Environmental Monitoring Report

Semi-Annual Report June - Dec 2016

Loan 2517-VIE: Renewable Energy Development and Network Expansion and Rehabilitation for Remote Communes Sector Project

Subproject: Nam Pay Hydropower Project

Prepared by the Power Development Project Management Board (PDPMB) of the Northern Power Corporation, for the Asian Development Bank (ADB).

(as of 22 Dec 2016)

Currency unit – Vietnamese Dong (VND)

VND1.00 = \$0.0000473 \$1.00 = VND22,330

ABBREVIATIONS

ADB - Asian Development Bank

NPC - Northern Power Corporation

PDPMB - Power Development Project Management Board

DONRE - Department of Natural Resources and Environment

EMS - Environmental Monitoring System

ESDC - Environment and Social Development Cell

EVN - Electricity Vietnam

IEE - Initial Environmental Examination

SONRE - Section on Natural Resources and Environment

VIE - Viet Nam

{WEIGHTS AND MEASURES}

MW – Megawatt Km – Kilometer

km2 – square kilometers l/s – litres per second

m – metre

m3 - cubic metre
m2 - square metre
mm - millimeter
s - seconds
mg/l - milligram/litre
dBA - {Definition 3}

NOTE

In this report, "\$" refers to US dollars unless otherwise stated.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature. Your attention is directed to the "terms of use" section of this website.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

TABLE OF CONTENT

I. INTRODUCTION	1
1. PROJECT INFORMATION	1
2. PURPOSE OF ENVIRONMENTAL MONITORING	1
II. STATUS OF LEGAL & POLICY COMPLIANCE	3
III. ENVIRONMENTAL MANAGEMENT SYSTEM	4
IV. WORK PROGRESS	6
V. ENVIRONMENTAL COMPLIANCE MONITORING	8
VI. ENVIRONMENT EFFECT MONITORING	19
VII. KEY ENVIRONMENTAL ISSUES & ACTIONS	22
VIII. CONCLUSIONS & RECOMMENDATION	
APPENDICES	31
LIST OF TABLES AND FIGURES	
Figure 1. Location of the Nam Pay Hydropower Project and Components	1
Table 1: Environmental Permits and Licenses Secured	3
Table 2: Parties and respective responsibilities in the EMS	5
Table 3: List of contacts/members in EMS Error! Bookmark not Table 4: Information on packages and construction contractors	
Table 5: Work progress until 30th June, 2016	
Table 6: Assessment of environmental compliance	9
Table 7: Environmental issues and follow-up actions required	24

I. INTRODUCTION

1. PROJECT INFORMATION

- 1. The Nam Pay hydropower project is a sub-project of Loan 2517-VIE: Renewable Energy Development and Network Expansion and Rehabilitation for Remote Communes Sector Project which is funded by the Asian Development Bank (ADB). The implementing agency of this sub-project is Northern Power Corporation (NPC).
- 2. The Nam Pay hydropower plant is constructed for rural electric system in Mun Chung Commune, Tuan Giao District, Dien Bien Province. Project location is shown in Figure 1.
- 3. The project is located in Nam Pay stream in Mun Chung commune of Tuan Giao district, Dien Bien province (Figure 1) and will affect the villages of Pa Tong (between dam and power plant) and Nam Pay (immediately downstream of the hydropower plant). It is planned to be constructed on the Nam Pay River which is the influent level I of Nam Mu river and the influent of Nam Muc river. The rivers originate from a mountainous region with the height of more than 1,000 m at coordinates of 103°22'30" East and 21°55' North. The rivers flow from the North toward the South, then merge into Nam Mu river. The Nam Pay hydropower project is positioned at 103°24'01" East and 21°47'24" North. The reservoir of the Nam Pay hydropower project has a small catchment area of 68 km².
- 4. The reservoir, headwork route, and energy route are in Pa Ca, Pa Tong, Na Tong, Nam Pay, Nong Tong village, Mun Chung Commune, Tuan Giao District, Dien Bien Province.



Figure 1: Project location in the region

5. The sub-project is part of the small hydropower plant development plan in Dien Bien up to 2020, which was approved through Decision No 99/QD-UBND on January 25, 2010 by the PPC.

Main work items

- 6. The Nam Pay Hydropower sub-project will have 7.5 MW generating capacity and an annual average electricity production of 27.93 million KWh. The main elements are shown in Figure 2 and described as follows:
 - a. A dam with maximum height of 25.8 m and reservoir with volume of 370,000m³;
 - b. A 1,246-m reinforced concrete tunnel;
 - c. A penstock of 843.7m in length, pipe section of 1.2 m and pipe-thickness from 1.2 to 2.0 cm;
 - d. A powerhouse with three Francis horizontal turbines;
 - e. Outdoor electricity distribution station;
 - f. A 35-KV transmission line to transfer electricity to the national grid through Tuan Giao-Tua Chua; and
 - g. Administration and management building
- 7. Below the dam, all the project components are on the right bank of the Nam Pay river. The power from the Nam Pay hydropower plant will provide electricity to the Mun Chung Commune with a population of 5,580 persons, 62% of which are ethnic Thai.
- 8. To connect the Nam Pay hydropower plant to the national electricity system, a new 35-kV line connection line is required, including two circuits:
 - First Circuit: about 32 km in length, wire AC-150 connecting to the busbar 35kV substation 110/35/22 kV-16 MVA Tuan Giao (E21.1);
 - Second Circuit: about 0.8 km in length, wire AC-150 35kV lines connected to Tuan Giao Tua Chua.
- 9. The water delivery system of the dam has a calculated head of 224.4 m, which is designed to deliver a maximum of 4.23 m³/s to three turbines and generate 7.5 MW of power. As a result of the project, in the dry season, the Nam Pay River will experience loss of water flow for approximately eight to nine months over the 3.5 km of the river between dam and powerhouse.
- 10. During low flow months with a flowrate of less than 0.5 m³/s, the plant will operate for only a few hours per day to provide for peak hour power requirements. The water regime will change immediately downstream of the dam.
- 11. Various access roads are required by the project:
 - a. At the dam, 1.5 km of road with the upgrading of existing track road and about 800m temporary road on right and left bank for temporary construction access;
 - b. At the surge tank, upgrading of the existing 140-m track road;
 - c. For powerhouse, upgrading of the existing 940-m track road to provide permanent access to the plant; and
 - d. A 700-m track road along the penstock route for construction purposes.

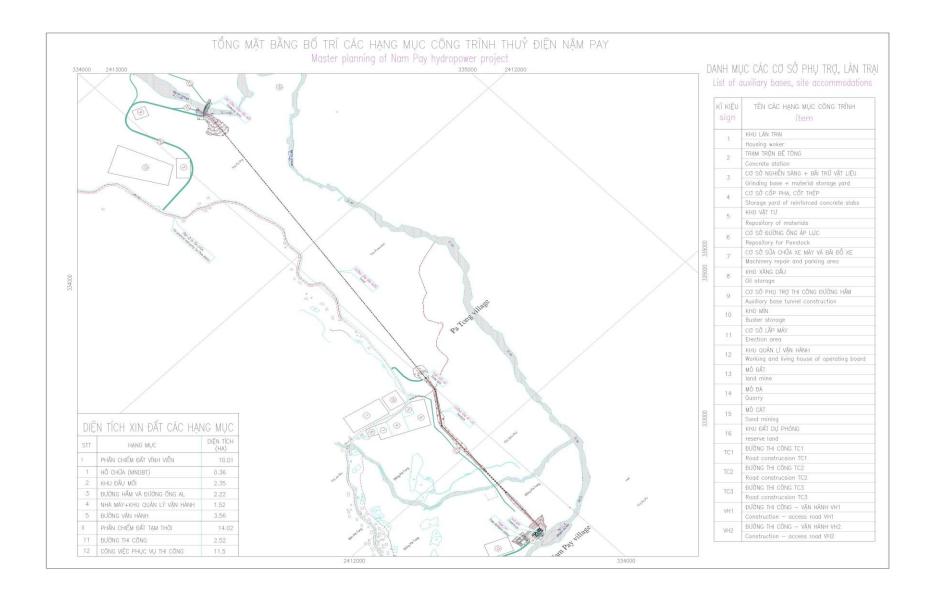


Figure 2: Master Plan of Nam Pay Hydropower Project

12. In addition to the main components, there are also auxiliary components for the Nam Pay Hydropower project which are described in the table below:

Auxiliary components

Components	Area (ha)
Accommodation of workers	1.05
Concrete batching plant	0.4
Base crushing and screening material storage yard	0.75
Steel formwork base	0.4
Blasting materials warehouse	0.04
Park management and operation	0.6
Inventory	0.15
Base of underground components	0.5
Maintenance base and parking area	0.2
Oil storage	0.1
Installed machine base	0.03
Reserve land	0.4

13. The proposed campsite is between the area above Pa Tong village and some houses along the highway. The campsite is close to local communities in Pa Tong village.

2. PURPOSE OF ENVIRONMENTAL MONITORING

- 14. The Power Development Project Management Board (PDPMB) of the Northern Power Corporation has been appointed as the department to undertake the management of the implementation of sub-projects of Loan 2517-VIE. The PDPMB consists of the Hydropower Section, directly monitoring the implementation of Nam Pay Hydropower project. The PDPMB is also tasked to establish and assess the environmental performance of the sub-project and its contractors with a view of improving the environmental performance of the overall project.
- 15. This Environmental Monitoring Report presents the results of the monitoring of the construction of Nam Pay hydropower project covering the period June to December 2016. The report documents the status of project implementation, compliance with the Environmental Management Plan (EMP), and also compliance with the environmental regulatory requirements of the Government of Vietnam. The report also aims to present corrective or remedial measures for environmental impacts observed during the monitoring period.
- 16. The PDPMB reviewed and monitored the implementation of the EMP integrated in the Initial Environmental Examination (IEE) report which was cleared by ADB. The Environmental Compliance and Monitoring Form and Environmental Monitoring Checklist provided by ADB were used to assess the compliance of the contractors with the EMP and

with ADB's Environment Safeguards. Site visits were carried out to validate implementation of the mitigation measures.

- 17. The objectives of the monitoring are:
- ✓ Monitor the status of sub-project's compliance with Vietnam Technical Regulations and Law on Environment
- ✓ Monitor the status of sub-project's compliance with ADB's Environment Safeguards requirements
- ✓ Monitor the compliance of the contractors with mitigation measures to address construction impacts on the environment as per Contract Conditions and the EMP
- ✓ Determine corrective actions need to carry out to address non-compliance activities during the construction phase.

II. STATUS OF LEGAL & POLICY COMPLIANCE

- a) The Environmental Impact Assessment (EIA) of Nam Pay Hydropower project was approved by the People's Committee of Dien Bien Province Decision No. 936/QĐ-UBND on 12/10/2012. The IEE was also endorsed by ADB. The EMP as contained in the approved IEE was included in the bid document with the contractors. The responsibility of EMP implementation during the construction phase of the project was entrusted to the contractors of the project. The implementation of the EMP by the contractors is being monitored by the field officers of the PDPMB of NPC.
- 18. The Nam Pay Hydropower Project has secured the following licenses and clearances for its implementation:

Table 1: Environmental Permits and Licenses Secured

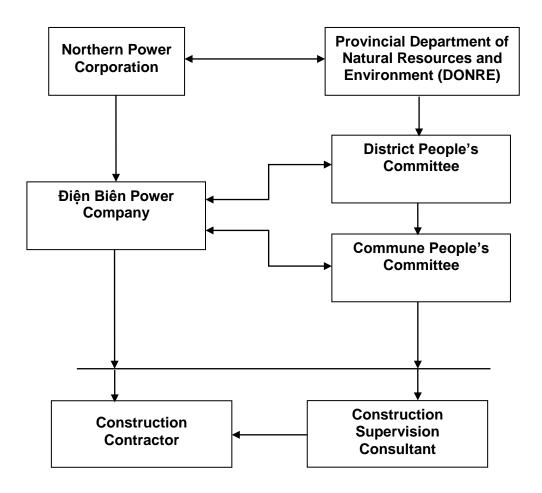
License/Clearance	License/Clearance No.	Issued by	Date Issued
Approval of EIA	No. 936/QĐ-UBND	Dien Bien Province People Committee	12 October 2012
UXO license	No 72/ 2014 GP- SCT	People's Committee of Dien Bien Province - Industrial and commercial facilities	21 November 2014
UXO license	No 13/ 2015/GP- SCT	People's Committee of Dien Bien Province - Industrial and commercial facilities	18 March 2015
Approval of reforestation plan	No 4416/UBND-NN	People's Committee of Dien 23 Dece Bien Province 2015	
Approval Decision of Environment Impact Assessment	936/QĐ-UBND	People's Committee of Dien 12/10/2012 Bien Province	
Register hazardous waste generator	Number QLCTNH: 11.000114.T	Department of Natural 17/12/2015 Resources and Environment	
Approval Decision of Environment Monitoring package	194/QÐ-EVN NPC	Northern Power Corporation	28/1/2016

19. Other issues is awaiting approval:

License/Clearance No.		ce No. Issued by	Date Issued
Extraction surfa	e In process	Pending	
water license			

III. ENVIRONMENTAL MANAGEMENT SYSTEM

- 20. The Environment and Social Development Cell has not been created by NPC. Instead, a focal person on environmental matters has been appointed within PDPMB to audit the implementation of the EMP by the contractor and to coordinate activities related to the EMP implementation and monitoring. A monitoring system will be developed and implemented on a regular basis. Documentation of monitoring activities will be retained at the project site by the PDPMB.
- 21. Environmental management system is shown in the organizational chart as follow:



22. Parties in the EMS and respective responsibilities during construction & operation phases are presented in the table below.

Table 2: Parties and respective responsibilities in the EMS

Parties	Responsibilities
NPC/PMU	Manage for ensuring the implementation of the IEE and EMP
Construction Contractor	Implement contents of EMP following to the signed contract
Construction Supervision Consultant	Monitor the implementation of the EMP of the contractor and report to NPC/PMU
Provincial Department of Natural Resources and Environment (DONRE)	General management of natural resources and environment
District People's Committee	General management of natural resources and environment
Commune People's Committee	General management of natural resources and environment

23. The following are the personnel assigned by NPC and the contractor to monitor compliance with environmental mitigation measures:

Table 3: List of contacts/members in EMS

Name of Personnel	Organization	Responsibilities
1/ Steering Committee	Dien Bien Power Company	
- Lê Mạnh Hùng	Dien Bien Power Company	- Construction Chief
- Nguyễn Đức Cường	Dien Bien Power Company	- Supervisor of package W04 Contractor
- Nguyên Mạnh Hà	Dien Bien Power Company	- Supervisor of package W03 Contractor
- Vũ Văn Đông	Dien Bien Power Company	- Supervisor of package W05 Contractor
2/ Package W03	- Toan Phat construction industry JSC.	
- Nghiêm Thanh Nam	- Toan Phat construction industry JSC.	- Vice chief - Technician

Name of Personnel	Name of Personnel Organization	
- Lò Văn Lâm - Nguyễn Văn Tân - Hồ Văn Lực 3/ Package W04 - Nguyễn Thanh Tùng - Kiều Quang Sỹ - Nguyễn Đức Đức	 Toan Phat construction industry JSC. Toan Phat construction industry JSC. Toan Phat construction industry JSC. Song Da commercial investment JSC. 	- Technician - Technician - Construction Chief - Technician Technician.
- Nguyễn Văn Cường	- Song Da commercial investment JSC.	- Technician.
4/ Package W05 - Trần Văn Cần - Nguyễn Đình Long - Vũ Ngọc Giang - Trần Minh Đức - Đặng Đức Hải	 Song Da investment & construction JSC. Song Da commercial investment JSC. 	Construction ChiefTechnician.Technician.Technician.Vice chief
5/ Nhà thầu tư vấn giám sát - Bùi Vĩnh Long - Nguyễn Xuân Hiếu - Nguyễn Ngọc Du	 Song Da investment & construction JSC. 	Supervision chief Supervisor. Supervisor of mechanical processing

- Package W03: Construction of head works, intake and pipe.
- Package W04: Construction of water-conveying system (power alignment) (tunnel and surge tank)
- Package W05: Construction of penstock, valve house, hydropower plant, tailrace, OPY station, road for O&M, house for O&M.

IV. WORK PROGRESS

24. Packages and construction contractors are listed in the table below.

Table 4: Information on packages and construction contractors

Construction Package	Description of work item in the package	Name of construction contractor	Contact
NPC-ADB –NP/W01	Construction of 35 kV line, 35/0.4 kV substation for unelectrified households	Joint stock company commercial and electrical construction Tuan Giao	02303 862 487
NPC-ADB-NP/W02	Construction of 0.4kV line for unelectrified households	Joint stock company commercial and electrical construction Tuan Giao	02303 862 487
NPC-ADB –NP/W03	Construction of head works, intake and pipe	Joint stock company of industrial construction Toan Phat	0435 379 424
NPC-ADB –NP/W04	Construction of water- conveying system (power alignment) (tunnel and surge tank)	Joint stock company commercial and construction Song Da	0463 254567
NPC-ADB-NP/W05	Construction of penstock, valve house, hydropower plant, tailrace, OPY station, road for O&M, house for O&M		

25. Table below outlines the progress of the project construction:

Table 5: Work progress until 31st Dec, 2016

Project Component	Time started	Completion	Remarks
Construction of 35 kV line, 35/0.4 kV substation for unelectrified households	31/7/2014	100%	completed.
Construction of 0.4kV line for electrified households	1/3/2015	100%	Completed
Construction of head works, intake and pipe	1/7/2014	53%	The work progress is quite slow due to the rainy season, The clearance were difficult, the supply of construction materials do not meet the construction progress on the construction site
Construction of water- conveying system (power	17/7/2014	49%	The work progress is quite slow due to the rainy season, The

Project Component	Time started	Completion	Remarks
alignment) (tunnel and surge tank)			clearance were difficult, the supply of construction materials do not meet the construction progress on the construction site
Construction of penstock, valve house, hydropower plant, tailrace, OPY station, road for O&M, house for O&M	11/1/2015	29%	The work progress is quite slow due to the rainy season, The clearance were difficult, the supply of construction materials do not meet the construction progress on the construction site

V. ENVIRONMENTAL COMPLIANCE MONITORING

- 26. Environmental compliance monitoring is implemented by Construction Supervision Consultant and PDPMB to check if all construction activities implemented by Construction Contractors follow EMP, IEE and environmental impacts to local areas/local residents during construction.
- 27. Table below describes implemented mitigation measures for anticipated impacts from IEE as well as current environmental impacts. Compliance level and Effectiveness of the implemented mitigation measures from Construction Contractors are also assessed.

Note:

- ➤ Compliance level and effectiveness level could be ranged from 1 to 5 (1: very good; 2: Good; 3: Fair; 4: Poor; 5: very poor);
- ➤ "Compliance level" refers the actions which had been implemented to see if the actions follow proposed IEE or not. In "Compliance level" column, the consultant should decide marks ranged from 1-5; other than that, short passage is necessary to explain why ranking that mark.
- ➤ Could the impacts be reduced by mitigation measures which had been implemented? How is the impact reduced by that actions/mitigation measures? "Effectiveness level" reflects these two question. Short passage is also necessary for explanation in this column.

Table 6: Assessment of environmental compliance

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/	More action required & responsibilities	Contractor response
Construction Phate Earthworks for new access roads and	Slopes along access roads & penstock will be provided with: Catchments/ cut-off drains, silt traps & chutes	Contractor built masonry, cut-off drains, silt traps	2	2	There were soil and silt along the canals	Require contractor to regularly maintenance, clean the catchments, silt traps & chutes, masonry	Contractor agreed (Song Da commercial
construction of penstock on steep slopes leading to	to minimize soil erosion. ✓ Masonry retaining structures. ✓ Formation of sediment basins & slope drains.					retaining structures, sediment basins & slope drains	investment JSC; Toan Phat construction industry JSC)
erosion & encroachment	Maximum usage of material in fill areas.	Yes	1	1		Continue this measure	Contractor agreed
	Spoils planning particularly on steep slopes with bench terracing for high cut areas & avoidance of any erosion and runoff of material on down slopes.	Yes	2	2		Continue this measure Require contractor to advoide of any erosion and runoff material on down slope	Contractor agreed (Song Da commercial investment JSC; Toan Phat construction industry JSC)
	Planting grass and revegetation on disturbed areas and maintaining of landscaping.	Trees and grasses were planted at slopes of road for O&M, Grasses are being planted at slopes of surge tank	1	1	Grasses were planted at slopes of road for O&M and road for surge tank	Continue this measure	Contractor agreed to implement when the base construction is done in stage 1

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/	More action required & responsibilities	Contractor response
Use of Borrowed Materials with potential for loss and degradation of land	No earth will be borrowed from cultivable and arable lands. Borrowing to take place from barren, wastelands, & riverbeds. For new borrow areas, all measures will be taken to avoid loss of any productive soil. Any borrow areas will be refilled, re-vegetated & landscaped.	Earth materials were taken only from the site. There were no materials taken from agricultural land.	1	1	All storage areas were rented from households on non- cultivated land	After renting the land must be renovated to initial stage	Contractor agreed (Song Da commercial investment JSC; Toan Phat construction industry JSC)
Taking of Quarry Materials with loss and degradation of land	Quarry materials will be obtained from existing operating sites with proper licenses & environmental clearances. New quarries to be opened only with permission of respective authorities.	Existing quarries were used by the contractor. Quarry materials were not used for construction	1	1	Stone for construction was bought from suppliers for guaranteed standard	No exploiting construction materials	Contractor agreed (Song Da commercial investment JSC; Toan Phat construction industry JSC)
Operation of construction equipment and construction activities and contamination of soils, loss of	Fuel storage & refueling will have adequate containment, away from water bodies/channel.	yes	1	1		Require contractor to collect waste oil to storage and to right area	Contractor agreed (Song Da commercial investment JSC; Toan Phat construction industry JSC)

Impacts & location water quality &	Mitigation measures from IEE Equipment will be properly	Mitigation measures implemented The clouts used to clean	Compliance level	Effec tiven ess	Impact observed/ Iocation Equipment has been	More action required & responsibilities Contractor has to collect	Contractor response
water pollution	maintained.	equipment are not collected			maintained regularly.	clouts used to clean equipment	
	Precautions to be taken to prevent water pollution due to increased siltation & turbidity for weir site & road construction particularly in dry month when flows are low.	yes	2	2			
	Approved sites defined for storage & disposal of wastes materials	yes	4	4	Soil dumped at disposal sites are scattered out in surrounding cultivation areas and irrigation canal which cause effect on irrigating and cultivating of local people, especially in Na Tong, Nam Pay villages;	Require contractor to discharge waste materials to all storage area.	Contractor agreed Song Da commercial investment JSC); Toan Phat construction industry JSC
	Any waste petroleum products will be collected, stored, & disposed of at approved sites.	Waste petroleum has been collected, stored in containments	1	1		Continue this measure	
Construction activities causing disruption of existing surface	Appropriate rain-storm-water channels will be constructed.	Rain-storm water channels were provided at the access road, construction area, clue	1	1			

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/	More action required & responsibilities	Contractor response
drains.		dam					
	Provision for cross drainage structures will be made.	yes	1	1		Continue this measure	Contractor agreed
Construction Camp & Residential	Construction camps will be located adjoining the dam and powerhouse sites & away from any settlement.	Construction camps are located far from residential communities.	1	1		Continue this measure	Contractor agreed
colony. Social impacts & pollution from wastewater & solid waste	Manual labor will be employed locally.	The contractor hired 20- 30 workers from the community.	1	1	In package NPC- ADB-NP/05; package NPC-ADB- NP/04; package NPC-ADB-NP/03;	Continue this measure	Contractor agreed
	Camps & residential colony will have properly designed sewage treatment system for wastewater effluent. Likewise, solid waste collection system will be employed.	Septic tanks are provided at the camps; Rain-storm water channels front of camps are blocked	1	1		Continue this measure	Contractor agreed
Emission from Construction Vehicles & Equipment causing air	Emission levels of all construction vehicles & equipment will conform to Vietnamese emission standards.	Contractors were required to maintain construction vehicles & equipment regularly.	3	3	Operation of trucks and soil scattered on the public road, cause dust pollution and negative impacts on.	Require contractor to regularly check vehicles and perform water spraying to the road to reduce dust	Contractor agreed

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/ location	More action required & responsibilities	Contractor response
pollution	Pollutant parameters will be monitored during construction.	Ambient air quality samplings at the site were conducted on 7 May,2016. Results show compliance with Vietnamese standards.	1	1			Monitored and Contractor agreed
	Crushing, & concrete plants will be away from population centres at dam and powerhouse sites.	Concrete plants are located away from population centers.	1	1		Continue this measure	Contractor agreed
Dust particulates causing health impacts for workers and	All precautions to be taken to reduce dust level emissions from batching plants & portable crushers at dam and powerhouse sites.	The construction site itself is located away from residential community.	1	1		The construction sites were checked for no impact on residential and camp areas	
villagers	Regular water spraying at all mixing sites & temporary service roads will be undertaken.	Water spraying on roads and dusty areas were not being undertaken by the contractor regularly	2	2	On the way to the dam	After checking 2 contractors Package NPC-ADB-NP/04; NPC-ADB-NP/03; water spraying was undertaken regularly.	Contractor agreed
	All delivery vehicles will be covered with tarpaulin.	Supervisors monitor regularly	1	1		Continue this measure	Contractor agreed
Construction activity Noise	All construction equipment & plants will conform to Vietnamese noise standards.	Careful monitoring	1	1		Continue this measure	Contractor agreed
from Vehicles, Plant & Equipment	All vehicles & equipment to be fitted with noise abatement devices.	Careful monitoring	1	1		Continue this measure	Contractor agreed

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/	More action required & responsibilities	Contractor response
causing noise pollution	Construction workers will be provided with personal protection.	Careful monitoring	1	1		Continue this measure	Contractor agreed
Noise pollution from any blasting activities at dam and power tunnel and	Any blasting works will be in accordance with Vietnamese Explosives Act.	Blasting license must be approved before any blasting work	1	1	At the moment 2 packages NPC-ADB- NP/04; NPC-ADB- NP/03; are undertaking rock blasting	Require compliance to the rules in blasting license	Contractor agreed
penstock,	No blasting between dusk & dawn.		1	1		Require compliance to the rules in blasting license	
	Residents close by will be informed well in advance of blasting times.	Contractor informed residents the blasting times. The blasting works were been in accordance with Vietnamese Explosives Act.	1	1	Contractor informed the time of blasting to residents	Require compliance to the rules in blasting license	Contractor agreed
	Workers associated with blasting sites will be provided with earplugs, helmets & other personal safety devices.	Careful monitoring	1	1		Continue this measure	
Construction of dam, reservoir,	No trees to be removed without prior approval.	Careful monitoring	1	1		Continue this measure	
tunnel, penstock with loss of vegetation & tree	Compensation for lost trees on private land.	Trees that were removed were compensated.	1	1	Compensated for lost trees on private land	Damaged area is compensated according to the law	By Clearance Board in Tuan Giao district
cover.	Planting grass and maintaining temporary construction areas, roads and other elements of the project.	Tree plantation is implemented on the slopes of dam, road	1	1		Trees plantation to be undertaken after construction	Contractor agreed

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/	More action required & responsibilities	Contractor response
Work force during construction causing impacts to wildlife	Construction workers to be educated for wildlife conservation with no hunting & poaching to be allowed for workers.	Workers are not allowed to hunt or kill wildlife animal	1	1		Continue this measure	Contractor agreed Song Da commercial investment JSC; Toan Phat construction industry JSC ed
Construction Activities & Accident Risks	All blasting sites will have warning & clearance signals. Site will be inspected prior/after blasting.	All blasting sites had warning & clearance signals. Site were inspected prior/after blasting.	1	1		Continue this measure	
	Workers will be provided with helmets, masks, safety goggles, etc.	Supervisors monitor regularly	2	2	Some workers were not wearing helmets, masks, safetyetc	Require all of workers to wear personal protection	Contractor agreed Song Da commercial investment JSC; Toan Phat construction industry JSC
	A readily available first aid unit will be available with dressing materials etc.	First-aid kit is available at the administration office.	1	1		Continue this measure	Contractor agreed Song Da commercial investment JSC; Toan Phat construction industry JSC

Impacts &	Mitigation measures from	Mitigation measures	Compliance	Effec	Impact observed/	More action required	Contractor
location	IEE	implemented	level	tiven	location	& responsibilities	response
				ess			
	Road safety education will be	All of drivers have license	1	1		Continue this measure	Contractor agreed
	given to construction vehicle drivers.	for driving					Song Da
	unvers.						commercial
							investment JSC;
							Toan Phat
							construction
							industry JSC
	Traffic management will be	Inclusion of measures in	2	2		Require contractor to	Contractor agreed
	ensured during road construction periods.	contracts and follow up monitoring				manage traffic during road	Song Da
	construction periods.	Information				Todu	commercial
							investment JSC; Toan Phat
							construction
							industry JSC
	Information dissemination will	All unit must register for	1	1		Continue this measure	Contractor agreed
	take place through the	temporary staying at local					
	Commune's People Committee regarding activities	authority					
	causing disruption.						
Construction	Any public utilities likely to be	Pay attention to mind the	1	1		Continue this measure	Contractor agreed
Activities	impacted, such as water supply pipe system,	power/ phone line of the					
causing	power/phone lines etc. must	powerhouse					
disruption to	be relocated to suitable						
Public Utilities	places, in consultation with local beneficiaries.						
Any discovery of	For all finds of an historical or	There were no historical	1	1		Continue this measure	Contractor agreed
artifacts or	cultural value, work will be	or cultural sites affected					
articles of	stopped and the find reported	by the project.					
historical interest	to the nearest office of the						

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/	More action required & responsibilities	Contractor response
and importance Generated im	Department Culture, Sport and Tourism or the Department of Culture and Information						
Reduced irrigation water flow in river and affected to aquaculture and agriculture cultivation		Measurements Undertaken by NPC hydrology engineers	3	3	As noted from local authorities, tunnel excavation cause reduction of irrigation water which is supplying for 3000 m3 of aquaculture and agriculture cultivation in Na Tong village and affect to income generation sources of 10 households	Department of Natural Resources and Environment of Dien Bien considered resolve but could not determine the cause of water reduction. The Steering Committee has met and agreed with the people that if the concrete tunnel was finished and still losing water, a water supply plan will be undertaken for the households	Households agreed Resolved by
					Soil dumped at disposal sites are scattered out in surrounding cultivation areas and irrigation canal which cause effect on irrigating and cultivating of local people, especially in Na Tong, Nam Pay villages;	These are damaged households from 2007 till now, Northern Electrical Power Corporation compensated first time with 14 households at Nam Pay village. For the other households, Dien Bien PC with	Clearance Board in Tuan Giao district

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effec tiven ess	Impact observed/ location	More action required & responsibilities	Contractor response
						Clearance Board are trying to resolve according to the notes	

VI. ENVIRONMENTAL IMPACT MONITORING

Ambient air, noise and surface water sampling works were conducted on: December 12th 2016; by Environment Analysing and Technique Joint Stock Company (EATC).

Sampling locations were selected in three points as follows:

K1: A position as traffic roads features is spacious area, rocky ground, less vehicle passage through the and less dust.

K2: A position dam construction site features is spacious area, rocky ground, construction site under construction pour the foundation dam, operate noise, less vehicle passage through.

K3: A location rock mines features is spacious area, rocky ground, excavators are working, less dust.

The air samples were taken and measured at the construction areas to test the environmental protection of contractors to ensure that the contractor complies with the terms of environmental protection on the construction contract. Results are compared to QCVN 05:2013/BTNMT, QCVN 26:2010/BTNMT and QCVN 27:2010/BTNMT which are presented in the table below.

Table 7: Results of Ambient Air Quality and Noise Quality Sampling

Note:

(*)QCVN 26:2010/BTNMT: National Technical Regulation on Noise

No	Parameter	Unit		Result		QCVN 05-2042/BTN	Remarks
INO	Parameter	Onit	K 1	K2	К3	05:2013/BTN MT	Kemarks
1	Instantaneous noise (Leq)	dBA	44	46,1	45,3	70(*)	Pass
2	Vibration	dB	69	65	70	75	Pass
3	Carbon dioxide (CO ₂)	mg/m³	571	586	567		No specified
4	Carbon monoxide (CO)	mg/m³	1,45	1,79	1,62	30	Pass
5	Nitrogen dioxide (NO ₂)	mg/m³	0,035	0,028	0,044	0.2	Pass
6	Sulfur dioxide (SO ₂)	mg/m³	0,042	0,041	0,038	0.35	Pass
7	Pb and compound of Pb	mg/m³	NA	NA	NA	-	-
8	suspended particulates (TSP)	mg/m³	0,168	0,263	0,268	0.3	Pass

The results show that air and noise quality at the roads area, construction area and the mine rock area are within limited values in QCVN 05: 2013/BTNMT and QCVN

26:2010/BTNMT. Construction activities at the sampling time do not impact on ambient air and noise quality.

SURFACE WATER QUALITY

Surface water sampling were conducted in Dec 12th 2016. Samples were taken at upstream; downstream; Nam Pay stream. The analyzed results are compared with QCVN 08-MT:2015 - National technical regulation on surface water quality. Results are presented in the table below.

Notes:

✓ NM1: Upstream of dam

✓ NM2: Downstream of dam

✓ NM3: Nam Pay stream

✓ B1: Use for the purpose of the irrigation and other purposes as: B2

✓ B2: Use for the purpose of the river traffic and other purposes required the lowquality water.

The surface water quality monitoring was performed at locations that contain large water sources. Surface water surrounding the construction areas was collected to evaluate the current stage of water quality in construction time.

Table 8: Surface Water Quality

No	Parameter	Unit		Result		QC 08-M1 /BTI	Remarks	
			NM1	NM2	NM3	Column B1	Column B2	
1	Temperature	0C	24,2	23,6	24,0	-	-	
2	pH	-	6,5	6,8	6,8	5,5 - 9	5,5 - 9	pass
3	Dissolved oxygen (DO)	mg/l	4,7	5,2	5,2	≥ 4	≥ 2	pass
4	Total Suspended Solids (TSS)	mg/l	11,2	9,3	10,1	50	100	pass
5	Total Phosphorus	mg/l	0,19	0,1	0,16	-	-	
6	Total Nitrogen	mg/l	1,04	1,36	1,18	-	-	
7	COD	mg/l	7,1	6,7	7,5	30	50	pass
8	BOD ₅	mg/l	3,8	3,1	3,8	15	25	pass
9	Oil and grease	mg/l	<0,3	<0,3	<0,3	1,0	1,0	pass
10	Coliform	MPN/100ml	663	618	608	7500	10000	pass

The result shows that all environmental parameters are within limited values under present regulation QCVN 08-MT:2015/BTNMT. Sampled values show that water is also qualified to column B1.

WASTEWATER QUALITY

Wastewater samplings were conducted in December 12th 2016. Samples were taken at the worker camp and rock mines. The analyzed results are compared to QCVN 14:2008/BTNMT - National technical regulation on domestic wastewater quality. Results are presented in the table below.

Notes:

✓ NT1: Worker camp area

✓ NT2: Rock mines

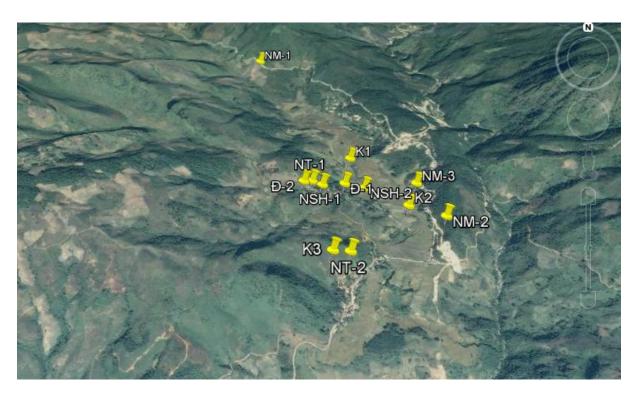
✓ Column A: Receiving source is used for domestic purpose

✓ Column B: Receiving source is not used for domestic purpose

Table 9: Wastewater Quality

No	Parameter	Unit	Res	sult	QCVN [*] /BTI	14:2008 NMT	Remarks
NO	raiailletei	Offic	NT1	NT2	Column A	Column B	Remarks
1	рН	-	7,6	7,2	5 - 9	5 - 9	Pass
2	COD	mg/l	89	8,1	-	-	No specified
3	BOD₅	mg/l	46	4,3	30	50	Pass
4	Total Suspended Solids (TSS)	mg/l	75	38	50	100	Pass
5	Total Nitrogen	mg/l	14,8	1,09	-		No specified
6	Nitrate (NO ₃ -)	mg/l	3,95	0,83	30	50	Pass
7	Nitride (NO ₂ -)	mg/l	0,21	0,009	-	-	No specified
8	Oil and grease	mg/l	6,43	<0,3	10	20	Pass
9	Coliform	MPN/100ml	4800	745	3000	5000	Pass

The result shows that all environmental parameters are within limited values under present regulation QCVN 14:2008/BTNMT. Sampled values show that water is also qualified to column B (Receiving source is not used for domestic purpose).



The map of environmental monitoring areas belonging to Nam Pay Hydropower

Plant

VII. KEY ENVIRONMENTAL ISSUES & ACTIONS

- 28. According to the Environmental Assessment and Review Framework (EARF) of this loan, the sub-project should also not involve activities located in the core zone, or as much as possible, in or near the buffer zone of designated special use forests consisting of national parks, protected landscapes and nature reserves or nature conservation areas and other protected areas where the proposed development is prohibited. The sub-project should as much as possible not involve activities located in or near ecologically sensitive and significant areas as recognized by the Government or any area that is internationally significant. In addition, the sub-project should, as much as possible, not involve activities located in or near any cultural heritage and historical sites designated by the Government or by international agencies such as UNESCO.
- 29. The Nam Pay hydropower subproject and its components were designed after detailed surveys to ensure strict compliance with the above conditions. The Nam Pay hydropower project and components are not passing through any wildlife sanctuary or national park. There are no sensitive areas or monuments of cultural and historical importance that is affected by the project activities.

VII. 1. Key environmental issues

The following are the key issues and follow-up actions that were identified.

- There were soil and silt along the canals.
- Grasses were planted at slopes of road for O&M and road for surge tank.
- Equipment has been maintained regularly.
- Soil dumped at disposal sites are scattered out in surrounding cultivation areas and irrigation canal which cause effect on irrigating and cultivating of local people, especially in Na Tong, Nam Pay villages.
- Operation of trucks and soil scattered on the public road, cause dust pollution and negative impacts on.
- Contractor informed the time of blasting to residents.
- Compensated for lost trees on private land.
- Some workers were not wearing helmets, masks, safety ...etc
- As noted from local authorities, tunnel excavation cause reduction of irrigation water which is supplying for 3000 m3 of aquaculture and agriculture cultivation in Na Tong village and affect to income generation sources of 10 households.
- Implementation of forest replantation plan.
- Degradation of water quality on the Nam Pay.
- High risk of accident for local people due to rock excavation at the peak of mountain.

VII.2. Follow-up actions required

30. Table below summarizes the key issues, follow-up actions and the timeframe for implementation:

Table 10: Environmental issues and follow-up actions required

Follow-up Actions Required	Timeframe	Responsible Parties	Report	ing to
Cover hauling trucks with tarpaulin	Immediately	PC Dien Bien Contractor	Construction Officer NPC/PMU	Supervision
Tunnel construction affects the irrigation system of 10 households.	Immediately	Contractor PC Dien Bien NPC	Construction Officer NPC/PMU	Supervision
Collect the storage at approved sites	Immediately	Contractor PC Dien Bien	Construction Officer NPC/PMU	Supervision
Watering the dusty areas	Immediately	Contractor PC Dien Bien	Construction Officer NPC/PMU	Supervision
Require all of workers to wear personal protection	Immidiately	Contractor PC Dien Bien	Construction Officer NPC/PMU	Supervision
Require contractor to manage traffic during road	Immidiately	Contractor PC Dien Bien	Construction Officer NPC/PMU	Supervision
Trees plantation to be undertaken after construction	As it is in due	Contractor PC Dien Bien	Construction Officer NPC/PMU	Supervision
Follow all relevant requirements in forest replantation plan which will be approved by PPC Monitor the implementation of approved forest replantation plan	As it is in due	Dien Bien PPMU	Construction Officer NPC/PMU	Supervision
Implement waste water	Immidiately	Song Da JSC	Construction	Supervision

Follow-up Actions Required	Timeframe	Responsible Parties	Reporting to
management, including providing a hole to trap suspended maters before discharging to Nam Nghe stream		CSC and PPMU supervision	Officer NPC/PMU
Compensate for cost of relocation of water supply of Nam Pay village	Immidiately	Song Da JSC CSC and PPMU supervision	Construction Supervision Officer NPC/PMU
Provide warning sign boards at the access road to Co Muong village where are high risks of accident; Provide a bodyguards to control people crossing this area	Immidiately	Song Da JSC CSC and PPMU supervision	Construction Supervision Officer NPC/PMU
Require contractor to regularly maintenance, clean the catchments, silt traps & chutes, masonry retaining structures, sediment basins & slope drains	immidiately	Contractor Dien Bien PC	Construction Supervision Officer NPC/PMU

VII.3. PUBLIC CONSULTATION AND GRIEVANCE REDRESS MECHANISM

7.3.1 Public consultation

Public consultation of the project was maintained from preparation phase – during IEE report preparation to construction phase – during periodic environmental monitoring.

In the preparation of IEE, public consultations were conducted by a survey team of PC on the environmental issues related to the Nam Pay hydropower project through meetings with local authorities of the affected communes and interviews with the local people. IEE report was approved and uploaded to ADB's website for information disclosure.

7.3.2. Grievance Redress Mechanism

A grievance redress mechanism (GRM) was established after project commencement. The first level and most accessible and immediate avenue for the fastest resolve of grievances is through the Project Manager of the Power Company. Grievances will be resolved through continuous interactions with affected persons and the PMU will answer queries and resolve grievances

regarding various issues, which are the Company's responsibility. Corrective measures will be undertaken at the field-level within seven days. All grievances will be documented with full information of the aggrieved person and the issue and the resolution of complaint.

Complainants not satisfied with the response of the Company have the option of using the procedure available under the Civil Law and the Land Law 2003 (Article 138) and Decree 197/2004/ND-CP (Art. 63, 64), which specifies:

- 1. Complaints will be sent to the commune Peoples Committee (PC), which must respond to a complainant within 15 days,
- 2. If the complainant is not satisfied with resolution of the commune PC, the next level of appeal is to the District PC which has the responsibility to respond and resolve complaints within 15 days,
- 3. If not satisfied with the resolution of the district PC, the complainant can bring the complaint to the provincial PPC,

As a final resort, if not satisfied with resolution of PPC, the complainant can take the case to the District Court.

During the monitoring period, the following complaints from households recorded:

- 1/ For the amount of damage compensation in 2007
- a/ Complaint letter: There are 14 households in Nam Pay village, Na Tong Commune with complaint about the construction process causing rocks flooded in their paddy fields.
- b/ Solution: Because the damage is not within the scope of recovery to construct and the this was the damage that the old unit in 2007 caused, the Northern Power Corporation has approved compensation for damage to soil and crops on the land that the contractors started construction in 2007 according to the decision number: 2653/QĐ-EVN NPC with the expense deducted from the 2007 contractor's payment value with the amount of money 998.890.726 VND. 19 December 2016, compensation has been paid to the affected households.
- 2/ The complaint letter about lost of water due to digging:
- a/ Complaint: There are 12 households in Nong Tong village Na Tong commune since May 2016 with complaint about the digging process caused lost in production and domestic water.
- b/ Solution: The meeting by Tuan Giao district Land development organization and Mr. Lo Van Cuong Vice Chairman of Tuan Giao District People's Committee, with related agencies that did the field check concluded there is not enough consideration to support compensation. The department of Environment and Resources has had the document no. 745 STNMT TNN about solving the problems in the construction of Nam Pay hydroelectric tunnels.

3/ For the amount of damage compensation in 2007 (second) after solving for the first 14 households above

a/Complaint: There are 12 households in Nam Pay village – Na Tong commune complaining about the construction process causing rocks flooded in their paddy fields. The complaint time was mostly in November 2016.

b/ Solution: The fact that the site is no longer in the state of being damaged and the households have no written record of the damage done by the construction units from 2007 as a basis for the compensation plan, due to the amount of damage is not within the scope of the recovery to construct and this is the work of the unit (former) from 2007 caused so Dien Bien Power Company has requested the construction unit in 2007, Trung Huong Co., Ltd., based on the letter of the household to consider confrontation deal with each household.

4/ For the households that lost the irrigational water in Pa Tong village – Na Tong commune

a/ Complaint: There are 11 households in the village complaining about the construction process in 2015, contractor Song Da invested and construction JSC constructed the pressure pipeline causing dehydrate in the paddy field of the farmers thus they could not cultivate. The complaint time was mostly in July – November 2016

b/Solution: Due to the amount of damage is not within the scope of land recovery for construction work and this is the amount of damage – according to the letter - was caused by the construction of pipeline pressure to deprive the water rendered them unable to cultivate from 2015. Dien Bien Power Company has requested the construction company of Song Da Investment and Construction JSC based on the letter of the household to consider confrontation deal with each household.

VIII. CONCLUSIONS & RECOMMENDATION

31. Until Dec 31st, 2016 The project has accomplished 100% of the 35kV line, 35/0.4 kV substation for unelectrified households and Construction of 0.4kV line for unelectrified households;

Package NPC-ADB-NP/W03: Construction of head works, intake and pipe is 50%;

Package NPC-ADB-NP/W04: Construction of water-conveying system (power alignment) (tunnel and surge tank) is 49%.

Package NPC-ADB-NP/W05: Construction of penstock, valve house, hydropower plant, tailrace, OPY station, road for O&M, house for O&M is 29%

In terms of implementation of the environmental management plan, some lapses of the contractor were noted such as:

- There were soil and silt along the canals.
- Grasses were planted at slopes of road for O&M and road for surge tank.
- Equipment has been maintained regularly.
- Some households on the way to the dam in Na Tong and Nam Pay villages demand compensation for the construction in 2007 caused rock and soil in their fields. In August 29th 2016 Dien Bien PC had Decision no. 2653/QDD-EVN NPC approved compensation for 14 households in Nam Pay village that had rock and soil in the field, they agreed and received the compensation. For the households on the way to the dam which had rock in the field, the Clearance Board in Tuan Giao district and Dien Bien PC are confirming the status to come up with a compensation plan.
- Truck operation and soil scattering on public road caused dust pollution and affected negatively to the environment. After the examination, Steering Committee asked the contractors to cover the trucks with canvas and spray water regularly for rock and materials transportation and demanded consulting unit to closely monitor the performance of the contractors.
- Contractors inform households the time of blasting. The contractors informed the Commune People's Committee and the villages near the authorized blasting area. For safety guarantee, Nam Pay Hydropower Steering Committee had asked the contractors to continue re-informing the People' Committee and the villages near the blasting area.
- Compensation for loss tree on the private land. Up till now, Dien Bien PC has been approved with 3 compensation plans and Northern Power Corporation approved one time support with total value of:
- Total compensate money up till now is **11.700.000.000 VND** include:
- ✓ Phase 1 according to compensation approval decision no. 575/QĐ-UBND 16/6/2014

- ✓ Phase 2 according to compensation approval decision no. 970/QĐ-UBND 25/11/2015
- ✓ Phase 3 according to compensation approval decision no. 860/QĐ-UBND 28/9/2016
- ✓ Phase 4 according to incurred compensation decision no. 2653/QĐ-EVN NPC 29/8/2016
- ✓ Option to advance money for the affected households. The compensation for damage is basically done, there are only incurred households which the Clearance Board and Dien Bien PC are considering resolve.
- Some workers did not wear helmet, mask, safety equipment, etc... After the examination, the Steering Committee has asked the consulting unit monitor closely the performing of safety of contractors during the construction.
- As noted from local authorities, tunnel excavation cause reduction of irrigation water which is supplying for 3000 m3 of aquaculture and agriculture cultivation in Na Tong village and affect to income generation sources of 10 households. Dien Bien PC had a document no. 1908/PCDB-QLDT 18/8/2016 ask the Department of Natural Resources and Environment of Dien Bien Province to solve. In 70/09/2016, the Department of Natural Resources and Environment of Dien Bien Province had document no 745 STNMT-TNN for resolve the problem in Nam Pay hydropower tunnel construction. Till now the construction is undertaken but the households still do not agree. Dien Bien PC is continuing to work with the relevant units to resolve.
- Implementation of forest replantation plan. Paid the replantation money according to the document no. 4416/UBND-NN 23/12/2015 and the document no. 274 SNN-LN 02/03/2016 of the Department of Agriculture and Rural Development.
- Degradation of water quality on the Nam Pay.
- High risk of accident for local people due to rock excavation at the peak of mountain.

As of Dec 31, 2016, the contractor implemented the following measures

- ✓ rehabilitation of slopes
- √ bench terracing of spoils on steep slopes
- ✓ provided a site for storage/disposal of waste materials
- ✓ provided septic tanks at the campsite
- ✓ delivery vehicles are now covered with tarpaulin
- ✓ Workers wear personal protection.
- ✓ Conduct watering and sprinkling of dusty area
- ✓ Information dissemination take place through the Commune's People Committee regarding activities causing disruption.

- ✓ The level of dust emissions are monitored periodically and in accordance with Vietnam standards
- ✓ Concrete mixing area is located away from residential areas
- 32. Some of the anticipated environmental impacts during the construction period have been mitigated by implementing the EMP in the process of construction projects.

June to Dec 2016: the main environmental problems are detected and timely warnings such as was mentioned above.

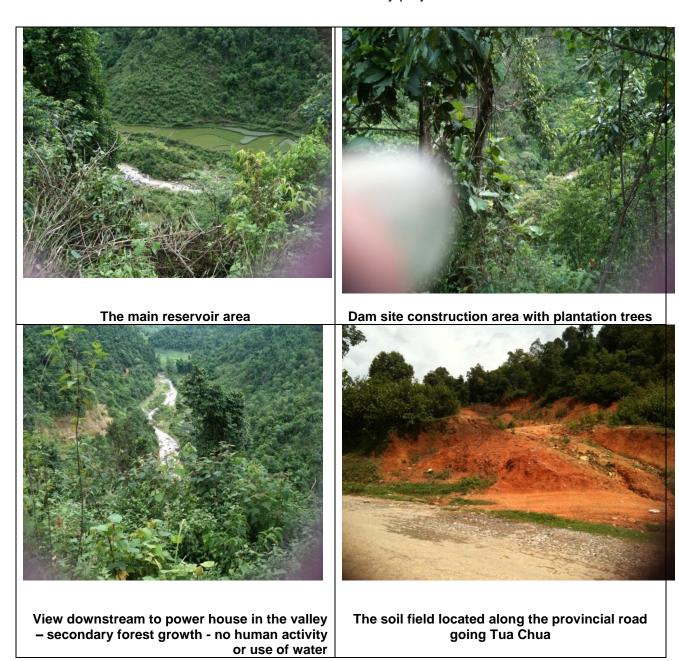
Recommendations

Dien Bien Power Company associated with the construction supervision consultant to monitor stricter and there are many measures and penalties for violations contractors, warning of the impact and provide mitigation measures to prevent impacts and adverse effects on the environment. At the same time technical assessment need to be conducted and compensation needed to be provided if any impacts caused by subproject being identified

APPENDICES

- a) Appendix 1: Photos of the Nam Pay project site
- b) Appendix 2: UXO license
- c) Appendix 3: Proposal Reforestation reimbursement
- d) Appendix 4: Environmental monitoring report of construction contractor.

ANNEX 1: Photos of the NamPay project site



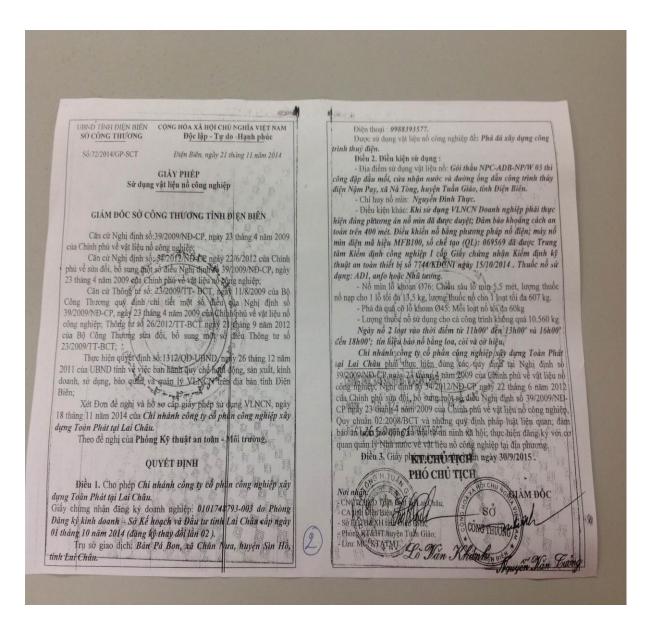




Plant Location

The villagers in project sites receive their drinking water by a pipe system which has been organized through the Commune and pipes water from side streams above the Nam Toong.

Anppendix 2: UXO license



Appendix 3: Proposal Reforestation reimbursement

TổNG CÔNG TY ĐIỆN LỰC MIỀN BÁC CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM Độc lập - Tự do - Hạnh phúc CÔNG TY ĐIỆN LỰC ĐIỆN BIÊN Điện Biên, ngày 05 tháng 01 năm 2015 Số: 824 /TT-PCĐB TO TRÌNH Về việc để nghị phê duyệt phương án trồng rừng thay thế khi chuyển mục dích sử dụng rừng sang xây dựng công trình: Thủy điện Nâm Pay, xã Nà Tông, huyện Tuần Giáo, tinh Điện Biên. Kính gửi: Sở Nông nghiệp và Phát triển nông thôn tinh Điện Biên Tên tổ chức: Công ty Điện lực Điện Biên Địa chỉ: Số 904, Đường Võ Nguyên Giáp, phường Mường Thanh, thành phố Điện Biên Phú, tinh Điện Biên Căn cứ Thông tư 24/2013/TT-BNNPTNT ngày 6 tháng 5 năm 2013 Quy định về trồng rừng thay thế khi chuyển mục đích sử dụng rừng sang sử dụng cho mục đích khác, để nghị Sở Nông nghiệp và phát triển nông thôn thẩm định và trình Uy ban nhân dân tinh phê duyệt phương án trồng rừng thay thể như sau: Tổng diện tích rừng chuyển đổi mục đích sử dụng: 3,8 ha. Đối tượng rừng chuyển đổi: Rừng sản xuất và rừng phòng hộ; Vị trí trồng rừng thay thế: Khoảnh 3, 6, tiểu khu 577, xã Nà Tòng, huyện Tuần Giáo. Thuộc đối tượng đất rừng: Sản xuất. Vị trí trồng rừng thay thế: Khoảnh 1, 5, tiểu khu 577, xã Nà Tòng, huyện Tuần Giáo. Thuộc đối tượng đất rừng: Phòng hộ Phương án trồng rừng thay thế: Loài cây trồng: Lựa chọn loài Keo tai tượng đối với rừng sản xuất và trồng Thông ba lá đối với rừng phòng hộ - Phương thức trồng: Thuần loài - Vốn đầu tư bình quân 1ha rừng phòng hộ: 56.347.760 đồng Vốn đầu tư bình quân 1ha rừng sản xuất: 41.182.160 đồng - Thời gian trồng: Năm 2015 Tổng vốn đầu tư trồng rừng thay thế: 240.509.489 đồng trong đó vốn đầu t trồng rừng phòng hộ là 162.875.530 đồng; vốn đầu tư trồng rừng sản xuất 77.633.959 đồng. Công ty điện lực Điện Biên cam đoan thực hiện đúng quy định của nhà nướ về trồng rừng thay thế, nếu vi phạm hoàn toàn chịu trách nhiệm trước pháp luật./. Nơi nhận: huy KT.GIÁM ĐÓC - Như kính gửi; PHQ GIÁM ĐÓC - Luu VT, OLXD.

Appendix 4: Environmental monitoring report of construction contractor

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM ĐỘC LẬP – TỰ DO – HẠNH PHÚC

Điện biên, ngày 20 tháng 12 năm 2016

BIỂU GIÁM SÁT MÔI TRƯỜNG TRONG QUÁ TRÌNH THI CÔNG

Gói NPC-ADB-NP/W05: Thi công đường ống áp lực, nhà van, nhà máy thủy điện, trạm OPY, khu quản lý vận hành, nhà quản lý vận hành; (Nhà thầu trúng thầu: Liên danh Công ty C.P đầu tư và xây lắp Sông Đà - Công ty C.P đầu tư vvv)

- Dự án: Thành phần vay vốn ADB: Thủy điện Nậm Pay. Thuộc cấu phần 1 dự án "Phát triển năng lượng tái tạo và mở rộng, cải tạo lưới điện cho các xã vùng sâu, vùng xa" vay vốn Ngân hàng phát triển Châu Á.
- Vị trí: Tại xã Mùn Chung (nay là xã Nà Tòng) Huyện Tuần Giáo.

- Thời gian báo cáo: Từ ngày 1/7/2016 đến 31/12/2016.

NHÀ THẦU THỊ CÔNG

CÔNG TY

DÂU TƯ VÀ XÂY Ả P

PHÓ GIÁM ĐỐC

BÙI ƯỦU XÂN

ĐIỆN BIÊN THÁNG 12/2016