environment and Social Management Plan of the PLHPP.

5.1.1 *National Environment and Social Management Committee*

It is not always possible for the developer to recognize indirect social and sometimes environmental impacts arising from the projects implementation and its social-environmental mitigation plan. Accordingly, community consultation and consultations with government agencies constitute an important component of the plan. The planning of this project will be undertaken in consultation and with the advice of the district, provincial, national governments. It is proposed to establish of the NESMC.

The major scopes of works of the NESMC are to provide guidance and direction of implementation the Social Development Plan, Resettlement Action Plan

The operational costs of the PLHPP NESMC will be supported by the project proponent. To avoid conflicts of interest, no member of the EMMC will be contracted to implement any part of the Environmental Management Plan, Resettlement Action Plan or any others.

National Environmental and Social Management Committee may be consisted of the following ministerial level:

- Ministry of Natural Resources and Environment.
- Ministry of Energy and Mines.
- Agriculture and Forestry Permanent Secretary Office.
- And some other Ministerial Concerned.

NESMC may conduct a meeting every 3 months to overall see the progress of the project, but upon requirement special meeting may be organize to solve all issues and emergency case that may require of the decision to be made quickly.

5.1.2 Environmental Management Unit

Set up under EIA department, currently, Environmental and Social Management Unit (EMU) for the PLHPP are proposed to be established to closely monitor and the major tasks of this EMU will act as secretary of the NESMC with major task to prepare all relevant PLHPP implementation policies and direction for approval by NESMC. EMU have a full right to inspect all implementation of the EMMP, SMMP and RAP of the Project.

During preparation of the Concession Agreement (CA) of the project, many obligations of the GOL and PLHPP to be developed and among them are the environment and social management conditions are to be discussed. ESMU will be set up to see that PLHPP has been fulfilled those requirements and obligations during implementation phase of the project. All EMU operational budget are going to be fully support by PLHPP.

EMU may be headed by director of the DESIA, they will regularly report to MONRE and NESMC as representative of the GOL on environment and social management and development of PLHPP.

5.1.3 Provincial Environment and Social Management Committee

Following precedents set by earlier projects the developer proposes that a Provincial Environment and Social Management Committee (PESMC) will be composed of officials from relevant Departments and Sectors of in each provincial government chaired possibly by either the Provincial Governor or Vice governor. Representatives from the District government may include:

- Provincial Governor.
- Provincial Cabinet Officer.
- District Governor.
- Environmental Manager (ESMMU).
- Provincial Energy and Mines Officer.
- Provincial Forestry Officer.
- Provincial Land Officer.
- Lao Woman's Union representative.
- And other concerned authorities

The PLHPP, PESMC will meet regularly may be one a month. The committee will have its inaugural meeting at least 1 month before the start of the Project and will operate for the construction stage and few years to monitor post impoundment impacts and take action where necessary.

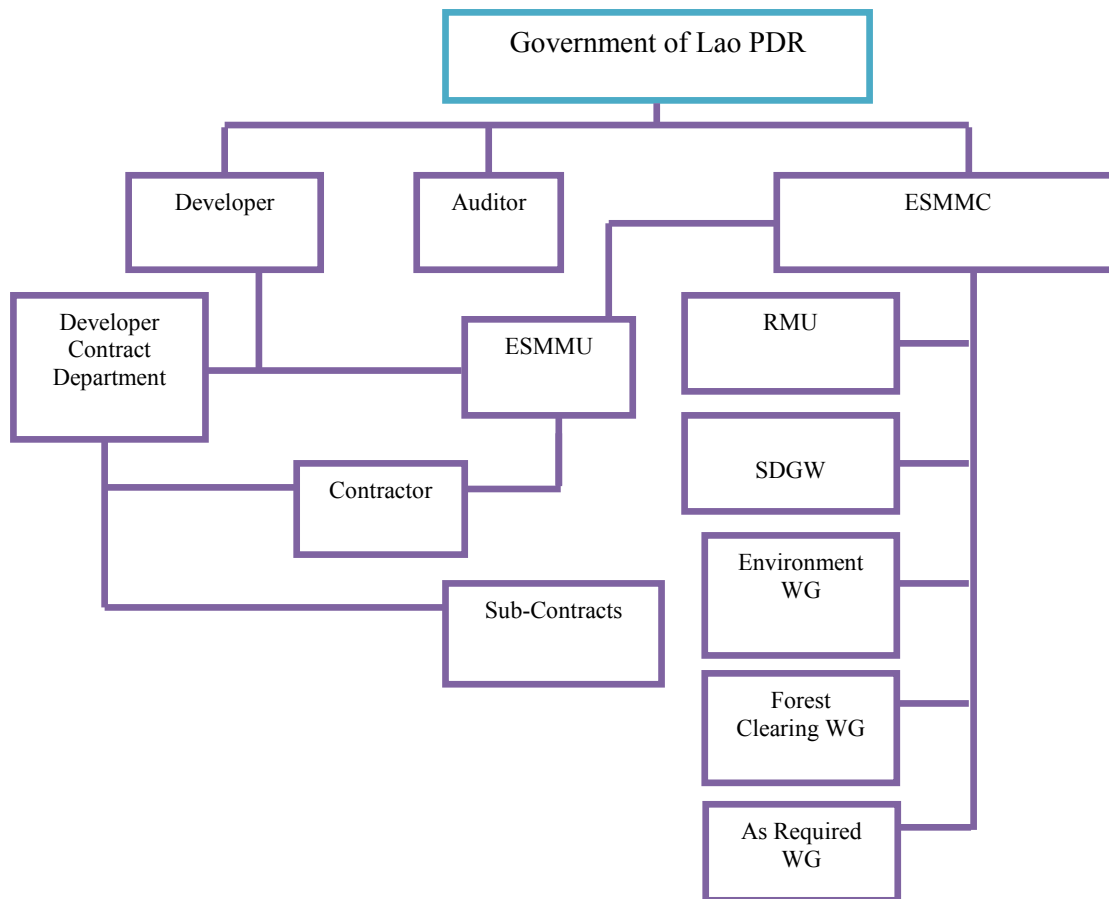


Figure 3: Institutional framework for the implementation Environment and Social of PLHPP.

The committee may form sub-committees as necessary to resolve specific issues so as to ensure the smooth implementation of all plans. The main function of the Committee is to represent the interest of the concerned population in dealing with project impacts and mitigation measures. Main issues to be addressed by the PLHPP PESMC will be:

- New resettlement site for affected villages.
- Compensate for permanent loss of cultivated land, grass land, non-timber forest product and others properties losses including public properties.
- Promote the involvement of the local population in the project activities either as unskilled, semi-skilled workers or as food suppliers (vegetables, chicken, eggs, etc.) for the workers canteens.
- Preserve the social integrity of the villages during the construction stage in assisting the people to protect themselves against antisocial behavior which may develop through contact with large number of foreign workers: gambling, alcohol or drug abuse, fighting, crime and prostitution.
- Advise on health and sanitation through the promotion of a malaria control program and non-formal education on hygiene, sanitation and child care.
- Advise on Community education program.
- Advise on Socio-environmental monitoring and livelihood safeguard program.

- Advise on Integrated watershed management program.

The PLHPP PESMC will debate and advise on these issues, in order to reach a consensus in decision making with input from the Lao Woman's Union, and other executive bodies concerned: MAF, MOH, MOE, specialized NGOs. Of particular importance will be advice provided by the PLHPP PESMC in relation to resettlement and the extent to which Resettlement operations remain consistent with government policy as embodied in Decree 48/PM(2016) on Compensation and Resettlement of People Affected by Development Projects.

There will be some representation from the Provincial government as well which could include representatives from the provincial Cabinet, Ministry of Natural Resources and Environment, Land Office, Energy and Mines, Industry and Commerce, Forestry, and Security as well as a District Government Representative and Village Head Men. This is to be formed as Working Group in different aspects of the Project. Each Working Group are going to report directly to PLHPP PESMC.

5.1.4 Resettlement Management Unit

It is proposed that a province Resettlement Working Group need to be established. The central task of the Resettlement Management Unit (RMU) is to provide leadership and coordination for GOL organizations involved implementation activities from project start-up. The responsibilities of RMU the will be as follows:

- Coordination of all GOL organizations and ensuring resettlement works priorities are addressed.
- Ensuring that GOL policies, procedures and regulations are being followed in the day-to-day management of GOL involvement in implementation.
- Facilitating involvement in carrying out resettlement activities, such as consultations and livelihood restoration programs.
- Monitoring and auditing funds that are earmarked by the Company for GOL activities.
- Ensuring that all GOL staff involved in the Project are aware of relevant regulations and have undergone proper orientation and training in gender, ethnic, poverty alleviation and participatory planning and implementation concerns.
- Ensuring prompt evaluation of land and assets (crops, production, market values, etc.) for compensation for APs and resettled people.
- Organization of Provincial and District level meetings and consultations.
- Participation in and follow through of claims lodged via established Grievance Procedure.
- Make sure arrangements for the cash compensation are distributed to PAPs.
- Since the RMU is primarily a coordination body with a few specific tasks, and the District organizations are partners in implementation, it is recommended that the RMU be composed of the following members:
 - Chair person - a senior, qualified management skill with proven effective experience with resettlement, compensation and rural development issues.
 - Deputy Chair person is from Districts to oversee coordination of GOL agencies involved in resettlement, Reservoir, Catchment, Downstream and Project Construction Land areas.
 - Support staff to be located at the District Project Offices where project reports and documents are kept for public viewing.
 - A representative of the Land Asset Registration and Titling Unit for Districts with sufficient delegation to facilitate evaluations of assets and deal with claims and complaints about compensation.
 - To ensure the transparency of the compensation hand over to PAPs, especially in term of cash payment. RMU is going to check all the agreement and other relevant documents before issues the cash payment to PAPs.

5.1.5 Social Development Working Group

As one of the major issues and with the purpose of sustainable development of the local people especially the impacted communities responsible by PLHPP. The aim is to implement all the measure to mitigate all the impact to the social and implement of the long term livelihood development.

These Government Agencies may be sub-contracted within the framework of the plan to carry out specific technical investigations in term of the social development activities:

- The National Agriculture and Forestry Institute in the Ministry of Agriculture and Forestry (MAF) will cooperate with District Agriculture and Forestry Office (PAFO) to undertake the agricultural assessment of the proposed resettlement areas, conduct of agricultural trials as necessary and extension.
- Department of Land (DOL) working with District Land Office will incorporate the advice from National Agriculture and Forestry Research Institute (NAFRI) and external consultants on the agricultural productivity of the land to undertake a land titling program for new resettlements.
- The Division of Fisheries (DoF), assisted by a consultant will be responsible for undertaking the assessment of the fishery resource in accordance with the requirements of the EMMP and will also be responsible for conducting trials and preparing a management plan for fisheries development in the reservoir area if feasible.
- The Ministry of Health (MOH) will be responsible for overseeing the efficient implementation of the public health components of the Environment Management Plan, particularly the worker's pre-employment screening and running of the health centre in a new resettlement area.
- The Institute of Malaria, Parasitological and Entomology will carry out the implementation of all activities related to malaria control. It will carry out the additional surveys.
- Ministry of Natural Resources and Environment (MONRE) will participate in the plan as an observer from the central Government, to ensure that Lao P.D.R environmental policies are satisfied within the context of the PLHPP and to overview the provision of water resources and environmental management of the resettlement sites.

5.1.6 Environment Working Group

Environment baseline data will be collect prior to the project construction to start. Monitoring during construction to ensure the environmental impact is minimized and environmental management plan for construction works are implemented.

The Environment Working Group might work closely with Environment Institute of MONRE to carry out scientific environment monitoring at the project site for the changes that may resulted from the project.

5.1.7 Forest Clearing Working Group

The are some forest to be cut for the construction site, access road and some other facilities for the project infrastructure. Main forest need to clear are from the reservoir. To ensure technical and management legislation concerning forest are follow the steps by the contractors who will get the forest cutting concession from the government and not causing any delay to the project progress.

5.1.8 UXO Working Group

UXO in the project are considering of a high contamination. UXO Working Group will provide the guidance especially for the safety issues and follow up for the best implementation of the UXO clearance to contractor hire by the Project. The most important task of this working group is going to provide local people UXO information.

5.1.9 Other Working Group

This will depend on requirement of the project some working group may need to set up this would be likely as Labour Management Working Group. This may be to arrange for the local people could maximize their participation in the project construction activities. Other tasks could be management of influx of the labour and people for the other area to construction site.

5.2 PROJECT INSTITUTIONAL ARRANGEMENT

On behalf of the Project Developer of PLHPP, there are some set up of the project developer in order to take care all social and environment matters of the project.

5.2.1 Environment and Social Management and Monitoring Office

The Developer will establish an Environment-Social Management and Monitoring Office (ESMMO) which will be responsible for overall planning, implementation of environmental and social management, resettlement for the project and coordination with local authorities as well as the affected households. While implementation of the project will be managed by Project Proponent, the ESMMO will be established to manage the RAP using consultant inputs as required, to monitor and report to the developer on the effectiveness of implementation of the RAP and to coordinate activities during construction and after construction aimed at improving the environmental performance of the project during its operating phase.

At least one official will be assigned for the ESMMO that will be responsible coordination of the environmental and social aspects with the construction and operation managers. The ESMMO will implement the resettlement under the supervision of the PLHPP Provincial Environment and Social Management Committee and contract a company, NGO or government to monitor the resettlement and the extent to which it is conducted according to the Resettlement Policy Frameworks, the RAP and government policy and regulations. The ESMMO will prepare all documentation and reports concerning the environmental and social aspects of the project including resettlement progress reports to be submitted to DOE and MONRE during the project implementation period.

The ESMMO will act as the first point of contact for the ESMMO and indirectly for the PLHPP National Environment and Social Management Committee (PLHPP NESMC). It will receive all complaints and grievances arise in the course of the implementation of the RAP resolve them as far as it can with the offended parties. If unsatisfactorily resolved an appeal by the offended party could then lodge an appeal to the PLHPP PESMC through the ESMMO.

Environmental Manager: The developer will appoint an Environmental Manager (EM) to head the ESMMO on a full time basis. The EM will report directly to the project proponent Project Manager. His role will be to ensure that the mitigation and monitoring measures are implemented and that the standards in the schedules of the RAP and those that are 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 project manager.

The EM will act on behalf of the project proponent in dealing with Government Agencies or other parties concerned. He will represent project proponent in the Paklay Hydropower Project Provincial

Environment and Social Management Committee (PLHPP PESMC) and will be responsible for maintaining good relations and communication with the local communities. His other activities will include but not necessarily be limited to:

- Coordination, supervision, monitoring and reporting on activities undertaken in the RAP.
- Liaising between the Project Manager with the Consultants, the Government Agencies, and the contractors and concerned or contracted NGOs.
- Supervising and monitoring of field activities of sub-contractors in relation to implementing the RAP.
- Supervising specific routine technical tasks of the ESMMO such as water quality monitoring.
- Reporting to the project Manager.

To implement these task, the EM will be assisted by full time assistants as required and part time international/or national consultants. This technical assistance will include the services of an environmental planner mainly during early implementation of the RAP, and by other specialists as required by the EM.

The ESSMOis composed of the Resettlement Section (RS), a Social Development Section (SDS) an Environment Section (ES) and a Project Monitoring group made of members who are retained within each of these three groups for monitoring each group but share facilities and the ESMMU database.

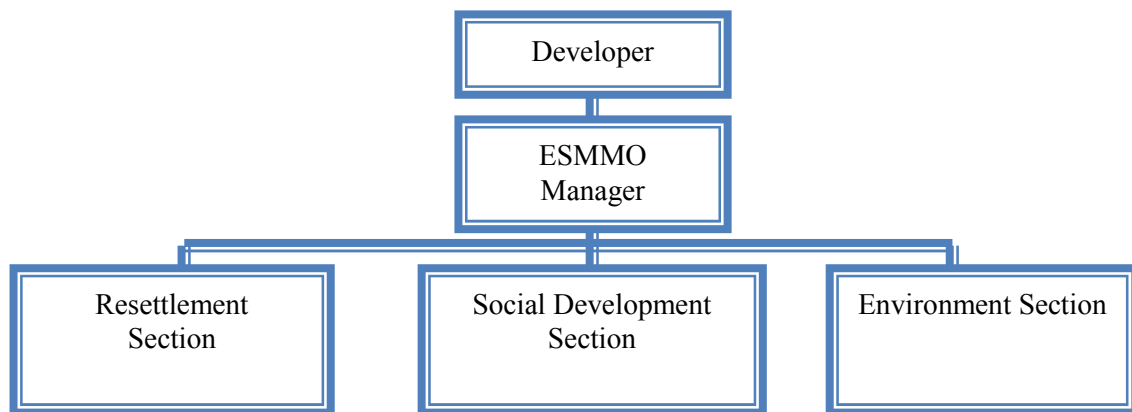


Figure 4: Components of the ESMMO.

Resettlement Section

The Resettlement section will be responsible for all infrastructure and livelihood planning as well as implementation and monitoring of the relocation process for households in the new resettlement area. It will carry primary responsibility for livelihood restoration and improvement for the new and adjacent villages. In addition, it will be responsible for compensation and relocation issues related to Project Construction Lands.

The Unit will be headed by a Manager with proven resettlement implementation experience, who will report directly to the ESMMO Manager, and work closely with the Liaison Officer and GOL support staff (see below). The tasks of the three teams in the Resettlement Section will be as follows:

a) Infrastructure Team:

- Ensure access to new sites/adjacent villages through the construction of new bridges and roads; and rehabilitation or upgrading of existing transportation facilities.
- Ensure effective water supply is provided to all new sites/adjacent villages, through the installation of wells and piping systems.
- Ensure water is available when appropriate and operational at new sites/adjacent villages.
- Ensure that housing and other relevant structures are constructed at new sites; and that community and service buildings for resettled people and adjacent villages are constructed or rehabilitated.
- Ensure that all new sites have reliable electricity supplies.

b) Livelihood Team:

- Develop suitable agricultural cropping systems, and carry out extension and technical support work to ensure food security and income targets for resettled people and villagers in adjacent villages.
- Ensure sustainable livestock and aquaculture development for all households (resettled people and adjacent population) in the adjacent villages.
- 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.
- Investigate markets and marketing-chains for agricultural produce and forge links with middlemen and cash crop companies.
- Develop handicraft and small-scale business opportunities and identify market channels.
- Together with the Monitoring Unit, monitor livelihood development until income targets are reached and sustained.

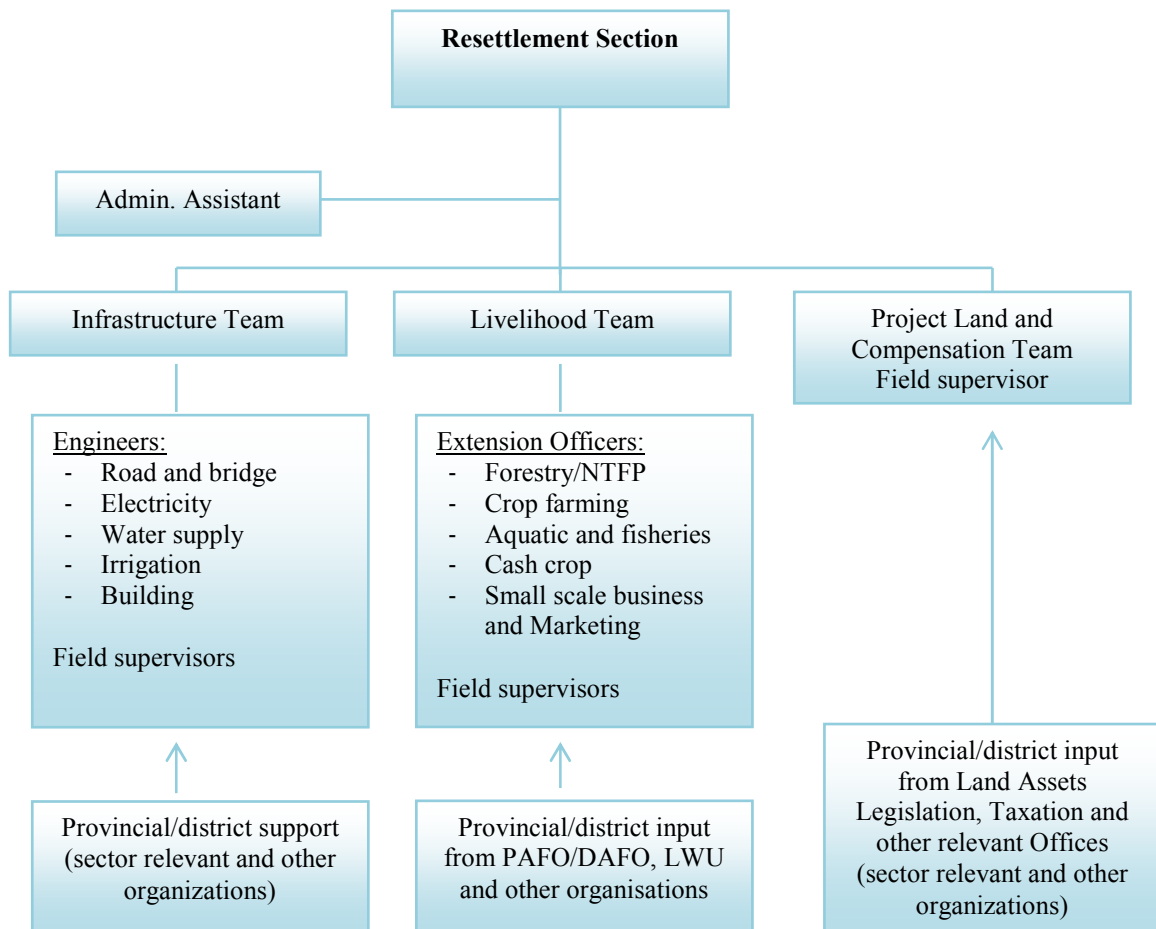


Figure 5: Organisation of the Resettlement and Compensation Unit.

c) Project Lands and Compensation Team

- Liaise with Infrastructure Section to ensure all infrastructures are in place for villagers who have to relocate from Project Construction Lands areas.
- Liaise with Livelihood Section to ensure PAP benefit from livelihood activities, where required.
- Valuate the assets lost due to construction activities in Project Construction Lands.
- Undertake cash compensation to entitled PAPs together with Compensation Disbursement Agent.

(1) Social Development Section

The Social Development Section (SDS) will have primary responsibility for all consultations in the project area as well as community and human services aspects of the resettlement and livelihood improvement process. It will initiate and monitor consultations, health programs, education programs and a range of community development initiatives.

The Section will be headed by an experienced Manager with proven social mitigation and development project experience, who will report directly to the ESMMO Manager, work closely with the Liaison Officer and GOL support staff. The SD Unit will seek intermittent input from an Ethnic Specialist and a Gender Specialist, both during detailed planning, and the commencement of

implementation, in order to ensure that ethnic and gender aspects are mainstreamed. The SDS will also ensure that the needs of vulnerable groups are addressed.

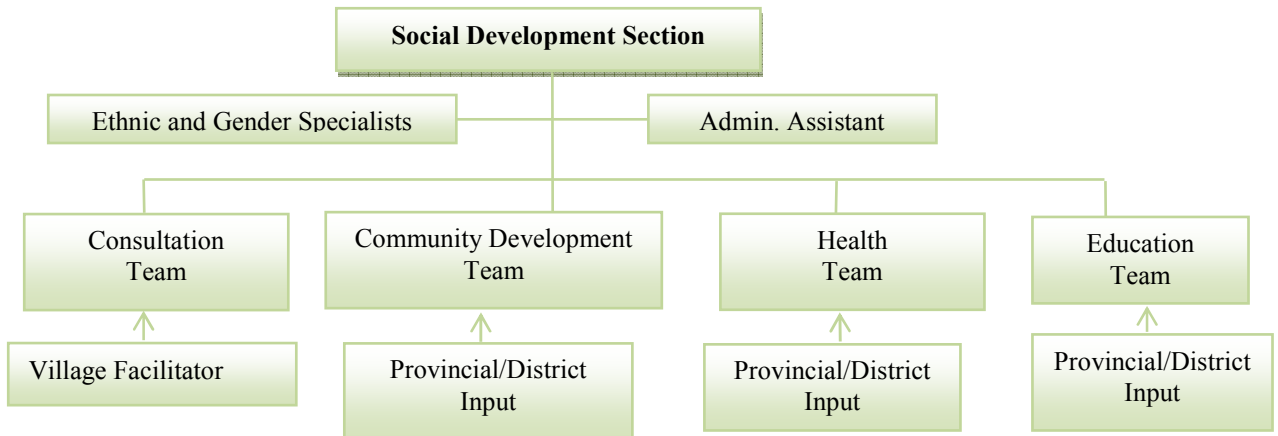


Figure 6: Structure of the Social Development Section.

The main tasks of the four teams in the Social Development Section will consist of the following:

a) Consultation Team:

- Participatory planning support for resettled people and villagers in adjacent villages, ensuring that local concerns and beliefs are incorporated.
- Participatory planning for downstream, the watershed and project construction land areas.
- Establish consultation feedback loops between affected households and project implementing organizations.
- Ensure that gender and ethnic issues are incorporated into planning procedures and implementation.
- Ensure that all affected households are familiar with content and mechanisms of the Grievance Procedure.

b) Community Development Team:

- Prepare a comprehensive community development strategy for resettled people and other project affected groups.
- Facilitate the implementation of savings and credit schemes.
- Assist villagers in developing off-farm livelihood alternatives and cottage industries.
- Pay special attention to vulnerable groups in the resettlement and livelihood development processes.
- Link up with NGOs for community development initiatives.

c) Health Team

- 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 MoH staff for these facilities.

- Establish baseline data on the health status of the population in project-affected villages; facilitate annual surveys to measure 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 mentoring 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.
- Liaise with multilateral, bilateral and NGO agencies active in health sector programs, to maximize cooperation and minimize duplication; participate in MoH activities to facilitate sector-wide coordination.

d) Education Team

- 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.

(2) Environment Section

The major tasks of the Environment Section are to monitoring all the baseline data and information concerning the environment like fish and fishery, hydrology, water quality, river bank erosion etc. Implementation of the mitigation measures that has been mentioned in EMP, the Environment Section may divide in 2 two following teams:

a) Environmental Monitoring Team

- Establish baseline data on the environment status of the project area environment in the watershed, upstream, dam site and downstream area.
- Carry out daily, weekly or monthly as planned schedule for monitoring of the environmental changes.
- Report to Environment Working Group for the timely management of the environment status in the Project area.

b) Construction Monitoring Team

- Make a details plan to follow up with the contractors in different construction site including access road.
- Ensure the contractors to provide the environmental management for the site works.
- Monitoring of the safety issues of the workers in the work site.
- Draft Environmental Instruction for environment management for Environment Working Group and EMU for consideration to further instruct to contractors.

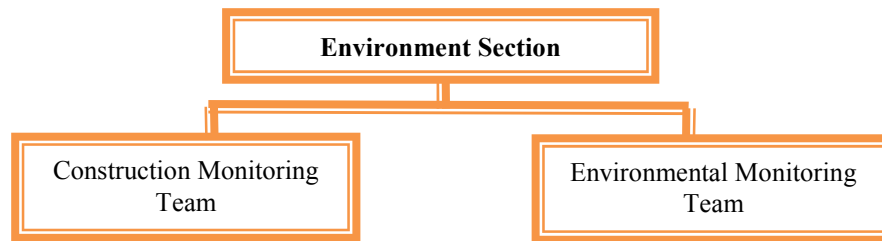


Figure 7: Structure of the Environment Section.

To respond effectively to matters raised by the NESMC or EMU and to effectively manage the environmental performance of the Project, the ESMMO will set up an Environmental Management Information System to process record all monitoring data compliance, management decisions and corrective actions taken. Anticipated documentation to be filed includes:

- Active and obsolete printed versions of the RAP sub-plans.
- All and resettlement site plans.
- Census of resettlement site and agricultural holdings of each household.
- All communications with social and environmental implications.
- All monitoring reports from ESMMO and the Contractor staff.
- Quarterly Reports.
- Grievances and complaints register.
- Training materials.
- Training attendance registers.
- Non-compliance special reports.
- Lao environmental legislation.
- Permits, legal documents and authorizing letters.
- Monthly meeting minutes.
- Occupational Health and Safety reports.
- Medical reports.
- Disciplinary procedures.

5.2.2 Auditor or Third Party Monitor

The project monitoring group will be composed of staff members from each of the Resettlement, Social Development and Environment group. The members of each group will monitor their own group according to the requirements laid out in the annual plan. The Monitoring Unit should include the following specialists:

A project monitoring Specialist with a strong background in mathematics or statistics and a relevant social or natural science plus experience in planning, implementing, monitoring and evaluating resettlement plans or projects to international standards on large hydropower projects, and preferably with relevant experience in Lao P.D.R or elsewhere in the region.

Lao National Resettlement Specialists or Social Development Specialists with strong background in relevant social sciences and demonstrated experience in organizing and managing socioeconomic data collection and analysis, PRA, group facilitation, and with relevant experience in the Project area.

Surveyors with demonstrated experience in household surveys, data input and analysis and participatory rapid appraisal techniques, and group facilitation will be used. Surveyors and monitoring team leaders should have an equal gender mix and local language skills.

An Ethnic and/or Gender Specialist who will probably be a member of the social development team will assist the monitoring unit to ensure that Ethnic and Gender issues are included in the various monitoring programs.

Questions the monitoring team will be asked to answer through such assessments will include as a minimum the following:

- Have any people used the grievance redress procedures? What were the outcomes?
- Have any intra-community conflicts been reported? How were they resolved?
- Were special measures for ethnic peoples implemented?
- What changes have taken place in key social and cultural parameters relating to living standards?
- What changes have occurred for vulnerable groups?
- Are people able to access schools, health services, cultural sites and activities?
- What is the extent and quality of participation in community groups?
- Has access to cultural sites and events been restored?
- Have perceptions of "community" been restored?
- Do people believe local spiritual needs are being met?
- Have people achieved replacement of key social and cultural elements?
- Have people reported incidents of corruption?
- Are women taking increasing roles in public decision making?

In addition, to answering these questions through appropriately designed survey questions, specific data will also be collected based on a set of indicators of both the state of social development and the state of the livelihood system. Quantitative data on the level of social development attained will include, but will not be limited to: school attendance, Early Childhood Care for Development (ECCD) centre attendance, teacher attendance (ensuring all schools have sufficient teaching staff assigned and active), number of classrooms with adequate learning materials, participation rate in adult literacy classes, village literacy rate, ratio of women to men on village committees, etc. All of the above data will be disaggregated by sex.

Quantitative Indicators of the system of livelihood for each family include:

- Paddy yield in tones per ha.
- Vegetable crop yields.
- Fish production (spawning and nursing survival rates, yield by weight and by cash value).
- Animal production: the animal weight and the survival rate after disease control.
- Design, making and marketing for women's products.
- Whatever overall socio-economic well-being indicators that PLHPP selects as measures of the attainment of livelihood targets, income/poverty levels at both household and village level.

- Monitoring of community management and benefit distribution will also be undertaken by the have its own indicators which will be decided upon by the communities themselves.

It is not possible to accurately define cost when the level of impact is not known. PLHPP need to characterize the existing situation accurately, and then closely monitor what actually happens when the dam's effects begin to be felt. A contingency budget has been established for livelihood improvement in the upstream villages. In case fisheries monitoring shows a significant impact on the fishery by the PLHPP. The budget is by no means meant to be used equally for each village. The amount to be used will depend on the impact, the size of the village, the importance of fishing and cost of livelihood activities (crop and livestock production) for each specific village.

5.2.3 Construction Contractors and Sub-Contractors

The developer will appoint a contractor to implement the physical components of the RAP including the construction of housing. The Contractor will in turn appoint subcontractors to manage specific aspects of the Resettlement e.g. removals and relocation, construction of infrastructure, construction of housing. Certain aspects of the resettlement could be contracted out to government agencies - e.g. agricultural extension, land development. The RAP Contractor will appoint a Social Manager who will speak and write fluently in English. The ESMMO will execute monitoring tasks and report to the EM. The EM will coordinate implementation of the RAP with sub-contractors.

Other RAP Contractor Personnel with responsibilities in relation to implementing the RAP will include the Resettlement Site Foremen and a Medical Officer and supporting staff. The Resettlement Site Foremen will ensure that social protection measures are implemented and utilized as documented in the RAP.

The Medical Officer and supporting staff will implement the Projects Occupational Health & Safety Plan in the EMMP which will also apply to implementation of the RAP.

5.3 VILLAGE INSTITUTIONAL ARRANGEMENT FOR THE PROJECT

5.3.1 Village Development Cluster

Villages Development Cluster (VDC) or *KhounBanPhatthana* has been established in districts according to decree No.09/PMO dated 07/05/2008 on Village and Village Development Cluster and will serve as counterparts to the ESMMO. The actual type and number of staff will be determined upon a detailed needs assessment prior to implementation. District staff involvement in ESMMO implementation will be primarily task-based. In some cases provincial and district staff will be involved in implementation arrangements when district staff is not available or adequately qualified. In some programs, such as consultations, both provincial and district staff have been members of project proponent teams. The Project will arrange for capacity building for social development for these keys staff for a long term management.

The tasks of the VDCs will be to:

- In collaboration with the ESMMO team, provide technical input to the Resettlement Action Plan and Social Development Plan and participate in capacity building for village facilitators - at times as trainers and at other times as trainees.
- Provide human resource and informational input to infrastructure and livelihood activities, as required and assist with training activities.

5.3.2 Village-Level Organizations

In each relocated and adjacent village it will be necessary to delegate to an existing organization the responsibility for formulating village policy on resettlement, overseeing the resettlement process, recruiting head village coordinator, and leading the community participation process and other identified tasks. This key person will create the link between several project working group and ESMMO. Several assistant coordinators may need to establish to help.

The members of the village coordinators will receive a regular honorarium for this work and will have funds to engage a secretary to ensure that all delegated issues are tracked and addressed. These head village coordinator should act as the formal contact point and have responsibility for selecting and supervising the assistant village coordinators, and represent the village in inter-village meetings to discuss, monitor and evaluate progress.

7 BUDGET FOR RESETTLEMENT AND SOCIAL MANAGEMENT AND MONITORING

Total costs of the SMMP and other monitoring is shown in the table below.

Table 3: Budget for Social Management and Monitoring

No	Item		Period		
			Construction Period	Operation Period	Total
			Total	Total	Total
1	Environmental Management Fees for Company		10,000,000	10,035,000	20,035,000
2	Social Management, Compensation and Resettlement Fees for Company		75,000,000	12,920,000	87,920,000
3	Environmental Management Fund for GOL	Environmental Management and Monitoring Fee (EMU)	701,474	866,303	1,567,777
4		Forest Management and Monitoring Fee	2,964,400	1,450,000	4,414,400
5		Water Resources Management and Monitoring Fee	378,600	308,000	686,600
6	Funding for External Independent Monitoring Agency (IMA)		523,754	334,510	858,264
7	Social Management Fund for GOL (RMU)		897,237	579,066	1,476,303
	Grand Total		90,465,465	26,492,879	96,923,344

Remarks: The EMU and RMU budget see the detail in Annex of this Report

8 TIME SCHEDULE

Overall time schedule for implementation of this plan for about 7 years, these are including (i) first year preparation of construction work, where this plan will be updated to more close to the situation all the ground. ESMMO will be formed. Local authorities, who will involve with the PLHPP are subjected to be prepare. APs are to be informed and also be preparing for the impacts and mitigation from the project. (ii) Project construction works are expected to be around 8years commencement. Overall of the social development works are going to be starting at different project impacted areas. (iii) Environment and Social Mitigation, Compensation is going to be continuous for period of 7 years. Where expected livelihood improvement of the affected people could meet the standard.

Detail time schedule are outlined in the table below:

9 REFERENCES

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