

Independent Advisory Panel Report

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8 February 2016

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

Report Number 6 on the Sixth Site Visit, 7-13 December 2015 And Nam Ngiep 1 Power Company Limited Response to the Report

Prepared by the Independent Advisory Panel for the Asian Development Bank.

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**Report Number 6
of the Independent Advisory Panel
on the Nam Ngiep 1 Hydropower Project,
Lao PDR
Fifth Site Visit, 7-13 December 2015**

8 February 2016

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List of acronyms and abbreviations

ADB	Asian Development Bank
AIP	Annual implementation plan
BAC	Biodiversity Offset Advisory Committee
BIORAP	Rapid biodiversity assessment
BKX	Bolikhamxay Province
BRP	Biomass removal plan
CA	Concession agreement
CIA	Cumulative impacts assessment
DEQP	Department of Environmental Quality Promotion
DFO	District forestry office
DFRM	Department of Forest Resources Management
DG	Director-general
DoLA	Department of Land Administration
DONRE	District office of natural resources and environment
E&S	Environment and social
EGATi	Electric Generating Authority of Thailand International Company
EHS	Environmental health and safety
EIA	Environmental impacts assessment
EMP	Environmental management plan
ESMMP-CP	Environmental and social management and monitoring plan construction period
EMO	Environmental Management Office
EMU	Environmental Management Unit
EPF	Environmental Protection Fund
ERM	Environmental Resources Management (consulting company)
ESD	Environment and Social Division
ESIA	Environmental and social impacts assessment
GOL	Government of Lao PDR
ha	hectare
IAP	Independent Advisory Panel
IEE	Initial environmental examination
IFC	International Finance Corporation, World Bank Group
IP	Indigenous people
ISP	Integrated spatial planning / Invasive species program
<i>Kum baan</i>	Group of focal development villages
LR	Lower reservoir
LTA	Lenders' technical advisor
MEM	Ministry of Energy and Mines
MONRE	Ministry of Natural Resources and Environment
MRC	Mekong River Commission
NAFRI	National Agriculture and Forestry Research Institute
NBCA	National biodiversity conservation area / conservation forest
NNP1	Nam Ngiep 1 hydropower project
NNP2	Nam Ngiep 2 hydropower project
NNP1PC	Nam Ngiep 1 Power Company
NPA	National protected area
NRM	Natural resources management
NTFPs	Non-timber forest products
PAP	Project affected people
PFA	National protection forest area
PONRE	Provincial office of natural resources and environment
PP	Project proponent
PPA	Provincial protected area
PRMLCRC	Provincial Resettlement Management and Living Condition Restoration Committee
REMDP/REDP	Resettlement and Ethnic Minority Development Plan
RMU	Resettlement Management Unit
ROW	Right-of-way
SEA	Strategic environmental assessment
SMO	Social Management Office
TD	Technical Division
UR	Upper reservoir
USEPA	United States Environmental Protection Agency
WCS	Wildlife Conservation Society
WMO	Watershed Management Office
WMP	Watershed management plan
WWTP	Waste water treatment plant
XSB	Xaysomboun Province

Report Number 6 of the Independent Advisory Panel on the Nam Ngiep 1 Hydropower Project, Lao PDR

Sixth Site Visit, 7-13 December 2015

Introduction

1. The Independent Advisory Panel (IAP) was pleased to be working with representatives of the Asian Development Bank (ADB) and the Lenders' Technical Advisors (LTA) again during the IAP's site visit in December 2015. The ADB representatives consisted of the following specialists: Ms. Kurumi Fukaya, Ms Joyce Munsayac, Mr Vijay Joshi, and ADB consultants Ms Elizabeth Mann, Mr William Robichaud, Mr Matthew Corbett, and Anik Ajmera. The LTA social and environmental safeguards specialists, Mr Ettore Romagnoli and Mr Raoul Cola, also accompanied the IAP specialists during the site visit.
2. The IAP noted several **positive** developments during the site visit:
 - Unit compensation rates have been well disseminated throughout the project area. All of the PAP interviewed by the IAP were aware of these rates.
 - Livelihood development is progressing well in in Zones 3 and 5. A strong livelihood restoration team, many recruited from other hydropower and mining projects, has been assembled under good leadership. The team has the potential to make a difference in the lives of hundreds of PAP and to introduce sustainable alternative livelihood development activities.
 - The asset registration program is progressing well in Zones 2LR and 2UR.
 - The community health and safety program is being implemented effectively. It provides a strong foundation for a follow up "community living well program."
 - The IAP has noted that the Nam Ngiep 1 Power Company (NNP1PC) is making a good faith effort to resolve PAP issues through arbitration; before PAP feel the need to file a formal grievance. Grievance follow up is progressing well.
 - Working with the resettlement management units, NNP1PC has formulated well thought-out resettlement flow charts that are time-bound and to which the Bolikhamxay Resettlement Management Unit (RMU) feels a strong sense of ownership.
 - The IAP is pleased that NNP1PC/Finance and Accounting has completed a comprehensive flow of funds analysis. The analysis indicates clearly that the flow of funds is seriously delayed in processing by management in the Environment and Social Department (ESD).
 - The IAP notes that there is some improvement in the integration of the technical, environmental, and social teams at NNP1PC.
3. The IAP also notes the following **challenges** that NNP1PC is facing:
 - Several NNP1PC managers and team leaders expressed concern to the IAP about program delays caused by procurement procedures, which are currently the principal concern of field personnel. Some field activities that are linked specifically to the dry or wet seasons are being delayed unreasonably by overly-cautious and centralized procurement arrangements; with even small purchases being controlled centrally
 - Contrary to the IAP recommendation made in May 2015, NNP1PC has not yet completed preparation of a 2015 Annual Implementation Plan (AIP). An integrated development plan, prepared in a collaborative manner, should be prepared as soon as possible. It should be reviewed by the LTA and sent to the IAP for additional review and comments.
 - The IAP understands that completion of the asset registration surveys in Zones 2LR and 2UR is a challenge for the under-staffed asset registration team. ADB and IAP expressed

concern that asset registration in these two zones could not be completed by a 31 January 2016 deadline. However, asset registration in Zones 3, 5, Transmission Line, and roads has been completed.

- The IAP is concerned that about management of field activities by the Xaysomboun RMU. Since the last mission (May 2015), the Xaysomboun RMU has been provided with additional facilities including support staff and vehicles, however continues to operate at less than full effectiveness. Meanwhile the Bolikhamxay RMU does not have similar facilities but achieves more. The IAP thus considers the problem to be with management of the Xaysomboun RMU.
 - At Zone 2UR, the IAP understands that detailed demarcation of the full supply level (FSL) mark of the Nam Ngiep 1 reservoir has been completed, but some markers are missing and others are too distant from each other. Moreover, there is some thinking that FSL may be higher than originally marked. Current markers are too distant from one another to complete a detailed asset survey and for PAP to determine the exact impacts on their agricultural land and house plots.
 - The IAP has warned NNP1PC of a potential crisis: Since PAP at Ban Hatsaykham are expected to be resettled between March and May 2016, after a one-year delay, NNP1PC staff needs to advise PAP about when and where they can cultivate their rice. Land preparation in this village generally begins in February and March. Many PAP did not cultivate rice during the 2015 wet season (for various reasons). The PAPs food security situation needs to be monitored carefully.
4. This report consists of two parts: Part 1 presents the activities and actions of the Independent Advisory Panel on the Nam Ngiep 1 Hydropower Project in Lao PDR; and, Part 2 presents a summary of the resettlement, social, environmental, and biodiversity issues related to the construction of the Nam Ngiep 1 Hydropower Project in a matrix format. Four separate annexes present additional comments of individual members of the IAP.
 5. The report was edited by Mr. Anthony M. Zola, the Resettlement Specialist and Chairman of the IAP. The annexes were written by individual members of the Independent Advisory Panel.

Part 1: Independent Advisory Panel Actions

6. The Independent Advisory Panel (IAP) for the Nam Ngiep 1 hydropower project (NNP1) in Lao PDR undertook a sixth visit to NNP1 on 6-13 December 2015. The IAP members participating in the sixth visit included the following:
 - Dr. Songwit Chuamsakul, Social Specialist
 - Dr. Richard Frankel, Environment Specialist
 - Dr. Kathy MacKinnon, Biodiversity Specialist
 - Mr. Anthony M. Zola, Resettlement Specialist
7. The IAP and NNP1PC agreed that the seventh IAP site visit would be on 15-22 May 2016. Subsequent site visits are proposed as follows:
 - Visits in 2016:
 - 1-5 August 2016 – supplemental visit by Dr. Songwit and Mr. Zola only; to observe resettlement of Ban Hatsaykham PAP
 - 11-18 December 2016 – whole IAP
8. This IAP report to NNP1PC and the ADB covers the following topics: (i) issues of concern to the IAP; and, (ii) actions by NNP1PC that are recommended by the IAP based on the NNP1 Concession / License Agreement, official / legal documents of the Government of Lao PDR (GOL), and international best practices. Actions

recommended by the IAP are time-based; meaning that NNP1PC is obligated to or should undertake and/or complete these actions within a specific period of time.

9. The IAP categories of concern are as follows:

- **High / Very High / Urgent** category of concern requires the Developer to act **immediately**;
- **Medium** category of concern requires that the Developer act within **1-2 months**; and,
- **Low** category of concern requires action **before the next visit** of the IAP.

The categories of concern are consistent with those applied at other international standard hydropower projects in Lao PDR.

10. Copies of this IAP report will be submitted to the following individuals:

- (i) Mr Yoshihiro Yamabayashi, Managing Director, NNP1PC
- (ii) Ms Kurumi Fukaya, Asian Development Bank, Private Sector Operations

11. The sixth IAP site visit was undertaken over an eight-day period; from Sunday, 6 December, to Sunday, 13 December 2015. The IAP travel schedule was as follows:

- **Saturday, 5 December**
 - Arrival in Vientiane: Dr MacKinnon. Overnight in Vientiane
- **Sunday, 6 December**
 - Arrival in Vientiane: Dr Frankel, Dr Songwit, Mr Zola
 - IAP initiating meeting at Hotel Khamvongsa
 - Overnight in Vientiane
- **Monday, 7 December**
 - Briefing by NNP1PC managers and staff at the Nam Ngiep 1 Hydropower Project office in Vientiane on (i) measures taken related to actions required and recommended by the IAP during the 5th IAP site visit in May 2015; and, (ii) overall progress on NNP1 project implementation and issues of concern.
 - The IAP resettlement and social specialists and ADB and LTA representatives met with the Deputy Minister of Energy and Mines and representatives of the Project Steering Committee (SC) Secretariat, which is chaired by the Minister of Energy & Mines. The group requested a meeting with the SC Chair to explain the current situation, GOL's and RMU's role, and proposed measures (i.e. asset registration and choice survey flowcharts) to avoid delays in implementation.
 - The IAP resettlement and social specialists traveled to Lone Xang District, Xaysomboun Province: overnight in Lone Xang District.
 - Environmental Specialist travels with EMO Representative, LTA and ADB Environment Consultants to Paksan; short meeting with EMO team to begin review of work progress and changes in organization chart; overnight in Paksan.
 - Biodiversity Specialist: Briefings of IAP by SMO and EMO at NNP1C; follow up meetings re Biodiversity and Watershed Management. Meeting between IAP, EMO Watershed and Biodiversity Team (Viengkeo, Souane and Hendra Winastu) ADB environmental team (V.Joshi, W. Robichaud, M Corbett), and Biodiversity Offset Advisory Committee (Ramesh Boonratana (Zimbo), Pheng Phengsintham and Rob Timmins). Briefing from Biodiversity Baseline Survey consultant, Dr Chanthavy Vengkhomheng on biodiversity surveys in watershed and other sites.
- **Tuesday, 8 December**
 - The IAP resettlement and social specialists and ADB and LTA representatives met with the district governor and other officials of Hom District and PAP from Zone 2LR, in Palavek village to discuss resettlement issues related to resettlement from Zone 2LR.
 - Travel to and overnight in Paksan.
 - Environment Specialist: Travel with LTA, ADB Environmental Specialist, EMO and TD to construction sites; presentation of general and technical issues by NNP1PC of main dam (left bank and right bank), RCC/ CVC/ aggregate plant yard, and re-regulation dam and power house area. Environmental inspection, monitoring, and waste management review by team leaders. Overnight at owner's base camp.

- Biodiversity Specialist: Meeting with DFRM, MONRE re Biodiversity Offset and Watershed Management Plan. Travel to and overnight in Paksan.
- **Wednesday, 9 December**
 - The IAP resettlement and social specialists and ADB and LTA representatives traveled to Thathom District, Xaysomboun Province, for consultations with district officials and PAP from three villages in Zone 2UR.
 - Travel to Paksan; overnight at Paksan.
 - Environmental Specialist together with LTA and ADB Environmental Specialists: Continue site inspections of all contractor work sites and sub-contractor camps. All day site visits including bridge to Houay Soup Area, landfill, sub-contractor's camp, wastewater treatment plants. After site visits discussed status of newly constructed or revised wastewater treatment plants with TD Environmental Consultant. Overnight at owner's base camp.
 - Biodiversity Specialist: Meeting with PONRE BKX and PONRE XSB re findings of biodiversity surveys and Watershed Management Action Plan: Konglee Manokaun, Pangkham Vilayphanh (BKX) and Messrs Sithat Vilaysouk and Sengthao PONRE and WMO staff (XSB) to discuss results of biodiversity surveys and PONRE priorities and challenges in watershed. Meeting with Wildlife Conservation Society re potential support from WCS to Nam Mouane area (Scott Stanley (Country Director) and Alex McWilliams (Country Operations Officer))
- **Thursday, 10 December**
 - Environment Specialist together with LTA and ADB Environmental Specialists: Travel to Paksan for meeting at EMO to review biomass removal plan, meet with biomass removal contractor, and discuss expected schedule for start of biomass clearance work. Return to owner's base camp for visit and inspection of Obayashi OC and NNP1PC base camps, wastewater treatment and solid wastes handling facilities. Visited sanitary landfill, batching plant, and quarry areas. Overnight at owner's base camp.
 - Biodiversity Specialist: Work at EMO office, Paksan. Visit Houay Ngua PPA and dam site to assess status of protection and further clearing in protected forests. Overnight in Paksan.
- **Friday, 11 December**
 - The IAP resettlement and social specialists and ADB and LTA representatives traveled from Paksan to Zone 3.
 - The IAP resettlement and social specialists met with PAP in Ban Thaheua, Ban Had Gniun, and Ban Hatsaykham villages in Zone 3, located near the NNP1 powerhouse and dam; to discuss project impact issues.
 - The IAP resettlement met with the Governor of Bolikhan District and the Chairman of the RMU of Bolikhamxay Province to discuss social and environmental impacts from the NNP1 construction project. Travel to Vientiane; overnight at Vientiane.
 - The IAP resettlement and social specialists and ADB and LTA representatives met the Minister of Energy and Mines (MEM), the SC Chair and his staff to raise key concerns about critical steps in the resettlement process which can delay the Project, the role of GOL, and the RMU XSB in particular.
 - The IAP social specialist met with the Vice President of the Lao Front for National Construction and his staff, in Vientiane Capital. Overnight at Vientiane.
 - Environment Specialist together with LTA and ADB Environmental Specialists: Meeting with Obayashi Environmental, Health and Safety Managers. Reviewed outstanding environmental issues. Met with EMU of Bolikhamxay Province to discuss monitoring issues, capacity building, and funding. Travelled to construction site of high voltage line to view work and discuss environmental issues. Return to Vientiane. Overnight at Hotel Khamvongsa, Vientiane.
 - Biodiversity Specialist: Discussions with Biodiversity Advisory Committee (BAC) re follow-up on biodiversity surveys in Nam Mouane area. Travel from Paksan and overnight at Vientiane.
- **Saturday, 12 December**
 - Morning: Internal IAP meeting at the Hotel Khamvongsa.

- IAP prepared individual debriefing presentations for NNP1PC staff.
- Afternoon: IAP debriefing for NNP1PC management and staff at Nam Ngiep 1 Hydropower Project office in Vientiane.
- Overnight in Vientiane.

- **Sunday, 13 December**

- Morning: IAP wrap-up meeting at the Hotel Khamvongsa.
- Afternoon: Follow-up technical discussions by individual specialists.
- Evening: Return travel to home bases.

12. The remainder of this report consists of the following:

- (i) Part 2: a summary of resettlement, social, environmental, and biodiversity issues, including the IAP's recommendations and level of concern; and,
- (ii) Additional comments of the IAP in the form of individual technical annexes as follows:
 - Annex 1: Resettlement issues
 - Annex 2: Social issues
 - Annex 3: Environmental issues
 - Annex 4: Biodiversity issues

Part 2: Summary of IAP issues, requirements, and recommendations

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R1	Site visits: 7-14 December 2014 3-10 May 2015 Houay Soup Resettlement Area Initial Environmental Examination (IEE)	Depleted and degraded soil at the Houay Soup resettlement site is the single most important issue for PAP to be resettled Need to redesign land use in the Houay Soup resettlement area	<ul style="list-style-type: none"> Until recently, the Developer's Pilot Plan (demonstration) farm at Houay Soup was managed by a competent and experienced Hmong (Mr Vang Moua). He was trusted by the PAP from Zone 2LR and Zone 3. The IAP learned that the manager has been transferred, thus leaving many PAP in doubt about NNP1PC's commitment to (i) continuing demonstrations of viable agricultural activities; and, (ii) improving soils and grazing land prior to PAP resettlement. 	<ul style="list-style-type: none"> The IAP notes that the IEE for Houay Soup prepared in 2014 was considered "irrelevant" by the ADB. Unfortunately, this issue was not discussed during the IAP visit in December 2015. The IAP will examine the revised IEE when it is received. Because of time limitations, the IAP did not visit Houay Soup as planned during the December 2015 site visit. <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that all mitigation measures proposed in the IEE be implemented at the Houay Soup resettlement site. 	High
R2	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Need to upgrade up to 500 ha designated for grazing of large livestock; prior to resettlement of PAP with cattle and buffalo	<ul style="list-style-type: none"> NNP1PC staff with previous experience in animal husbandry and pasture development are available to provide technical advice on this important activity. Livestock rearing has a high potential to provide sustainable income to PAP The area designated for pasture development will be identified after the "choice survey" at 2LR determines actual numbers of PAP and livestock to be resettled. 	<ul style="list-style-type: none"> The IAP is unsure of the on-the ground status of pasture development activities NNP1PC reports having plans to improve grazing areas at Houay Soup and to establish individual and common fodder gardens in the residential areas of Houay Soup <p>Recommendations:</p> <ul style="list-style-type: none"> The IAP recommends that improvement of grazing areas and common and individual PAP fodder gardens begin as soon as possible. This will require the irrigating of improved tropical grasses and legumes prior to the 2016 wet season. 	Medium
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R3	<p>Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015</p> <p>Concession Agreement, Annex C, Appendix 3, Table 1-1, b</p>	<ul style="list-style-type: none"> Designation of the Houay Soup area as resettlement site by GOL authorities Inclusion of adjusted size and land use plan for Houay Soup in the revised IEE Significantly smaller size of Houay Soup area that is available for PAP resettlement Designation of 3,715 ha in the PFA for sole use of PAP settling at Houay Soup 	<ul style="list-style-type: none"> GOL certificate granted to NNP1PC for 1,745 ha at Houay Soup resettlement area outside national protection forest area (PFA); an additional 648 ha also has been degazetted from PFA by MONRE. Total area for resettlement is 2,393 ha 3,715 ha remains in PFA; will be managed through an integrated Natural Resources Management Plan Asset registration completed in Houay Soup area. Except for those affected by the access roads and the transmission lines, no PAP using land in Houaysoup have been compensated as REDP Zone 5 update is accepted by ADB. 	<p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that all mitigation measures made in any revised version of the Houay Soup IEE be implemented. The revised IEE for Houay Soup should reflect (i) 648 ha degazetted from the PFA; and, (ii) a broad framework for sustainable conservation and use of remaining 3,715 ha remaining in the PFA, with details to be finalized through participatory land use planning (PLUP) following relocation of PAP. The IAP recommends that construction of critical infrastructure at Houay Soup (as defined by the ADB) should begin as soon as possible to ensure the smooth resettlement of PAP from Hatsaykham. Clearance should be obtained from the ADB. 	High
R4	<p>Site visits: 7-14 December 2014 3-10 May 2015 6-13 December 2015</p> <p>Concession Agreement, Annex C, Appendix 3, Table 1-1, b</p>	<p>A large number of PAP in Zone 2LR have stated repeatedly that they prefer not to resettle at the Houay Soup resettlement area; that instead they will self-resettle</p>	<ul style="list-style-type: none"> According to the CA, NNP1PC is responsible for two options: (i) resettle PAP at Houay Soup; or, (ii) pay cash to PAP for self-resettlement based on unit compensation Official cut-off-date for the project area is 11 April 2014 PAP at 2LR have stated that the cut-off-date is date they receive compensation payment for assets PAP assets survey is nearly completed at 2LR; 48 PAP in Ban Namyouak refuse to cooperate in asset registration survey. Deputy governor of Xaysomboun Province said PRLRC would declare a new cut-off- date after asset registration is completed; with compensation paid immediately to those who opt for cash. For those refusing to decide, GoL would require them to move to Houay Soup. 	<p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that PAP who choose to self-resettle should be interviewed and assisted to prepare self-resettlement plans based on a draft self-resettlement plan format prepared in consultation with the RMUs and approved by the PRLRC; to document PAP their choice of future livelihood development; and, to ensure PAP are not self-relocating to areas not approved by GOL. . The IAP recommends that compensation payments be initiated soon after the asset survey, the choice survey, and the self-resettlement livelihood plans are completed. The IAP recommends that the GOL- NNP1PC prepared flowcharts be used to deal with PAP refusing to cooperate with asset registration process. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended 					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R5	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Extraordinary delay in resettlement of PAP from Ban Hatsaykham Need for PAP from Hatsaykham to cultivate crops beginning in March 2016 NNP1PC has scheduled resettlement of PAP from Hatsaykham during the 2016 growing season	<ul style="list-style-type: none"> • A social management action program (SMAP) is being effectively implemented at Ban Hat Gniun village and Ban Hatsaykham hamlet to minimize impacts from nearby construction camps • Ban Hatsaykham will not be moved to the Houay Soup resettlement site until March 2016 • Based on the indicative choice survey, only one PAP family from Hatsaykham now agrees to move to Houay Soup. Some PAP in Zone 3 refuse to make a choice between self-resettlement/cash compensation or relocation to Houay Soup. • GOL has created a task force to talk to PAP as part of the negotiation process for the final choice survey. For those refusing to decide, GoL would require them to move to Houay Soup • GOL and NNP1PC have prepared a flow chart concerning how to deal with PAP who refuse to make a choice about moving to Houay Soup or not 	<ul style="list-style-type: none"> • The IAP has recommended since 2013 that PAP at Ban Hatsaykham be moved early to the Houay Soup resettlement area or be relocated temporarily to another part of Ban Hat Gniun village to minimize impacts from construction activities. This move has not taken place for various reasons. The IAP is very disappointed that a temporary relocation was not undertaken. • The IAP supports the GOL decision to move to Houay Soup those PAP who refuse to decide. • The IAP understands that the PAP at Ban Hatsaykham have lost confidence in NNP1PC and no longer believe that the resettlement process will benefit them. <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP recommends that NNP1PC management establish immediately a special task force to take command of and organize the Hatsaykham resettlement process. This task force should be headed by an experienced resettlement specialist and should consist of mostly GOL officials linked to the RMU. The activity should be planned, organized, and implemented with military precision; and, in such a way that PAP have time to prepare land and plant their main crops during the 2016 growing season. • The IAP recommends that NNP1PC prepare immediately an emergency food and nutrition security program that will provide food and financial support to Hatsaykham PAP who are unable to undertake both resettlement and crop cultivation (of their main crop) at the same time. 	Urgent
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R6	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Commercial development by camp followers around the Developer's base camp and other labor camps will have a negative impact on PAP in host villages located near those construction camps	<ul style="list-style-type: none"> • The "zero tolerance" policy has been adopted by the Developer. • A code of conduct is attached to every contract and emphasized by an instruction from the Bolikhan District Governor on social behavior by construction workers • SMAP is being implemented in the impacted areas • Experienced staff are implementing social management activities among PAP and camp followers • The number of restaurants and beer bars has decreased at Ban Hat Gniun and Ban Hatsaykham • A police sub-station has been established to ensure law enforcement 	The IAP is satisfied that sufficient actions have been taken to reduce unethical and immoral social behavior by all employees of the Developer (including consultants and advisors), the Head Contractor, and all sub-contractors. Lapses can and will occur however and the situation should be closely monitored by NNP1PC and inspected periodically by the LTA.	Closed
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R7	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 3-10 May 2015 6-13 December 2015	<ul style="list-style-type: none"> Demarcation of fully supply level of the Nam Ngiep 1 reservoir Livelihood restoration of PAP in three villages in Zone 2UR Policy level clarification is needed related to islands in the NNP1 reservoir and use of drawdown zones 	<ul style="list-style-type: none"> The assets survey is completed at Zone 2UR; follow up survey is needed because the detailed demarcation of full supply level of the Nam Ngiep 1 reservoir has not been completed Issues related to use of islands and drawdown zones need to be addressed PAP are waiting for a more intensive NNP1PC program to provide training for new, non-agricultural livelihoods Livelihood development team at 2UR requires stronger leadership 	<p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that the detailed demarcation of the full supply level of the Nam Ngiep 1 reservoir by NNP1PC engineers should be completed as soon as possible. The current demarcation is insufficient to finalize the asset survey. The IAP recommends stronger leadership and management the livelihood development team at 2UR. 	Medium
R8	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	<ul style="list-style-type: none"> Organizational and institutional issues related to both NNP1PC and the GOL Effectiveness of the Xaysomboun RMU Hom District officials have not been well informed by Xaysomboun RMU about resettlement issues and procedures Integrated planning by NNP1PC needs to be demonstrated 	<ul style="list-style-type: none"> Xaysomboun RMU is providing only weak support to NNP1PC in coordinating pre-resettlement activities in Zone 2LR Hom District officials report lack of knowledge of NNP1 project details; lack leadership from Xaysomboun RMU 2016 AIP not completed; should demonstrate integrated planning by technical, environmental, and social units Monthly reports have not been sent to IAP in the past 	<ul style="list-style-type: none"> Xaysomboun RMU is not facilitating the smooth resettlement of PAP in Zone 2LR, resulting in confusion and lack of trust Delays in pre-resettlement activities in Zone 2LR hurt the image of NNP1PC and discredit management and staff, and cause confusion among PAP <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that ways and means be identified and implemented to strengthen the Xaysomboun RMU. The IAP recommends that NNP1PC work closely with the Xaysomboun RMU to provide orientation and familiarization to Hom District officials to facilitate NNP1PC's ability to work in Zone 2LR. The IAP recommends that NNP1PC complete and submit the 2016 AIP for review as soon as possible. 	Medium
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R9	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	<ul style="list-style-type: none"> The NNP1PC internal management and organization needed to implement resettlement are weak Procurement procedures needed to facilitate important and time-sensitive field operations are complex and slow; and, may effect resettlement activities Flow of funds are being delayed by ESD managers, not by the Finance and Accounting Department 	<ul style="list-style-type: none"> Release of funds for SMO and EMO field activities continues to be delayed by ESD management resulting in delays in field operations related to preparations for resettlement Procurement is delayed resulting in delays in field operations and preparations for resettlement NNP1PC is hiring senior (retired and formerly high ranking officials) Lao to give NNP1PC a higher profile without considering their lack of hands-on field experience in hydropower, resettlement, and livelihood restoration 	<ul style="list-style-type: none"> The TOR for the IAP stipulates that the IAP is required to review monthly reports The experience of senior NNP1PC employees from other high profile hydropower projects is not being applied by key NNP1PC and GOL decision makers <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that NNP1PC send the monthly progress reports to IAP at the same time they are sent to ADB The IAP recommends that NNP1PC use senior Lao with experience in working on other hydropower RMU to work with the Xaysomboun RMU. Senior Lao without experience in working on hydropower projects should be used only at selected official meetings and not hired as NNP1PC staff. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S1	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	<ul style="list-style-type: none"> Livelihood Programs Agricultural products and market 	In Zone 3 (Ban Thaheua, Ban Hat Ngiun, and Ban Hatsaykham) the livelihood programs have been improved and accepted by the PAP (e.g. vegetables, mushroom growing, chicken, fish, and frog raising). These programs are successful and have generated 2,000,000-3,000,000 kip income per month for many PAP families. However, the programs have not started yet in Zone 2LR and Zone 2UR.	Recommendation The IAP recommends that when the security in Xaysomboun Province is back to normal then the Project should start the livelihood programs in Zone 2LR and Zone 2UR as soon as possible. And livelihood program fund in each village is required. So far, these products from the programs are needed by the local markets and are consumed by the villagers in the communities.	Medium
S2	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	<ul style="list-style-type: none"> Hmong graves removal 	So far, there are about 900 Hmong graves (more than 600 graves in the 4 villages of Zone 2LR, and 268 graves in Ban Pou of Zone 2UR, and 2 graves in Ban Hatsaykham of Zone 3.	Recommendation The IAP recommends that the Hmong graves in Zone 2LR should be compensated quickly so that the PAP can undertake the needed spirit ceremonies/rituals before impoundment. The removal of each grave requires Hmong people to perform their indigenous rituals for several days. It means that in Zone 2LR may take 2-3 years to remove all Hmong graves.	High
S3	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	<ul style="list-style-type: none"> Resettle to Resettlement Site (Houay Soup) and self-resettlement 	<ul style="list-style-type: none"> According to PAP, 2 households of Ban Namyuak, Zone 2LR and 1 household of Ban Hatsaykham Zone 3 decided to move to Houay Soup. The rest choose self-resettlement. According to PAP, moving Mr. Vang Moua, Manager of Pilot Project in Houay Soup, to Ban Pou of Zone 2UR, has caused confusion among the PAP. They perceived his transfer means the Project is abandoning Houay Soup. 	Recommendation The IAP recommends that the Project continues to improve Houay Soup, the Resettlement Site, as planned. There will be more PAP who decide to move to Houay Soup if the Project is able to develop Houay Soup and its infrastructure and facilities.	High
* Level of Concern: <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S4	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Food security and livelihood programs	In Zone 3 (Ban Thaheua, Ban Hat Ngiun, and Ban Hatsaykham) the livelihood programs have improved and are accepted by PAP. These programs are successful and have generated significant income for many PAP families. However, programs have not started in Zone 2LR and Zone 2UR.	Recommendation The IAP recommends that when the security in Xaysomboun Province is back to normal the Project should start livelihood programs in Zone 2LR and Zone 2UR as soon as possible. A livelihood program fund in each village is required.	Medium
S5	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	<ul style="list-style-type: none"> There are more people from outside both Hmong and Lao Loum during the Hmong New Year Festival when the IAP visited Ban Hatsaykham, Zone 3. In Zone 3: Following establishment of the construction camps, drug abuse, prostitution, alcohol drinking, crimes, fighting, gambling, stealing, and other crimes increased. 	The IAP observed and was informed that the issues are under control. It is obvious that the issues are better than last year. The PAP, communities, and relevant district officials have paid more attention to the issues. Some karaoke shops in Zone 3 have been closed. However, the IAP has been informed that there are still many sex workers in Zone 3, especially along the road in Ban Hat Ngiun	Recommendation <ul style="list-style-type: none"> The IAP recommends the Project discusses and solves the issue with village leaders, local committees, police, and Bolikhan authorities. If not, drug abuse will impact not only Hatsaykham but Project workers and Lao Loum communities; this issue requires close observation and investigation The IAP recommends that it is required to enforce the Lao Laws. The Project has to work closely with the village headmen, the district and provincial authorities. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S6	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	The PAP have requested 9 new more items of assets and cultivated land that is located above 320 meters of the flood for compensation	The 4 villages of Zone 2LR (Ban Namyouak, Ban Sopyouak, Ban Sopphuane, and Ban Houaypamom) have requested addition of 9 items, including assets and cultivated land (in case of Ban Sopphuane; that is located above 320 masl, since it cannot be cultivated after impoundment) for compensation from the Project.	<p>Recommendation</p> <p>The IAP recommends that the GOL (district and provincial levels), the Project, and PAP representatives set up a committee to discuss and find a solution together immediately. Otherwise issues will spread to other villages and might create more problems for the Project. For land above 320 masl, the Project should explain the PAP entitlements a per the compensation policy in the REDP and PRLRC Decree of 21 August 2015.</p>	High
S7	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Self-resettlement	The Hom District Governor promised PAP of Zone 2LR that they would be allowed to self-resettle to Houaysai and Samsao and nearby villages which are close to the old PAP villages. Otherwise they have to move to Houay Soup, no other choice.	<p>The IAP understands from Mrs. Bouaphane Likaya, a Member of the National Assembly of Lao PDR and a national level Hmong leader that a decree granting cash payment to self-resettlers may be difficult.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP supports her recommendation that PAP be resettled at Houay Soup. • The IAP recommends that NNP1PC take time to brief national level Hmong leaders about the REDP entitlements of Hmong PAP. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S8	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	In Zone 2LR, 49 households have refused to register their assets with the Project.	In Ban Namyouak of Zone 2LR, there are 49 PAP households that have refused to register their assets with the Project. Their reasons include: (1) the unit rate is very low; (2) the GOL does not support any good and proper resettlement site for them; (3) they require quick cash payments. The IAP has been informed that these PAP request additional discussions with the GOL and the Project.	Recommendation The IAP recommends that the GOL-NNP1PC flow charts be implemented while keeping local village leaders informed and systematic and continuous dialogue with PAP so that fair solutions can be found for all PAP.	High
S9	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Collaboration with Xaysomboun Province, Zone 2LR, and 2UR	The security issue in Xaysomboun Province in November – December 2015 and during the IAP site visit might cause delays in activities in Zone 2LR and 2UR. It is understood that several missions and activities in the 2 zones could not take place for several weeks.	Recommendation The IAP recommends that the Project works through the RMU, Vice Governor and the Governor of the Xaysomboun Province. Whenever Project staff visit the site, they should visit and inform the Governor of Hom District and related officials in the district. In addition, Project staff should visit village's leaders, IP elders, the head of women's group, head of the youth group, etc. This is also a strong recommendation from the Vice President of the Lao Front for National Construction.	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S10	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Cut-off-date	The last cut-off date was August 15, 2015 and the PAP have been informed. In Zone 2LR, PAP from the 4 villages have requested 9 new items of assets to be considered for compensation from the Project. Ban Sopphuane of Zone 2LR has requested the cultivated land above 320 meters to be considered for compensation because the cultivated land cannot be used anymore.	Recommendation The IAP recommends that the GOL (district and provincial levels), the Project, and the representative from the PAP, must set up a committee to discuss and find a solution together immediately. Otherwise the issues will spread to other villages and might create more problems for the Project.	High
S11	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Community participation	The IAP was informed that the Project staff shall meet the village leaders when they visit the villages, especially in Ban Hatsaykham, Zone 3. The village leaders said that the number of social issues has decreased and that they can help/support the Project to solve other social problems as they arise in the community.	Recommendation The IAP recommends that more community participation be applied as an additional tool to prevent more social issues /crimes from occurring, e.g. in Ban Hatsaykham. Representatives of the Lao Front for National Construction can be mobilized to help resolve issues in the village.	Medium
S12	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	Asset registration	The IAP has been informed that the asset registration in Zone 2LR is still slow and behind the schedule since the lack of staff and insufficient tools. The asset registration deadline is due on January 31, 2016. However, according to the PAP, they said that this maybe impossible.	Recommendation The IAP recommends that the asset registration in Zone 2LR be finished quickly. This requires sufficient support to Project staff and tools. This requires to move some Project staff from other zones to Zone 2LR temporarily. Without sufficient staff and tools, the asset registration cannot be finished within the schedule.	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of Concern
E1	<p>ESIA of NNP1</p> <p>Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015</p> <p>National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR, No. 561/CPI, June 2005</p>	<p>There are four hydropower projects under construction that will affect water quality, water use and water availability along the Nam Ngiep river. An organizational arrangement is needed to manage the watershed resources and enable communications and cooperation between the hydropower companies.</p>	<ul style="list-style-type: none"> The watershed management plan (WMP) started in May 2015 and is on-going. The focus of the action plan is to develop a WMP and undertake necessary surveys and establish the WMO. Overlapping concessions, cumulative and trans-boundary impacts from hydropower, mining, and other development projects within the watershed necessitate consideration of an integrated management and monitoring plan for the Nam Ngiep watershed. NNP1 Watershed Team has been meeting with MONRE, provincial and district officers, to discuss management issues of the watershed. However, representatives of other Project Proponents in the watershed have not been in attendance. An integrated watershed management plan necessitates involvement of all key stakeholders and how they can share resources, data and improve communications. Little information is provided in the NNP1PC Monthly Progress Reports. 	<p>Recommendation</p> <p>The IAP recommends that NNP1PC continues its efforts to contact all Project Proponents of the four hydropower projects being developed along the Nam Ngiep River and organize an annual meeting to be hosted by NNP1PC to discuss sharing water flow and water quality data and other issues of interest or concern to the four Project Proponents and concerned government agencies.</p>	Low
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of Concern
E2	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015	NNP1PC is expected to contribute to capacity building of MONRE and assist in establishing the EMU staffed by provincial and district representatives from project affected areas	<ul style="list-style-type: none"> • IAP discussions with the EMU of Bolikhamxay indicate that NNP1 is a priority project for GOL and EMU would like to join in monthly monitoring site visits to contractors' camps and construction sites. Funds have been received from NNP1PC to start compliance monitoring and the EMU Bolikhamxay issued its first report in November 2015. NNP1 Monthly monitoring reports are also now available at the EMU (but in English only; Lao translations were requested). • Although the LTA were unable to visit the EMU of Xaysomboun Province, it was reported that MONRE has started the Integrated Spatial Planning (ISP) for Xaysomboun Province. It is believed that Xaysomboun has now received NNP1 monitoring reports. The EMO should include training programs for the Xaysomboun EMU in compliance monitoring and site inspections as part of its AIP 2016. 	<p>The IAP is satisfied with the efforts that the EMO is now making to include training for the EMU in compliance monitoring and reporting on a regular basis.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • The EMU reports should be sent to both NNP1PC and MONRE and include an assessment of the adequacy and effectiveness of implemented mitigation measures being made by the company and its contractors. The EMU lacks any monitoring equipment, but they can be made aware of what parameters are relevant and how the EMO Compliance Monitoring team samples the environment to measure and analyze the adequacy of protective measures being implemented by both the company and its contractors. • It is important for the EMU to see the improvements being made to the wastewater treatment plants at the various construction camps and to verify that the improved treatment systems are producing an effluent that meets the Lao effluent standards. Both the EMO and the EMU should be briefed on the waste treatment technologies being implemented at the various camp sites (how the systems work and how they should be maintained). • Likewise, the EMU should participate in discussions with communities on how best to manage their solid wastes from both the resettlement communities as well as the construction sites. These efforts should include separation, recycle and reuse of all waste materials, with the goal to create new job opportunities for community members. This emphasis on recycle and reuse of wastes should include the collection of biomass from the future reservoir. It is possible to recycle over 90% of the solid wastes currently being thrown away in the sanitary landfill. Separation and recycle will thus save considerable landfill capacity and result in savings for the company as well as creating new jobs, income and new product opportunities for the resettlement communities. • Similar planning and training should be included for the EMU of Xaysomboun as construction work proceeds in the province. • The AIP 2016 should clarify and detail the training programs to be introduced to the EMUs of both provinces. The training should include all environmental issues that need to be improved in 2016 by the Contractor. Training includes joining in monthly joint inspections made by the EMO together with the Contractor and 	Medium

				<p>involvement in discussions of the proposed changes by the Contractors to correct outstanding environmental issues and non-compliances. The EMU can thus witness the compliance and monitoring approach used by EMO to ensure that the Contractor and all Sub-contractors meet with the conditions of Annex C of the CA and the ADB SPS.</p> <ul style="list-style-type: none"> The IAP again recommends that NNP1PC convene a workshop combining the EMUs of both provinces and MONRE to review duties of the EMU for Nam Ngiep watershed. MONRE should be invited as workshop organizer to review "lessons learned" from Nam Theun 2 and the Theun-Hinboun projects, and include the expanded mandate of MONRE to oversee integrated environmental conservation interests of water, forest, and biodiversity protection at the regional and district levels. It is believed that this training emphasizing "lessons learned" from other EMUs in hydropower development will serve as a very effective tool to promote capacity building of the EMUs. This should be followed by a planned visit to the Theun-Hinboun hydropower project in Bolikhamxay Province together with the EMU for the Theun-Hinboun project to review their responsibilities, their learning experiences, weaknesses, strengths, and to include field exercises with them to witness mitigation measures, and analyze findings. The workshop would greatly benefit the Company and the capacity building efforts of the project. Funds spent for this workshop would be well spent and beneficial to all parties. 	
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of Concern
E3	Site visits: 7-14 December 2014 3-10 May 2015 6-13 December 2015	The management of the environment is not in compliance with (1) the CA Obligation 2.2 Obligation to Implement Environmental Measures which states that the Company (NNP1PC) must ensure that the HCCEMMP is prepared by the Head Construction Contractor in accordance with the Concession Agreement.....and ensure that the Head Construction Contractor implements the approved HCCEMMP; and (2) the ADB Safeguard Requirements 1: Environment, Section 2. Environmental Planning and Management, para. 15, which states that when a third party's involvement (meaning a contractor, or an operator of an associated facility) will influence implementation of the EMP, the borrower/client (meaning NNP1PC) has control or influence over the actions and behavior of the third party, and will collaborate with the third party to achieve the outcome consistent with the requirements for the borrower/client.	<ul style="list-style-type: none"> • The Main Contractor (CWC) has three staff designated to manage and oversee the environmental, health and safety (EHS) obligations of the CWC and its Sub-contractors (Mr. Santi Sayakoummane, Environmental Specialist; Mr Taguchi Tomohiro, EHS Manager; and Mr Lester Palarca, Safety Engineer) in accordance with the CA and the ADB Safeguards. The IAP is satisfied with the new arrangement as long as supervision of environment affected activities of the CWC and its Sub-contractors is carried out by CWC in accordance with best practices and commitments of the ESMMP-CP. <ul style="list-style-type: none"> • CWC is still dependent upon NNP1 to provide all technical inputs, environmental monitoring, and reporting, plus meeting with the Sub-contractors to implement acceptable solutions to environmental issues. • The NNP1PC site activities have shown an improvement from the past as was observed and agreed both by IAP and LTA during this site visit. However, CWC is still not operating in accordance with ADB Safeguards and IFI Performance Standards. 	<p>The IAP believes that the CWC is non-compliant with ADB's Environmental Safeguards and IFC Performance Standards. CWC's non-compliance is the borrower/client's (NNP1PC) non-compliance as far as ADB and other lenders are concerned.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • NNP1 must continue to pressure the CWC to carry out its environmental management obligations both for the CWC and its sub-contractors in accordance with best practices. This means that the Technical Division (TD) must work closely with the EMO and not be in conflict with the EMO requests for improved CWC environmental actions to manage both their obligations and those of their sub-contractors. • The IAP is satisfied with the technical inputs of the Environmental Engineering Consultant to resolve design problems with the wastewater treatment systems of the sub-contractors, the CWC Main Camp, and the Owner's Camp. However, the implementation of the designs was not in accordance with the Consultant's recommendations. The TD allowed the EHS Managers of the CWC to change the design criteria. This is very surprising because TD would not allow the contractors to change approved designs of any civil works for the dam or power plant. The revised wastewater treatment plants are not properly constructed and need to be reconstructed for the third time in order to ensure operation efficiency and ability to achieve effluent standards. • The Technical Division and the EMO should not have allowed the Contractors to deviate (change) the approved designs. The EMO was negligent in its inspection work because they did not report or record any non-compliances for the wastewater treatment plants. EMO has a set of drawings. Why didn't they inspect the construction works of 	Very High

				<p>the wastewater treatment plants and report deviations from agreed upon designs? The EMO and the EHS Managers of Obayashi allowed the construction of the WWPTs to go forward without any checking of the construction works against the drawings.</p> <ul style="list-style-type: none"> • The designs are based on referenced international standards and thus CWC and its sub-contractors should build the treatment systems and install equipment as specified in the detailed design drawings. There should be no deviation from the design drawings unless agreed upon by a joint meeting between the EMO, TD, and the contractor in question. • The EMO is also taking samples to check on efficiency of the systems. The samples are not representative because they are not composite samples so the analytical results are not representative of what is going into or being discharged from the WWTPs. • The EMO is also not sampling the effluent if there is no discharge (to a water course). This is in violation to the CA and to ADB Environmental Safeguards. 	
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended • Very High – Highest priority for action 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP Comments and Recommendations	Level of Concern
E4	Site visits: 7-14 December 2014, 3-10 May 2015, 6-13 December 2015	Management of wastes from construction sites and camps of sub-contractors is not compliant with guidelines of the ESMMP-CP and do not meet the requirements of Annex C to the CA. NNP1 has not prepared and approved a SSES MMP for the Landfill Management Plan and submitted it to MONRE prior to commencing construction work covered by the SSES MMP (<i>see Clause 68 of Annex C to the CA</i>). NNP1PC has obligations to minimize and recycle waste (<i>see Clause 57 of Annex C, CA</i>).	Several violations of the standards are evident: 1) Solid wastes are still being dumped into the temporary pits of the NNP1PC landfill without separation of recyclable wastes for reuse or sale to recycle firms; 2) The temporary pits are unlined and do not have a leachate collection system. The pits should be covered and protected from rainwater seeping or draining into the pits; and, 3) Septic tanks wastes from sub-contractor septic tanks are temporarily being collected and disposed of by outside contractors. Disposal requests are being managed by NNP1PC and disposal sites and lime treatment is being approved by NNP1 until a proper sewage treatment plant is installed on-site.	<ul style="list-style-type: none"> • The Main Contractor, Obayashi, understands that it is their responsibility to ensure that all sub-contractors meet waste treatment and waste management standards agreed upon in the CA and EMP for all types of construction and worker wastes (air, liquid, solids and hazardous wastes). The TD has provided technical assistance for CWC and its sub-contractors by hiring a licensed environmental engineer to provide designs for the wastewater treatment plants and the sanitary landfill needed for the construction camps and the NNP1 project. • The IAP is not convinced that the proposed sanitary landfill design meets “best practices” for economic operation of landfills. A compacted clay liner should be adequate enough to meet the impermeability criteria of a properly designed landfill. The leachate system can be made large enough to ensure evaporation of collected leachate. <p>Recommendations:</p> <ul style="list-style-type: none"> • The main focus of the solid wastes collection and treatment system for the construction and operation phases of the project must be on maximizing separation and recycle of waste materials and not disposal of all solid wastes into the landfill. Some 95% of the wastes disposed in the landfill can be recycled. • It is far more economic for NNP1PC to invest in a recycle industry (separation, compaction and recycling technologies for reusing solid wastes) than in expanding the sanitary landfill to meet projected solid wastes generation volumes throughout the CA. • Creation of job opportunities for villagers to utilize wastes as raw materials for new products will pay for itself in future livelihood developments, save on investment & operation costs of the sanitary landfill, and create a healthier and cleaner environment for the resettlement communities. • The AIP 2016 should focus on a “green technology” approach to management of solid wastes from the contractors and from all project impacted communities. • The design of the sanitary landfill appears excessive for the location and intent to meet safe disposal standards. The pits should have a compacted clay lining to encircle the pit and minimize seepage. An additional impervious liner below the leachate collection system appears excessive since the landfill does not receive <i>mixed construction, industrial, and domestic wastes</i> (<i>see USEPA Guidelines</i>). The leachate drains to a series of ponds to maximize evaporation during wet season. These design criteria are adequate for the environmental safeguards of the project as long as the EMO, CWC and all sub- 	Very High

				<p>contractors ensure that hazardous materials and hazardous wastes are separated out of construction wastes and are managed separately in accordance with international best practices.</p> <ul style="list-style-type: none"> • Work should proceed quickly on completing the specifications of the final design and construction of the sanitary landfill. • NNP1PC needs to calculate a disposal fee with concurrence of CWC and all subcontractors to cover the cost of construction and operation of the sanitary landfill for the NNP1 project. • NNP1PC will operate the landfill throughout the CA using the collected fees to pay for operation. Communities using these facilities need to be instructed on the Guidelines for solid wastes collection and disposal. Disposal fees would vary over time to reflect the net costs of collection, separation, recycle and residual disposal costs 	
E5	<p>Site visit: 3-10 May 2015 6-13 December 2015</p>	<p>Cooperation and support from TD to EMO is necessary to implement corrective actions by CWC and sub-contractors on outstanding environmental issues.</p> <p>Compliance Monitoring frequency and parameters to be monitored needs to be re-evaluated in a new Annual Implementation Plan (AIP) for 2016. This plan needs to be urgently drafted, reviewed, and approved within January of 2016.</p>	<ul style="list-style-type: none"> • Visits to construction camps and work sites by the IAP and LTA Environmental Specialists showed improved awareness and attention to environmental issues by CWC and its sub-contractors. • Inspection monitoring is taking place regularly between EMO,CWC, and sub-contractors, with scheduled meeting times so that contractors can respond to non-compliances with agreed upon corrective actions and within an acceptable time frame for implementation. • An Environmental Manager of CWC's EHS team is now inspecting work sites and camps of subcontractors together with EMO Compliance team members to ensure environmental performance standards 	<p>Review of EMO Monitoring and Inspection Team activities is showing improved support and cooperation from TD to implement corrective actions by CWC and sub-contractors on outstanding environmental issues. This needs to be extended to the newly redesigned wastewater treatment systems. TD needs to insist the CWC and its sub-contractors follow the design drawings and specifications of the environmental engineering consultant and build the required treatment systems to meet the standards specified in the consultant's reports.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP strongly endorses the involvement of NNP1PC environment managers in field inspections to ensure full cooperation of senior EHS manager support from the CWC and its sub-contractors. • Outstanding environmental issues should be monitored more frequently using relevant parameters to verify adequacy of mitigation measures and to document results achieved. • The overall environmental monitoring program needs to be revised and updated in a new AIP 2016. The monitoring program should be flexible and modified to clarify the extent of an adverse environmental impact or to prove acceptability of an implemented mitigation measure. 	High
E6	<p>Site visit: 6-13 December 2015</p> <p>Biomass Removal Plan (BRP) for Nam Ngiep Power Company, Final, July 2015 (Prepared by Earth Systems)</p>	<p>The Biomass Removal Plan for the reservoir has been approved by all parties and a contractor selected for implementation. The approved plan lacks key biomass details (such as amount of soft and hard biomass for each of the 18 priority removal areas;</p>	<p>NNP1 has requested a site specific ESMMP from the selected BRP Contractor for each of the 18 priority biomass removal areas. The SSESMMMP are expected to be ready in the first quarter of 2016 for review and approval by GoL, NNP1, and local government agencies who will be involved in monitoring the implementation.</p>	<p>The IAP is concerned that the Biomass Removal Plan was approved by all parties without any reference to making beneficial use of the waste biomass for villager livelihood development, soil improvement, or other beneficial uses of timber, such as raw materials for construction of chairs and tables for schools, collection and storage of wood for fuel, development of village nurseries, using valuable seedlings for future agro-forestry development, non-timber forest products, etc.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The IAP advises that NNP1 should organize a special meeting among key SMO and EMO staff to discuss potential uses of biomass from the future reservoir which would benefit impacted 	Medium

	<p>Official approvals of the BRP by ADB and MONRE, Sept. 2015</p>	<p>elevations limits for removal); there is no detailed implementation plan for their removal; and there is no mention of any utilization of the waste biomass for making charcoal, firewood, a soil conditioner or biomass use by villagers to improve livelihood support or development.</p> <p>The Code of Practice lists numerous management and mitigation measures that are the responsibility of the Owner to verify, provide training, and carry out compliance monitoring. Is the EMO set up to handle this new responsibility? The AIP 2016 needs to address this new activity and clarify all E&S requirements.</p>		<p>villages and development of livelihood options. The results of the meeting should be incorporated into the biomass removal implementation plan and a team from within EMO assigned to oversee the BRP contractor, his removal and storage of useful biomass for villager use, and livelihood training needed for preparation and use of the reclaimed biomass.</p> <ul style="list-style-type: none"> • The same Environmental Auditing team needs to be familiar with and oversee the Environmental and Social Safeguards of the BRP as described in the Code of Practice for Biomass Removal (pgs 49-56 of the BRP for NNP1, July 2015). • The IAP recommends that the EMO review the Code of Practice with the BRP Contractor to ensure that there is no use of hazardous materials within the reservoir area, no maintenance of vehicles, zero tolerance for hunting or poaching of any kind, etc. and that he understands what he must do to implement the Code of Practice. This Compliance Monitoring work will require a new team of EMO staff to work within the reservoir area and the AIP 2016 needs to address this new activity in considerable detail. 	
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended • Very High – Highest priority for action 					

Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B1	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 Dec 2015	Options for implementing a biodiversity offset (long-term issue)	Watershed biodiversity surveys completed –no suitable offset site in watershed. Three other sites proposed by provinces also not suitable	Recommendation <ul style="list-style-type: none"> Verify suitability of Nam Mouane in BKX and/or another suitable site outside project provinces 	Very High
B2	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 3-10 May 2015 6-13 Dec 2015	Activities along the dam access road need to be managed to reduce impacts (ongoing issue)	Degradation, logging and forest clearance for agriculture along access roads. EPF grant allocated (Dec 2015) but not yet under implementation	Recommendation <ul style="list-style-type: none"> Work with provincial authorities to limit forest clearance along new dam access road (still an issue). Company to monitor effectiveness of PONRE implementation of EPF grant 	High
B3	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 Dec 2015	Poor knowledge of wildlife populations and distribution in project area. Surveys in Nam Ngiep watershed needed to determine a) suitability of are for offset and b) needs for mitigation activities	BIORAP survey completed in watershed (August 2015). No suitable offset site in NNP1 watershed but some interesting species populations that could merit special actions	Recommendation <ul style="list-style-type: none"> Integrate results of survey in watershed management plan to protect key species 	Closed
B4	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 Dec 2015	Data on NTFPs collection	Not clear what info has been collected as part of asset surveys at different sites	The IAP assumes that information on NTFP use has been incorporated into asset assessments for compensation. NNP1C to advise	Closed

*** Level of Concern:**

- Low - action recommended within 6 months
- Medium - action recommended within 1-2 months
- High - immediate action recommended
- Very High – Highest priority for action

Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B5	Site visits: 7-12 January 2013 17-24 November 2013 6-13 Dec 2015	Workers and construction traffic removing forest resources, illegal logs and wildlife	Prohibition of illegal harvesting and trade is covered in the Developer's Code of Conduct (ongoing issue)	Recommendation The Developer should enforce a zero tolerance policy on illegal logging, hunting and wildlife trade by the employees of the Developer, Contractor, and all sub-contractors. Ongoing need. EMO to report on any infractions	High
B6	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 3-10 May 2015	Introduction of potentially invasive species as part of reforestation, agriculture schemes	Plans for aquaculture in reservoir to improve livelihoods (ongoing)	Recommendations <ul style="list-style-type: none"> The Developer should check to make sure that the proposed species to be introduced are NOT potentially invasive Need careful review to ensure no introduction of exotic species with likely negative impact on native fish fauna. 	Low
B7	Site visits: 7-12 January 2013 17-24 November 2013 7-14 December 2014	NTFPs used by PAP for food security and cash income	PAP at all impacted villages are highly dependent on NTFPs NRM report for Houay Soup recommends zoning of forest according to land capacity and advocates another consultancy to assess NTFPs at Houay Soup	Recommendations <ul style="list-style-type: none"> Protect sufficient natural forest within and adjacent to the resettlement sites for villagers to harvest NTFPs or provide alternative sources of income DoLA has allocated large area of protection forest for PAP use at Houaysoup. Rather than another consultancy suggests participatory planning with PAPs at resettlement site 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended Very High – Highest priority for action 					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B8	Site visits: 7-12 January 2013 17-24 November 2013 3-10 May 2015	<ul style="list-style-type: none"> Monitoring of biodiversity Capacity of provincial and district EMUs for monitoring Community engagement in monitoring 	<ul style="list-style-type: none"> Biodiversity values are not monitored by anyone EMUs in project provinces have limited capacity and resources Hmong villagers have good local knowledge Long term issues 	Reservoir will give access to new areas above water line Recommendations <ul style="list-style-type: none"> Additional wildlife surveys should be undertaken in the upper watershed during construction to define protection and monitoring needs Hmong villagers should be hired to assist with monitoring biodiversity within resettlement areas and nearby forests Strengthen capacity of provincial EMUs to monitor impacts on biodiversity and environment. (still valid for BIORAP) 	Medium High
B9	Site visits: 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 Dec	Suitability of Watershed as Biodiversity Offset (unresolved issue)	Updated BOF still identifies XSB watershed as potential offset site – critical to get biodiversity assessment underway asap to determine suitability,	Survey completed. Provinces agree watershed NOT appropriate as offset site	Closed
B10	Site visits: 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 Dec 2015	Appropriate and integrated Watershed management activities Initiate development of ISP for XSB	The watershed now falls mainly within the boundaries of XSB Province which lacks an integrated spatial plan ISP delayed (Dec 2015)	Recommendations <ul style="list-style-type: none"> Work with MONRE and environmental offices in XSB to develop ISP NNP1C work with XSB to prioritize and complete planning for districts within watershed as critical input to watershed management plan 	Very high
B11	Site visits: 4-11 May 2014 7-14 December 2014 6-13 Dec 2015	Construction activities and increased access will lead to further habitat loss in watershed and along ROW for transmission lines	Villagers already clearing forests around dam site to expand agricultural activities	Recommendation Develop guidelines and mitigation plans to minimise habitat loss due to construction activities and for restoration and rehabilitation of impacted areas. NNP1C to monitor habitat infractions in watershed	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B12	Site visit 4-11 May 2014 3-10 May 2015 6-13 Dec 2015	Working with MONRE to manage watershed management activities	Current budget request from MONRE focuses mainly on vehicles and salary supplements, – need to refocus on actions, Watershed Management Action Plan prepared and budget s released to PONRE	Little progress with WMP (Dec 2015) Interim action plan and budget in prep with WMOs	Very High
B13	Site visit 4-11 May 2014	Capacity of environmental units at MONRE to manage watershed management activities	MONRE has very limited capacity at all levels (especially at province and district levels).	Developer's EMO to work with MONRE to seek capacity and mentoring opportunities (e.g., involvement of provincial officers in XSB ISP) Ongoing	High
B14	Site visit 7-14 Dec 2014 3-10 May 2015 6-13 Dec 2015	Appoint Biodiversity Offset Committee of technical experts with appropriate expertise	<ul style="list-style-type: none"> Outstanding issue Required by 31 December 2014 according to financial agreement with ADB 	Biodiversity Offset Advisory Committee appointed with well qualified international and national experts	Closed
B15	Site Visit 7-14 Dec 2014 3-10 May 2015 6-13 Dec 2015	Watershed Management Plan should include Houay Soup forests and be integrated with ISP for XSB	MONRE require 4,250 ha of protection forest in Houay Soup resettlement area to remain as forest Dec 2015 DoLA has agreed PAPs should have sole use of Houay Soup forests	<ul style="list-style-type: none"> NRM report identifies options according to land quality. Activities in protection forest in Houay Ngua and Houay Soup to be implemented in accordance with WMP objectives. Forest activities at Houay Soup to be funded under Resettlement Plan 	Very High
B16	Site Visit 7-14 Dec 2014 3-10 May 2015 6-13 Dec 2015	Collaboration with NNP2 on watershed management	Developments at NNP2 impact on watershed, including water quality and aquatic biodiversity No recent contact with NNP2	Recommendation Initiate further contact with NNP2 to facilitate collaboration and complementarity of watershed management	High
B17	Site visit 3-10 May 2015 6-13 Dec 2015	Biodiversity Offset Framework and Choice of Offset Site	Not new issue but important to reopen discussions on potential offset site beyond watershed	Advised MONRE and PONRE the need to review potential offset sites outside watershed PONREs agreed and suggested 3 alternative sites outside watershed but none suitable for offset	Closed
B18	Site visit 3-10 May 2015 6-13 Dec 2015	Watershed Management Plan	Not yet started (Dec 2015) but decisions already made on budget and resource allocations	Recommendation Little progress with WMP (Dec 2015) Urgent that Watershed Management Planning team is mobilized and managed as one integrated team rather than multiple consultancies and sub-plans managed separately.	Urgent

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B19	Site Visit 3-10 May 2015 6-13 Dec 2015	Watershed Management Action Plan	Action plan and activities agreed before Watershed Management Plan in place	Ongoing discussions Prioritize activities in line with PONRE mandates and capacity	Closed – see B12
B20	Site Visit 3-10 May 2015 6-13 Dec 2015	Potential Offset Site outside Watershed	Reopen discussion for offset site outside watershed but within XSB/BKX	Agreed with PONREs – new offset sites proposed and surveyed	Closed
B21	Site Visit 3-10 May 2015 6-13 Dec 2015	Biodiversity Offset Management Plan	Revised deadline for Offset management plan now extended to 1 May 2016,	Deadlines will need to be revised again to accommodate delays on choice of Biodiversity Offset site and WMP	High
B22	Site visit 3-10 May 2015 6-13 Dec 2015	Budgets for Watershed Management and Biodiversity Offset	Modest budgets allocated but decisions and allocations already being made before adequate plans in place. Ongoing concern	Funding to be allocated according to clear objectives and outcomes. Review opportunities for supplemental funding	High
B23	Site visit 6-13 Dec 2-15	Watershed Management Plan	Separate subplans being prepared. By consultants	Recruit watershed management specialist and establish one integrated watershed management team	High
B24	Site visit 6-13 Dec 2015	Conservation of remaining populations of rare and endangered species in watershed	Important species populations identified at Phou Samsao and Phu Katta and surroundings	Identify opportunities for species conservation activities in XSB from the Environment Protection Fund (EPF)	High
B25	Site visit 6-13 Dec 2015	Surveys Nam Mouane as potential Offset site	BKX proposed 77000ha at Nam Mouane site – need to assess biodiversity values and access for technical assistance	Surveys to be initiated by March 2015 for draft report June and final decision Sept 2015	Urgent
B26	Site visit 6-13 Dec 2015	Survey at 2 nd back-up site for potential offset	Proposed sites Khoun Xe Nong Ma, Xe Sap have high biodiversity potential but outside project provinces	Surveys to be initiated by March 2015	High
B27	Site visit 6-13 Dec 2015	Biomass clearance –	Site plans under prep	Review detailed site plans to ensure no new access into watershed forests	High

*** Level of Concern:**

- Low - action recommended within 6 months
- Medium - action recommended within 1-2 months
- High - immediate action recommended.

Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B28	Site visit 3-10 May 2015	Staffing for Watershed Management and Biodiversity team	Still vacant positions	Fill team positions, with competent staff and work more closely with other EMO and SMO staff to avoid constant need to outsource activities to consultants	Closed
B29	Site visit 3-10 May 2015 6-13 Dec 2015	Financial flows and procurement issues	Serious delays on contracting essential activities e.g. BIORAP survey and BOAC due to procurement delays	NNP1C Finance Dept. needs to work with EMO to facilitate contracts and speedy mobilization of activities.	Closed
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Annex 1: Resettlement Issues

Background

The reservoir of the Nam Ngiep 1 hydropower project (NNP1) will inundate the houses and productive lands of five villages and impact an additional three villages and one hamlet as follows:

- Four villages in the Lower Section of the Reservoir (LR) in Xaysomboun Province (Zone 2LR);
- Three villages in the Upper Section of the Reservoir (UR) in Xaysomboun Province (Zone 2UR); and,
- One hamlet in the Construction Area in Bolikhamxay Province (Zone 3).

The number of project affected people (PAP) to be resettled from villages in Zone 2LR and Zone 3 is estimated at 2,953 from 417 households; consisting of 2,735 people from 384 households in Zone 2LR; and, 218 people from 33 households in Zone 3.

The resettlement site for the PAP is an area of approximately 2,393 ha called Houay Soup (Zone 5), defined in the Concession Agreement. The Houay Soup resettlement area is located on the right bank of the Nam Ngiep river under the administrative jurisdiction of Ban Hat Gniun, Bolikhan District, Bolikhamxay Province.

An as yet unspecified number of PAP in three villages in Thathom District, Xaysomboun Province will be required to undertake “internal relocation,” namely PAP from Ban Pou, Ban Hatsamkhone, and Ban Piengta (Zone 2UR). Most villagers’ houses would not be impacted. Mostly agricultural production land will be impacted. The PAP in Zone 2UR are seeking the following: (i) compensation from the Developer to relocate impacted houses within the village; (ii) access to old agriculture lands that will remain above the reservoir inundation level; and, (iii) change and diversification of livelihood, from agriculture to other occupations. Discussions on resettlement, relocation, and compensation entitlements continue between PAP and NNP1PC. The assets survey undertaken in Zone 2UR during the second and third quarters of 2015, was being completed during the IAP’s site visit in December 2015. A more thorough asset survey is required after the high water level of the NNP1 reservoir has been demarcated.

Resettlement is the responsibility of NNP1PC’s Environment and Social Division (ESD), specifically the Social Management Office (SMO). The ESD director is interacting with the Provincial Resettlement Management and Living Condition Restoration Committee (PRMLCRC) (Resettlement Committee), as well as resettlement management units (RMUs) established by the GOL in Xaysomboun and Bolikhamxay provinces, to prepare for, organize, and facilitate PAP resettlement and relocation in a manner that meets ADB safeguards and other international standards.

Supplementary Comments on Selected Resettlement Issues¹

Supplementary comments related to Zones 3 and 5

1. **Issue:** Originally, the size of the Houay Soup resettlement area (Zone 5) was estimated at 6,108 ha, of which an estimated 420 ha was to be designated as suitable for lowland rice production. The GOL has now officially allocated only 1,745 ha of the Houay Soup area – with an additional 648 ha promised – for resettlement by PAP from Zones 2LR and 3. The remaining 3,715 ha is a national protection forest area (PFA). According to Decree 333/PMO, villagers will have access to the PFA to collect non-timber forest products (NTFPs) as well as for passive agriculture, forest development, and natural agriculture. In this context, PAP who choose to resettle at Houay Soup will be able to use PFA forestry resources within the framework of an integrated Natural Resources Management Plan being prepared by NNP1PC.
2. The IAP has not been shown any final land use plan for the Houay Soup resettlement area. The IAP was informed that the plan was completed in May 2015, but it was not presented to the IAP either then or during the most recent site visit in December 2015. The IAP expects that the ADB and the LTA will review and approve the revised plan. The IAP expects that NNP1PC's revised plan will reflect the viability of land-based livelihoods at Houay Soup, including sufficient grazing areas and taking into consideration environmental infrastructure (e.g., solid waste disposal, proper drainage, etc.). (**Issue R3**)

Recommendations:

- The IAP recommends that all mitigation measures made in the Houay Soup IEE be implemented strictly.
 - The IAP recommends that construction of critical infrastructure at Houay Soup (as defined by the ADB) should begin as soon as possible to ensure the smooth resettlement of PAP from Hatsaykham. All necessary approvals should be obtained from the ADB on a timely basis, keeping in mind the March 2016 resettlement of PAP from Hatsaykham.
3. **Issue:** The IAP has been seriously concerned about the social, economic, environmental, and sanitary conditions at Ban Hatsaykham beginning with the first site visit (*in 2013; see IAP reports 1-5*). To date the hamlet appears on the surface to have been impacted less than the IAP expected from construction of the access road, use of the access road, and the presence of hundreds of construction workers and their camps. This is due likely to the considerable presence of local law enforcement officials in nearby Ban Hat Gniun which also patrol Hatsaykham and the workers' camps.
 4. Sanitary and environmental conditions in Ban Hatsaykham are among the worst that the IAP has ever seen in Lao PDR. The IAP has little doubt that these unhealthy sanitary and environmental conditions are further reflected in the social and ethical fabric of this ethnic minority hamlet. Economically the village superficially (intuitively) appears to be fragile and on the brink of catastrophe; however, PAP are understood to have land outside the hamlet as well as being involved in illicit activities. The IAP has had these impressions since the first site visit in 2013 and little seems to have changed since then.

¹ The letters and numbers in parenthesis after each issue (e.g., R1) refer to the item number on the issues, requirements, and recommendations matrix in Part 2.

5. It is in this context that Ban Hatsaykham is now confronted with a major physical and psychological challenge: that of being resettled closer to their agricultural lands at the Houay Soup resettlement site. NNP1PC has scheduled resettlement take place between March and May 2016 – the exact time that PAP will be preparing land for the 2016 growing season. The IAP considers this as poor timing and a reflection of poor judgement and planning on the part of NNP1PC directors and managers. It appears to the IAP that little thought has been given to when the PAP will have time to prepare their fields for cropping – particularly since they will be occupied with moving their families, farm equipment, personal possessions, livestock, and other belongings to their new homes (*where, incidentally, only one family in the hamlet is reportedly now willing to move; although this situation is likely to change*).
6. The IAP understands (*based on interviews conducted by the IAP indigenous people's specialist*) that only about one-half of the PAP in Hatsaykham hamlet cultivated crops during the 2015 growing season. The other half of the village had little confidence that NNP1PC would allow them to harvest their crops and therefore did not plant. As a result, the IAP understands that the PAP currently are consuming their reserve supplies of rice.
7. The IAP must therefore warn NNP1PC of the potential for a food crisis. If Hatsaykham PAP are busy relocating to their new homes at Houay Soup, they may not have sufficient time to cultivate crops during the growing season that begins in March 2016 and that can last through June (*depending on the rainfall patterns in the area that year*). **(Issue R5)**

Recommendations:

- The IAP recommends that NNP1PC management establish immediately a **special task force** to take command of and organize the Hatsaykham resettlement process. This task force should be headed by an experienced resettlement specialist and should consist of mostly GOL officials linked to the Bolikhamxay RMU. The resettlement activities should be planned, organized, and implemented with military precision; and, in such a way that PAP have time to prepare land and plant their crops during the 2016 growing season.
- The IAP recommends that NNP1PC prepare immediately an **emergency food and nutrition security program** that will provide food and financial support to Hatsaykham PAP who are unable to undertake both resettlement and crop cultivation (of their main crop) at the same time.

Supplementary comments on 2UR villages in Thathom District, Xaysomboun Province

1. **Issue:** An estimated 170 households in Ban Pou, Ban Hatsamkhone, and Ban Piengta villages located in Zone 2UR will be impacted by the project. PAP have decided to either (i) undertake internal self-relocation; or, (ii) change their livelihood with support from NNP1PC SMO livelihood development staff. About 20 households are expected to lose all of their land as a result of reservoir impoundment. The IAP understands that there is no land available for relocation thus making cash compensation for self-relocation or a change of livelihood necessary. **(Issue R7)**
2. The principal issues brought to the attention of the IAP during consultations with selected PAP leaders from Zone 2UR during the site visit in December 2015 include the following:
 - **Demarcation of full supply level of Nam Ngiep reservoir:** NNP1PC reported that a review and adjustment of the 2007 demarcation was recently undertaken. However, markers remain 100-200 meters apart. A more detailed demarcation is

needed to ensure that PAP fully understand the high water level of the reservoir and the impacts that will occur to land, property, and livelihood.

- **Sustainable alternative livelihood development:** Once again PAP representatives requested that NNP1PC livelihood staff intensify and accelerate their individual household consultations on new livelihood options. Many PAP already were well aware of the impacts.

Recommendations:

- The IAP recommends that the **detailed demarcation** of the full supply level of the Nam Ngiep 1 reservoir by NNP1PC engineers should be completed as soon as possible. The current **general demarcation** is insufficient to finalize the asset survey.
- The IAP recommends that stronger leadership and more effective management be provided to the livelihood development team at Zone 2UR.

Supplementary comments on organizational and institutional issues

1. **Issues:** The IAP is pleased to note that significant progress has been made in disseminating unit compensation rates and completing asset surveys. The IAP remains concerned about the following organizational issues related to resettlement activities (**Issue R8**):

- Continuous delays in resettlement of the PAPs from Hatsaykham hamlet.
- Failure to complete a 2016 Annual Implementation Plan in a timely manner.
- Weak institutional capacity and poor performance of the Xaysomboun RMU in facilitating NNP1PC activities in Zones 2UR and 2LR, based upon feedback from concerned officials in Hom District and Thathom District.

Recommendations:

- The IAP recommends that ways and means be identified and implemented to strengthen the Xaysomboun RMU. The IAP has made recommendations in previous reports that relate to this issue. NNP1PC managers should review those recommendations and implement them.
- The IAP recommends that NNP1PC work closely with the Xaysomboun RMU to provide orientation and familiarization to Hom and Thathom district officials to facilitate NNP1PC's ability to work in Zone 2LR.

Resettlement and Social Photos



Zone 3 livelihood development: Mixed farming activities at Ban Hatsaykham hamlet: composting, fish raising, vegetable gardening, and fruit tree crops



Zone 5 livelihood development: Mixed farming activities at a home plot in Ban Thaheua: composting, vegetable gardens, and penna livestock raising



The NNP1PC supported police post at Ban Hat Gniun that ensures law enforcement in Zones 3 and 5



Livestock being promoted to PAP in Zone 3 and Zone 5 by NNP1PC staff to offset impacts from project development



IAP, ADB, LTA meeting with PAP at Ban Hat Gniun, an impacted host village in Zone 5 to discuss entitlement issues



IAP, ADB, LTA meeting with Lao officials and PAP from Zone 2LR in Hom District, Xaysomboun Province to discuss entitlement, resettlement, and social issues

Annex 2: Social Issues & Indigenous Peoples' Issues

Summary of Social Specialists Inputs

Introduction

1. This is a progress report of the 6th site visit to the Nam Ngiep 1 Hydropower Project. The site visit took place during 6-13 December 2015. Because of security issues in Xaysomboun Province the IAP could not visit four directly affected villages in Zone 2LR (Ban Namyouak, Ban Sopyouak, Ban Soppouan, and Ban Houaypamom) in Hom District, Xaysomboun Province. However, the Hom District Governor organized a meeting for the village headmen and village committees of these villages to meet the IAP, ADB, and LTA at the Hom District Office instead.
 - In Zone 2UR, the IAP also could not visit the three indirectly impacted villages, namely: Ban Pou, Ban Phiengta, and Ban Hatsamkhone in Thathom District, Xaysomboun Province, because of the same security issues as mentioned above. However, the Thathom District Governor organized a meeting at the Thathom District Office for the PAPs and the IAP, ADB, and LTA to meet, as well.
 - In Zone 3, the IAP visited a directly affected village, Ban Hatsaykham and two indirectly affected villages, Ban Thahuea and Ban Hat Ngiun villages in Bolikhan District, Bolikhamxay Province.
 - This 6th site visit the IAP met approximately 140 directly and indirectly PAPs in formal and informal meetings. All relevant issues were discussed and the best solutions were discussed among GOL, IAP, ADB, LTA, the NNP1PC staff, village headmen, village committees, and village elders.
2. The IAP had seven formal meetings with higher levels of the GOL, as follows:
 - On 7 December 2015: A formal meeting with Dr. Sychath Boutsakitirath, Deputy Director General, Department of Energy Business, Ministry of Energy and Mines.
 - On 8 December 2015: A formal meeting with the Governor of Hom District (Mr. Boonsoung Biayathawbiasoun) and the Head of RMU of Xaysomboune Province (Mr. Phonexay).
 - On 9 December 2015: A formal meeting with the Deputy Political Secretary of Thathom District (Mr. Jitthon), the Head of RMU of Xaysomboun Province (Mr. Phonexay), and GOL staff.
 - On 10 December 2015: A formal meeting with the Head of RMU of Bolikhamxay Province (Mr. Khamsing).
 - On 10 December 2015: A formal meeting with the Governor of Bolikhan District, Bolikhamxay Province.
 - On 11 December 2015: A formal meeting with the Vice Governor of Bolikhamxay Province (Dr. Souvanny Sayana).
 - On 11 December 2015: A formal meeting with Mrs. Bouaphane Likaya, Member of the National Assembly of Lao PDR., Cultural-Social Affairs Committee.
 - On 11 December 2015: A formal meeting with Mr. Laopao Xiong, Vice Governor of Xaysomboun Province (at the NNP1PC Headquarters Office in Vientiane Capital).
 - On 11 December 2015: A formal meeting with Dr. Khammany, Ministry of Energy and Mines, Chair of the NNP1 Steering Committee.
3. **This 6th Site Visit:** The IAP had formal meetings and informal discussions with PAP as well as formal meetings with relevant GOL officials at both the local and national levels. The IAP discussed, interviewed, and observed many cultural and social issues. The IAP schedule follows:

- **6 Dec 2015**
Arrival Vientiane, Lao PDR; had a pre-meeting with IAP and prepared for debriefing meeting and site visit
- **7 Dec 2015**
Formal debriefing meeting with NNP1PC Director and staff at NNP1PC Head Office in Vientiane Capital
- **7 Dec. 2015**
Formal meeting with Dr. Sychath Boutsakitirath, Deputy Director-General, Department of Energy Business, Ministry of Energy and Mines
- **8 Dec. 2015**
A formal meeting with Governor of the Hom District, Head of RMU of Xaysomboun Province, together with about 15 village elders and headmen from Zone 2LR (Ban Namyouak Ban Sopyouak and Ban Sopphuane) in Hom District Office
- **9 Dec. 2015**
A formal meeting with the Deputy Secretary Political Leader of Thathom District (Mr. Jitthon) the Head of RMU of Xaysomboun Province (Mr. Phonexay) and staff with about 40 village elders and headmen from Zone 2UR (Ban Pou, Ban Hatsamkhone, and Ban Phiengta) in Thathom District Office
- **10 Dec. 2015**
 - A formal meeting with the Head of RMU of Bolikhamxay Province (Mr. Khamsing)
 - A formal meeting with the Governor of the Bolikhan District Bolikhamxay Province
 - **In Zone 3:** An informal meeting with Ban Thaheua and Ban Hat Ngiun's elders and headmen together with about 60 PAP. Surveyed livelihood programs in the villages
 - **In Zone 3:** A formal meeting with Ban Hatsaykham's elders and headman together with about 30 PAP. Surveyed the Hmong New Year Festival in the village
- **11 Dec. 2015**
 - A formal meeting with the Vice Governor of Bolikhamxay Province (Dr. Souvanny Sayana)
 - A formal meeting with Mr. Laopao Xiong, Vice Governor of Xaysomboun Province (in the NNP1PC Headquarters in Vientiane Capital).
 - A formal meeting with Mrs. Bouaphane Likaya Member of the National Assembly of Lao PDR, Cultural-Social Affairs Committee
 - A formal meeting with Dr. Khammany, Ministry of Energy and Mines, Chair of the NNP1 Steering Committee
- **12 Dec. 2015**
A formal meeting with NNP1 PC for presentation of facts find and discussions
- **13 Dec. 2015 :**
Working on NNP1PC documents and returning to Bangkok Thailand

4. Summary of IP and Social Issues: It was unfortunate that during the 6th trip the IAP could not visit PAP in their villages in Zone 2LR and Zone 2UR because of security issues in Xaysomboun Province. However, the IAP was able to meet PAP in district offices: Zone 2LR in Hom District, and Zone 2UR in Thathom District. Key PAP issues and problems included the following: asset registration, IP (Hmong) graves, resettlement and self-resettlement, resettlement site, compensation, additional items for assets, unit compensation rate, cut-off date, livelihood programs, food security, community participation, drug abuse, crimes, and cooperation.

5. Requirements and my Recommendations: Provided above

6. The next IAP site visit is scheduled for 15-22 May 2016:

- I would like to meet the Governor of Xaysomboun Province, Head of RMU of Xaysomboun Province and the Governor of the Hom District.
- I would like to meet the Governor of Bolikhamxay Province, Head of RMU of the Bolikhamxay Province, and Governor of Bolikhan District.
- I would like to meet PAP in 10 villages (4 villages in Zone 2LR; 3 villages in Zone 3; and 3 villages in Zone 2UR).
- I would like to visit, especially, Ban Hatsaykham of Zone 3 and Resettlement Site, Houay Soup

Annex 3: Environmental Issues

Organizational, institutional and mitigation environmental issues of concern to the IAP include the following:

1. **Issue: The Developer is expected to contribute to capacity building of MONRE and to financially assist in establishing an Environmental Management Unit (EMU).**

The EMO is inviting the EMU of Bolikhamxay to join in its compliance monitoring activities, enabling the EMU to monitor implementation of the EMP and to report on the adequacy and effectiveness of mitigation measures being implemented to minimize environmental impacts. The EMU produced its first monitoring report in November 2015 and the report is posted on the MONRE website, which is accessible by PONRE and DONRE but not by the general public (restricted access)².

The IAP met with the EMU representatives of Bolikhamxay Province (Mr. Outhorn Singhadoungbanya, Head of Environmental Management Division, and Mr. Thayvanh Saythummy, Head EMU, Bolikhamxay Province)³. The EMU stated that they are receiving NNP1 Monthly Monitoring Reports from the EMO in English and would like to have Lao versions as well. Joint compliance monitoring with involvement of the EMU at Bolikhamxay has been on-going.

A similar program needs to be planned and started with the EMU from Xaysomboun Province. It is not known whether the strategy plan or action plan for the newly established EMU has been received from MONRE. A copy of the yet to be completed Annual Implementation Plan for the ESMMP-CP 2016 needs to be given to the EMU at Xaysomboun so they will be aware of construction works to be started in their province.

Recommendations:

- The IAP recommends that the Company, as part of its capacity building efforts, convenes a workshop combining the EMUs of both provinces and MONRE to review the duties of the EMU for the Nam Ngiep watershed. MONRE should be invited as Workshop organizer to review “lessons learned” from Nam Theun 2 and the Theun-Hinboun hydropower projects, and include the expanded mandate of MONRE to oversee *integrated environmental conservation interests* of water, forest, and biodiversity protection at the regional (PONRE) and district (DONRE) levels. The workshop would be an appropriate time to discuss how best to make use of NNP1 funds to be contributed as per CA commitments (versus recent EMU and MONRE budget requests), how to monitor impacts on water and forest resources from other hydropower project developments, and how best to make use of future monitoring reports.

² The EMU monitoring report noted the following environmental non-compliances: (1) wastewaters at camps were not being adequately treated to meet Lao effluent standards; (2) dust levels at the crushing plant exceeded safeguards for workers; (3) management of hazardous chemicals and wastes at several work areas needed improvements; (4) river water quality in the Nam Ngiep showed higher than normal suspended solids levels that the EMU believes the increased sediment loads are caused by project activities; and (5) the EMU requested that the solid wastes from Tha Dua and Hat Ngium villages be collected and disposed of at the project sanitary landfill as villagers were disposing wastes into the river. These monitoring results were obtained visually and by discussion with villagers, as the EMU has no monitoring equipment of its own. The report illustrates that the EMU monitoring can be useful to both the company and local authorities.

³ The EMU consists of 4 persons from PONRE plus 3 in the “field” (DONRE assigned persons) in Bolikhamxay Province. As noted in Annex C Social and Environmental Commitments of the CA, the EMU is required to monitor all environmental aspects of project development and operation except resettlement. Monitoring of the environmental situation is to ensure that the company complies with the Lao regulations and the CA.

- The meeting should also review the new AIP 2016 of the ESMMP-CP as a basis for understanding the future compliance monitoring program in the provinces. These activities would also be of interest to the Nam Ngiep River Basin Committee comprising representatives of private and public sector development projects in the Nam Ngiep river basin. At the proposed meeting, the IAP recommends that NNP1 includes *compliance monitoring training* of the EMUs by illustrating actual “environmental issues” found at the contractor camps or construction sites of NNP1, how the Inspection and Compliance Monitoring Report is developed, discussed and approved with the Contractor and a date agreed upon for corrective actions to close the environmental issue so that a “non-compliance” is not issued by the Company. The EMO then returns with the EHS Managers of the Head Contractor to inspect the environmental issue on the date committed by the Contractor to complete the correction. The EMO should then invite the EMU to join with them during the inspection and compliance monitoring mission.
- It is recommended that the Biomass Removal Plan, July 2015, be included in the capacity building program as the EMU can play an important role in compliance monitoring of the Biomass Removal Plan and the Code of Conduct of the work camps. The EMU monitoring reports will be useful to the EMO in its overseeing of the contract implementation. In the event that the EMU finds non-compliances to safeguards, they can then inform NNP1 for their response and follow up of what actions the Company will take to correct the non-compliance.

In summary, such assistance to the training of the EMUs will benefit both PONREs and DONREs and serve to build confidence in the communities of their benefits from the project and the establishment of a workable grievance mechanism to solve environmental problems.

2. Issue: Waste management during the construction phase, in both project areas and impacted communities

The EMU discussed with the IAP the problem of solid waste collection and management in impacted communities and the need for more focus on “green technologies” to cope with solid wastes from new shops, restaurants, bars, and service centers. Large amounts of solid wastes of all kinds are accumulating along the roadsides of these expanding communities. As noted the EMU requested that permission be given to Thaheua, Hat Gniun and Hatsaykham (Zone 3) to use the future sanitary landfill of the project.

The EMO is developing a project wide solid wastes separation and recycle system, including a pilot Waste Bank project to encourage more separation and sale of recyclable materials. The EMO is also keeping a detailed inventory of construction and camp wastes generated and being sold (including hazardous wastes). These data will be important for decision making on the future waste management system for the project.

Recommendations:

- The EMO should continue to assist the EMU to work with the Heads of each village and to set up a Committee in each village to reach agreement on how best to manage a collection and separation system. The Company (NNP1) should continue its efforts to build and operate a proper sanitary landfill for the project. However, more emphasis should be placed on “green technology” and to include recycle and reuse technologies in the future handling of solid wastes, with the goal to create opportunities for reuse of waste materials for job creation, livelihood development, and future income generating activities of participating villagers. The EMO should find and provide technical assistance for developing a management plan for the whole project area.

- It is recommended that a cost-benefit analysis be carried out for alternative recycle technologies based on the types and quantities of solids wastes being produced, now and in the future operating phase. The Company together with the Village Committees should discuss the costs of building and operating a landfill, including the costs of adequate transportation for trucking wastes to a landfill disposal site earmarked for the project and impacted villages. Collection fees should be part of the service plan using waste recycling as an incentive to lower costs and improve attention to waste management and recycling by the village Committees. The analysis should include improved living conditions in the villages (cleaner environment, less rodents, disease, fewer mosquitoes, etc.) This is a worthy environmental project for these project impacted communities and the lessons learned by both the EMU and the EMO can be carried over into the new resettlement villages of NNP1 in the future.

3. Issue: Health Care and Safeguards

Considering the large work force of the CWC and sub-contractors, it appears essential to implement at site a proper health clinic with qualified medical staff and assistants, including a standby ambulance service. This is especially important given the limited medical facilities available at Paksan, the distance and time needed to reach Paksan (or Vientiane in the case of a severe injury). The situation for NNP1 dictates that a well-equipped and adequately staffed health clinic should be in operation at the Owner's Main Camp site.

Recommendations:

- NNP1PC should have an independent medical review of the health clinic established at the Owner's Main Camp to ensure that the facility is adequately equipped and staffed for the large work force now employed by the project. The review should cover an evaluation of the clinic's capabilities to treat injuries, manage more serious cases until a standby ambulance can transport patients to a hospital with appropriate medical facilities, and temporarily serve for backup health care of project impacted villagers until the Houay Soup health clinic is established.
- According to IFC Environment, Health, and Safety Guidelines (2007), the Company (NNP1PC or as contracted with the CWC) should ensure that first aid attendants are available for the facility as well as medical equipment suitable for the personnel, type of operation, and the degree of treatment likely to be required prior to transportation to an established regional hospital.
- NNP1PC should ensure that qualified first-aid can be provided at all times. CWC should install appropriately equipped first-aid stations that are easily accessible throughout the project construction sites. These first-aid stations include:
 - Eye-wash stations and/or emergency showers should be provided close to all workstations where immediate flushing with water is the recommended first-aid response
 - Where the scale of work or the type of activity being carried out so requires, dedicated and appropriately equipped first aid room(s) should be provided. First aid stations and rooms should be equipped with gloves, gowns, and masks for protection against direct contact with blood and other body fluids; and
 - Remote sites should have written emergency procedures in place for dealing with cases of trauma or serious illness up to the point at which patient care can be transferred to an appropriate medical facility.

4. Issue: NNP1PC Management of Environmental Issues

The IAP site visit allowed for numerous observations of cooperation and technical support from Management and the Technical Division to the EMO. The IAP is aware of

improved communications and support among the Divisions, but there are still areas that need further improvement.

Recommendations:

- NNP1PC should continue to support improved cooperation between the Technical Division and the EMO, especially technical assistance for implementation of designs of environmental infrastructure and joint planning and monitoring of issues of common concern (overseeing the Contractor and Sub-contractors' environmental protection systems, the Biomass Removal Plan, the Annual Implementation Plan of the ESMMP-CP, and Code of Conduct) as these activities affect project reputation and progress.
 - The Technical Division has already provided environmental engineering support for design of pollution control systems required of the Contractor and Sub-contractors. These designs should be implemented without exception, similar to the detailed designs of the civil works for the dam and powerhouse, etc. Errors in construction of these works should be rejected and the contractor made to rebuild the system as per the approved specifications.
 - The Environmental Laboratory needs to move forward in order to promote better monitoring and to verify the effectiveness of implemented mitigation measures throughout the project. Current monitoring of effluent samples (frequency and parameters monitored) are insufficient to provide feedback on adequacy or efficiency of the installed treatment system. The monitoring program needs to be problem oriented, reactive and adapted to the changing characteristics of the construction program. EMO Managers need to meet regularly with Contractor and Sub-contractor EHS Managers to explain what is missing, what is not working, and what is needed to meet CA and ADB safeguards. The AIP 2016 should address these issues in detail.
 - Follow up of non-compliances with the contractors appears to be improving, but time laps are still too long between notification of an environmental issue and correction by the Contractor. More cooperation for the EMO is needed from the Technical Division. The Contractors need to be reminded that implementation of environmental mitigation measures is an integral part of the construction program and its measurement of progress (and approval of payments go hand-in-hand with civil works).
 - Obayashi has strengthened its E&S organization on site, but the CWC must be reminded that it is his duty to regularly check and monitor the subcontractors' performance on environmental issues, provide and ensure that all workers wear protective clothing for air and noise pollution, and for safety, ensure that wastewater treatment and waste management (construction and hazardous wastes) systems are working properly and meet effluent standards.
5. **Issue: The EMO needs to build and operate its own Environmental laboratory** to monitor and enforce contract commitments. This is a repeat of the same issue from previous IAP Site Reports #4 & #5. The staff of EMO are competent, well trained and able to carry out environmental monitoring work and do most environmental analyses on their own, including key water, wastewater, and other waste parameters (air quality, noise, vibration, and even future Greenhouse Gas monitoring requirements). There are currently four staff trained and well qualified. Analytical testing of parameters by the EMO staff would then reduce the need for samples to be sent to UAE, Bangkok, for analysis, and the Lab could better support the EMO Compliance Monitoring work of construction sites and ambient environmental conditions.

Recommendations:

- The IAP recommends that NNP1 prioritize completion of the EMO environmental laboratory at the EMO Offices, Paksan. In-house analysis benefits the company in two ways: one, for supervising the contractors to ensure that they are meeting their contract requirements, and two, saves money (payback in a few months to a few years to recover capital costs vs. paying for these analyses by outside laboratories).
- The new AIP 2016 of the ESMMP-CP should include measurement of Greenhouse Gases at the Environmental Laboratory, as the Biomass Removal Plan will begin implementation in 2016 and this parameter is a primary criterion of the BRP. Detailed planning for operation of the lab should be included in the AIP 2016.

Summary:

The IAP met with key EMO staff of the three divisions: (1) watershed biodiversity team, (2) compliance and environment team (environmental monitoring and compliance staff overseeing contractors), and (3) database and control staff, and reviewed several proposed plans (e.g., wastewater treatment plants for all construction camps, the sanitary landfill, biomass removal plan, water quality monitoring, auditing of contractor camps and work sites, solid and hazardous wastes management at the construction sites and in the villages, recycle opportunities for all types of solid wastes, etc.). The IAP believes that the EMO is competent and that the combined Lao and Thai staffs are experienced and capable of carrying out all their responsibilities in a professional manner that meets international “best practices”. However, given the new monitoring tasks for the biomass removal plan (with 11 priority removal sites), the wastewater treatment plants at all work camps, the emphasis to improve separation and recycle of solid wastes, etc. the Compliance Monitoring team needs to redesign its monitoring program (type of sample, parameters to be measured, location and frequency of sampling and analysis) and present a new plan with designed staff for each activity.

The site specific management plans for biomass removal in the reservoir need details for environmental safeguards covering vehicle and equipment maintenance, worker camp rules, including zero tolerance for poaching, hunting, or trading of wildlife or forest products, etc. The Code of Practice should be completed, agreed upon, and workers trained prior to start of any biomass removal in the reservoir area.

It appears that sub-contractors might be changed and thus NNP1 should have a Closure Plan for work sites that includes a checklist for handling all residual wastes, cleanup, and restoration or rehabilitation of the work site. The IAP would like to see a copy of the Closure Plan.

Lastly, the construction work progress by the contractors and the Company is impressive. Many new sites are being started (including the bridge to the Houay Soup Resettlement area). It is recommended that the LTA and IAP carry out site inspections during alternative quarters or that the LTA should be visiting quarterly and overlap with the IAP twice per year so that comments and the reports can be made available to the IAP for review.

Environmental Photos



Above: Location of sanitary landfill for the NNP1 project to be built and operated by a private contractor supervised by the Owner. Pictures shows one "temporary pit" partially filled with construction and camp wastes. These wastes were not separated for recovering recyclable materials. The temporary pits will be emptied and re-constructed in a properly designed sanitary landfill. The pits will be lined with an impervious layer of compacted clay. A leachate collection system will be installed and connected to a series of leachate evaporation ponds. The NNP1 landfill site should also include a temporary storage facility for separation and storage of recyclable materials and hazardous wastes. NNP1 will manage the site for both and construction and operation phases.



Photo shows improper construction of tank walls or berms. Collapsed berms at Song Da 2 Camp have contaminated stone and sand filters with mud balls. Mud and clay soil needs to be removed from the surface of the gravel filters; berms need to be lined with rip-rap or concrete



Photo shows improperly designed and built wastewater treatment pond. Shape and size of wetlands at Song Da 2 camp inappropriate; shape should be rectangular 3:1 L: W minimum, not square design. Aquatic plants need to follow specifications of Consultant for wetlands treatment. There is no chlorine contact tank or monitoring tank to check the quality of the treated effluent as specified by the Consultant.



Combined wastewater "aeration" tank at Main Contractor's Camp. This tank is not adequate to be considered as an aeration tank; there is no separation of solids; wastewater is released to the environment before meeting effluent standards.



Picture shows discharge area where effluent from the Main Contractor's camp is discharged to the environment. Flooded field contains contaminated wastewater – not meeting effluent standards.

Annex 4: Biodiversity Issues

Sixth IAP visit to NNP1, 6-13 December 2015

1. This report is based on visits by the Biodiversity expert and other IAP members to the Nam Ngiep1 project, discussions with the Project Developer, the NNP1 EMO Biodiversity and Watershed teams, ADB Environment team, Lenders Technical Assistance team, Dept. of Forest Resources Management (MONRE) and provincial PONREs of Bolikhamxay and Xaysomboun.

Summary

2. Since the last IAP visit in May 2015 there has been good progress on key biodiversity issues, with the appointment of the Biodiversity Offset Advisory Committee and implementation of the biodiversity assessment in the Nam Ngiep watershed. The rapid biodiversity survey confirmed that the watershed is not appropriate for a biodiversity offset. These results have been relayed to provincial authorities. Surveys have also been conducted at three alternative sites in XSB and BKX but none are suitable for an offset site. The security situation in XSB precludes further surveys in that province. BKX have now proposed an alternative 77,000 ha site in Nam Mouane on the border with Vietnam. This site is believed to be of high biodiversity value but surveys need to be undertaken as soon as possible to verify biological values and accessibility of the site. Selecting an offset site and developing an appropriate management plan are critical to meet ADB conditions.
3. ADB has already revised dates for agreement on a biodiversity offset site and watershed management plan. The Biodiversity Offset Framework covers both biodiversity offset and watershed management, including provincial institutional and fund flow arrangements. Progress with developing the watershed management plan has been slow and there is still a need to recruit a watershed management team to lead this work. Instead NNP1C has worked with MONRE (DFRM) and the provincial PONREs to develop a Watershed Management Action Plan, with activities and budgets and is already supplying vehicles, equipment and other resources on an ad hoc basis to provincial PONREs. It is critical that one fully integrated and agreed watershed management plan is developed to guide future funding from both NNP1C and the provinces.
4. While some good progress has been made over the last few months, delivery of both the biodiversity offset and watershed management plan are behind schedule. Time lines to meet ADB deadlines are now tight and NNP1C needs to recruit necessary expertise urgently and to use fully expertise available within BAC and the company to deliver these components. The current timelines will require another amendment to FA delivery dates. NNP1C also needs to give full consideration on how to mobilize and leverage additional resources needed to ensure effective management at the biodiversity offset site and within the watershed, including provision of additional technical expertise as needed.

Issue: Biodiversity in the NNP1 watershed.

5. ADB safeguards require the project proponents to avoid loss of critical habitats and to mitigate the impacts of the development. *In addition to mitigation to minimize environmental impacts caused by construction and operational activities, NNP1C is required to establish a biodiversity offset to compensate for biodiversity losses attributable to the development.*

6. Original proposals had focused on the NNP1 watershed as a potential offset site but detailed biodiversity surveys, completed in August 2015, confirmed that the area is NOT appropriate for an offset. This result was relayed to, and accepted by, the provinces.
7. The surveys identified, however, some species populations of interest remaining within the watershed, including populations of the endemic Lao newt, Owston's civet, and the northern white-cheeked gibbon; identified priority areas for species conservation within the watershed include Phou Samsao and Phu Katta and surroundings. The results of the survey will be used to inform the watershed management plan to ensure species conservation through appropriate land use planning and specific species action plans. Any further biodiversity surveys or planning should be undertaken as part of the watershed management planning exercise and not as a separate sub-planning exercise.

Recommendations

- Integrate further work on biodiversity planning into the watershed management planning team to ensure identification and protection of remaining biodiversity values within the watershed.
- Identify opportunities for appropriate activities for conservation of remaining populations of rare and endangered species within the watershed, with potential funding support from the Environment Protection Fund (EPF) for XSB
- If appropriate it may be useful to support some additional biodiversity surveys within the watershed to identify other areas of special interest for key species.

Issue: Watershed Management

8. The consultant for the watershed management plan has not yet been recruited and there is still no Watershed Management Plan (WMP) in place. Nevertheless, a short term plan of activities has been agreed between NNP1 and MONRE (DFRM), and the provincial PONREs and the provinces are awaiting release of additional funds. The WMP needs to reconcile the needs of the Company, the provinces and the communities. An approved plan should prioritise activities and funding from both the provinces and the Company.
9. The ADB watershed management consultant, Matt Corbett, is working with the provincial watershed management offices (WMO) to develop an interim action plan, in line with provincial priorities and the competencies and capacity within the provincial PONREs. NNP1C should recruit the watershed management consultant team and government consultant as soon as possible to develop the overall watershed management plan, including the Houay Soup and Houay Ngua protection forests. Currently planning for watershed activities is being done through a series of unconnected contracts for sub-plans e.g. biodiversity and fisheries. It would be more useful to have one integrated watershed management team with all specialists working together to produce one integrated watershed management plan. The team should be led by a watershed management specialist but include expertise on biodiversity, fisheries and a social specialist experienced in *effective* local consultations in Lao PDR, and with understanding of both GoL and Hmong culture. Whenever possible expertise within the Company should also be involved in the watershed management planning exercise e.g. for GIS work and participatory planning.
10. There are several important inputs to the watershed management planning process.
 - The Integrated Spatial Plan (ISP) for the XSB province, including the watershed, is being prepared through collaboration between XSB and DEQP (MONRE) with resources from NNP1C. It was expected that this spatial plan would be completed by January, 2016 but the process has been delayed. NNP1C should work with the province to prioritise planning for those districts that fall within the watershed.

- The Biodiversity Assessment survey within the watershed identified some priority areas of biodiversity value for certain rare and endangered species, including Phou Samsao and Phu Katta and surroundings. Appropriate management measures for these species should be integrated into the management plan, including land use plans and species action plans.
 - A very detailed Natural Resource Management Plan has been prepared by consultants for the Houay Soup area, including protection forests. The plan looks mainly at land capability but detailed activities and zoning of the Houay Soup area needs to be done through participatory planning with Project Affected Peoples (PAPs) at the resettlement site. Any agreed activities within the protection forests should be consistent with retaining forest cover, sustainable utilization and overall watershed objectives.
11. It will be important to develop a consolidated, realistic and simplified watershed management framework with annual action plans of prioritized activities. The Watershed Management Fund, agreed in the Concession Agreement has an allocation of US\$6.24 million over 27 years, with \$800,000 already committed to supply offices, vehicles, equipment and operational expenses to the provinces. The remaining sum is insufficient to cover all watershed management activities and NNP1C-supported priorities should focus on essential mitigation activities targeted to the lower Nam Ngiep watershed (the project area).
12. The WMP should develop practical management actions with appropriate implementation budgets to guide use of both project and provincial funds. Any further decisions on NNP1C-provided budgets and equipment should be linked to the final approved watershed management plan with activities prioritized against PONRE capacities, clear objectives and verifiable indicators to be monitored by NNP1C. Project watershed management activities such as reforestation, habitat protection, sedimentation control in the lower watershed should also be aligned with the ISP for XSB. It will also be important to determine where additional funds for watershed management and livelihoods can be identified from non-project sources.

Recommendations

- Recruit the full Watershed Management planning team as soon as possible, including the GoL watershed consultant (by February 2016). Create one integrated WMP team including watershed management, biodiversity and fisheries specialists and social specialist with good knowledge of Lao PDR and Hmong culture. The team should also include relevant expertise that can be provided by the company e.g. GIS specialist.
- NNP1C should work with XSB to prioritise ISP planning for those districts that fall within the watershed so that this data is available to the WMP planning team.
- Prioritise activities with clear roles and responsibilities, including funding sources (project and/or province). Identify key activities consistent with PONRE/WMO mandates and capacity (e.g., monitoring illegal logging, protecting forest). Initiate additional consultation and collaboration with NNP2 for collaborative watershed management.

Issue: Houay Soup and Houay Ngua Protection Forests

13. Within the 6000 ha originally proposed for the Resettlement Site, 1750 ha has already been allocated for the resettlement site and the Department of Land Management had agreed to allocation of a further 648 ha of protection forest. On 25th December, 2015 DoLA signed an agreement that the remaining 3715 has of Houaysoup are for the use of PAPs only This additional area will retain protection forest status and needs to be managed accordingly. Plans for land use, should be integrated with the Watershed Management Plan, be consistent with GoL regulations for protection forest and be decided through discussions and a participatory planning process with the community. The EMO and SMO should work together with the PAPs to define appropriate activities

within these protection forests, including sustainable forest management, NTFP collection and agroforestry.

14. Under a grant from EPF the Company will provide additional financial support to PONRE BKX for manned checkpoints on the dam access road and for regular patrols to protect the remaining forest at Houay Ngua. Given the weak performance of PONRE in protecting Houay Ngua under the earlier grant from the company, it will be important that both EPF and NNP1C monitor the effectiveness of PONRE monitoring and protection of all remaining watershed forests along the access road as well as the Houay Ngua area.

Recommendations

- Activities to be implemented in the protection forests within Houay Soup should be designed in accordance with the objectives of the Watershed Management Plan but funded under the resettlement budget.
- NNP1C should monitor the effectiveness of PONRE in monitoring and protecting Houay Ngua and other protection forests to reduce further forest loss along access roads.

Issue Selection of Biodiversity Offset

15. As stated in earlier reports the footprint of the project is MUCH greater than the area of habitat cleared and flooded (7,600 hectares according to ERM report). The project needs to identify a credible high biodiversity value offset, additional to watershed mitigation activities. A realistic biodiversity offset needs to be of high biodiversity value, ecologically viable, manageable, and cost effective with potential for a sustained biodiversity outcome. The site needs to have strong commitment from GoL, PONRE and communities and be likely to leverage other financial and technical support, including necessary NGO technical assistance.
16. After the watershed biodiversity survey, the project provinces (XSB and BKX) suggested three other potential offset sites outside the watershed (Phou Sod, Phou He (XSB), and Phou Sithone extension (BKX) and rapid surveys were also undertaken in those areas. Unfortunately, none of these three sites are of high enough biodiversity value to qualify as an offset; the results have been relayed to provincial authorities. The security situation in XSB precludes further surveys in that province but BKX has now proposed a potential site in Nam Mouane, 77,000 ha of forests on the Vietnam border, adjacent to the Pu Mat reserve in Vietnam. This area appears to have high potential as an offset site but needs to be assessed as soon as possible so that a final decision can be made. It is likely that any offset site would need strong technical support from a conservation NGO to assist government agencies. The survey should therefore a) verify the biodiversity value of the area and b) assess accessibility for provision of technical assistance for protection and management of the area. All discussions and decisions re future survey needs and suitability of a biodiversity offset site should be made under guidance and in consultation with the independent Biodiversity Offset Advisory Committee (BAC).
17. The issue of choosing a realistic biodiversity offset site is now critical and needs to be resolved as soon as possible. It would be preferable to identify an offset site within a project province with Nam Mouane as the first priority and NNP1C should request early GoL approval for a survey at Nam Mouane as soon as possible so that a final decision can be made on a biodiversity offset site. In case Nam Mouane is not feasible because of biodiversity or security concerns then NNP1C would need to seek an appropriate alternative site elsewhere, including outside the project provinces. Given time constraints and limited options within the project provinces. it would be useful to initiate biodiversity assessments at other potentially suitable sites outside BKX (e.g., Khoun Xe Nong Ma,

Xe Sap), in parallel with the survey at Nam Mouane. The final report for a suitable site should make appropriate recommendations on institutional arrangements, technical assistance and budget needs,

Recommendations

- Contract and mobilize an assessment of Nam Mouane as soon as possible, with advice on TORs from the Biodiversity Offset Advisory Committee. BKX should confirm permission for biodiversity surveys by end of January 2016 so that surveys can be undertaken quickly to meet ADB deadlines.
- In parallel develop and implement a plan for assessment of a second site elsewhere in Lao PDR. Potential sites of interest include Khoun Xe Nong Ma, Xe Sap outside BKX.
- Conduct BIORAP surveys at Nam Mouane and one other site with teams of Lao and international experts starting in March 2016 with draft reports on site values and next steps, including proposed institutional arrangements, available by June 2016.
- A decision on potential offset site should be made by Sept 2016. This may require another amendment to ADB timelines.

Issue: Budgets available for Biodiversity Offset

18. According to budget tables in the Concession Agreement there are \$3.7m potentially available for biodiversity activities; this is a very modest amount to establish and manage a realistic biodiversity offset over the lifetime of the project. Experience in Lao PDR suggests that successful conservation efforts require partnerships between government agencies and conservation NGOs, including both national and international technical assistance. NNP1C needs to think seriously about how additional resources can be mobilized or leveraged to support the designated offset site.
19. The CA allocates a designated payment to the Environmental Protection Fund (EPF) of \$990,000. \$180,000 has already been released to EPF for disbursement against projects in 2015; EPF has accepted a proposal from BKX for \$80k but not yet received a proposal from XSB. advises that it will probably be released according to 50k XSB:50k BKX and 80k to other areas in Lao PDR. NNP1C should consult with EPF to determine whether it would be possible to earmark the remaining \$880,000 to proposals that would support, or reduce pressures on, a designated offset site and/or biodiversity priority sites within the XSB watershed. EPF and/or other donors could also be encouraged to provide support to the unsuccessful backup option offset site should the decision for Nam Mouane be favourable.

Recommendations

- Review conservation needs and priority actions as proposed in final accepted offset report and consider how NNP1C can allocate additional resources as a sign of goodwill.
- Follow up with the EPF on potential for ring-fencing NNP1C allocations to the fund for grant applications for conservation projects in the biodiversity offset area and biodiversity priority areas within the NNP1 watershed.
- Discuss with World Bank and other donors' potential for funding for associated conservation initiatives in Nam Mouane e.g. LENS project
- Work with conservation NGOS (national and international) to leverage other financial (and technical) support.

Issue: Biomass clearance

20. A good process has been outlined for biomass clearance, based on lessons from other dams and good practice guidelines. The contractor will start work in January in selected blocks. Detailed site plans are under preparation. It will be important to ensure that the clearance process does not open new access into the watershed and that the contractor imposes a zero tolerance policy on hunting and/or wildlife trade for all employees. Much

of the biomass (mainly bamboo) in the lower watershed should be used to create biochar which can be used to improve soil fertility at the resettlement at Houay Soup

Recommendations

- Review detailed site plans for biomass clearance to ensure that clearance activities do not provide new access to the watershed forests.
- Ensure contractor institutes a zero tolerance policy on employees hunting or collecting wildlife for trade.
- Identify areas for biomass conversion to biochar in lower watershed.

Issue: Collaboration with NNP2

21. NNP1 is not the only dam in the Nam Ngiep watershed. It is essential that NNP1C consult and collaborate with environmental and social teams at NNP2, especially in relation to planning appropriate activities in the watershed. In early 2015 NNP1 held a joint meeting with NNP2 on climate change but there needs to be much greater contact and collaboration for cost-effective management of the watershed and riverine resources.

Recommendation

- Follow up meetings with NNP2 over proposed social and environmental mitigation activities in watershed.



**NAM NGIEP 1
POWER COMPANY**

Nam Ngiep 1 Hydropower Project

**Response
to the Independent Advisory Panel
Report Number 6 of 8 February 2016**

A	12 March 2016				
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Response to the Independent Advisory Panel Report Number 6 of 8 February 2016

Introduction

This document contains the response of Nam Ngiep 1 Power Company to the findings and recommendations of the Independent Advisory Panel (IAP) expressed in their Report No 6 of 8 February 2016.

The Nam Ngiep 1 Power Company is committed and obligated to strictly comply with the environmental and social safeguards of ADB and the Government of Lao PDR. In particular, as a borrower of loans from ADB, the Company, in accordance with the ADB Safeguard Policy Statement of 2009, is required to engage an Independent Advisory Panel to monitor the project and provide balanced and objective technical opinions on the Project's compliance with the environmental and social safeguard requirements of ADB and the Government of Lao PDR.

In the period from 7-13 December 2015, the IAP conducted their sixth monitoring mission to the Nam Ngiep 1 Hydropower Project. The findings and recommendations of the IAP are publicly available and their reports can be downloaded from the website of Nam Ngiep 1 Power Company, <http://namngiep1.com/>

The Nam Ngiep 1 Hydropower Project is located on the Nam Ngiep River, which flows about 160 km from the mountainous area of Xieng Khuang Province in the centre of Lao PDR through Xaysomboun Province to the plains of Borikhamxay Province until its confluence with the Mekong River. The Project consists of a 148 m high main dam and a smaller 20 m high re-regulating dam downstream of the main dam. The Project will have two powerhouses, one at the main dam with an installed capacity of 272 MW and the other powerhouse at the re-regulating dam with an installed capacity of 18 MW. The main dam will form a 70 km long and 67 km² large reservoir which will inundate four villages in the lower part of the reservoir and impact agricultural land belonging to three villages in the upper part. The re-regulating pond formed by the small dam will inundate one village.

The construction works started in August 2014 and the overall progress of work is about 32%. The inundation of the reservoir is planned to start in May 2018 and the Project will commence generation of electricity by January 2019.

The Company is working closely with the Government of Lao PDR at all levels, international organisations and local people to adhere to the Company's obligations under the Concession Agreement, national legal framework, Lenders' environmental and social safeguard policies and international best practices. The ultimate goal is to avoid and minimise the Project's footprint on the environment, and in line with the policies laid down in the National and Provincial Socio-Economic Development Plans, contribute to the long-term sustainable development of the country and in the Provinces where the Company operates.

For further reading and understanding about the environmental and social management of the Project, please visit the Company Website <http://namngiep1.com/> where detailed information about the design and progress of implementation of the environmental and social management plans and programmes are available.

Nam Ngiep 1 Power Company's Response to Report Number 6 dated 8 February 2016 of the Independent Advisory Panel on the Nam Ngiep 1 Hydropower Project, Lao PDR

Independent Advisory Panel Sixth Site Visit, 7-13 December 2015

Resettlement Issues

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R1	<p>Depleted and degraded soil at the Houay Soup resettlement site is the single most important issue for PAP to be resettled</p> <p>Need to redesign land use in the Houay Soup resettlement area</p>	<ul style="list-style-type: none"> Until recently, the Developer's Pilot Plan (demonstration) farm at Houay Soup was managed by a competent and experienced Hmong (Mr Vang Moua). He was trusted by the PAP from Zone 2LR and Zone 3. The IAP learned that the manager has been transferred, thus leaving many PAP in doubt about NNP1PC's commitment to (i) continuing demonstrations of viable agricultural activities; and, (ii) improving soils and grazing land prior to PAP resettlement. 	<ul style="list-style-type: none"> The IAP notes that the IEE for Houay Soup prepared in 2014 was considered "irrelevant" by the ADB. Unfortunately, this issue was not discussed during the IAP visit in December 2015. The IAP will examine the revised IEE when it is received. Because of time limitations, the IAP did not visit Houay Soup as planned during the December 2015 site visit. <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that all mitigation measures proposed in the IEE be implemented at the Houay Soup resettlement site. 	High	<ul style="list-style-type: none"> The Houay Soup IEE is complimented by the Houay Soup Integrated Natural Resources Management Plan (INRMP). The mitigations and management actions outlined in these reports will be implemented fully. It is proposed that an Annual Implementation Review of both these documents will be prepared by NNP1PC and issued to stakeholders to track progress as well as to give advice on any necessary changes required to the recommendations made in the reports.

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R2	Need to upgrade up to 500 ha designated for grazing of large livestock; prior to resettlement of PAP with cattle and buffalo	<ul style="list-style-type: none"> • NNP1PC staff with previous experience in animal husbandry and pasture development are available to provide technical advice on this important activity. Livestock rearing has a high potential to provide sustainable income to PAP • The area designated for pasture development will be identified after the “choice survey” at 2LR determines actual numbers of PAP and livestock to be resettled. 	<ul style="list-style-type: none"> • The IAP is unsure of the on-the-ground status of pasture development activities • NNP1PC reports having plans to improve grazing areas at Houay Soup and to establish individual and common fodder gardens in the residential areas of Houay Soup <p>Recommendations:</p> <ul style="list-style-type: none"> • The IAP recommends that improvement of grazing areas and common and individual PAP fodder gardens begin as soon as possible. This will require the irrigating of improved tropical grasses and legumes prior to the 2016 wet season. 	Medium	<ul style="list-style-type: none"> - The physical improvements of the grazing land and the fodder gardens will be commenced as soon as access to the areas are obtained and established - See also NNP1PC response to point R2 in the 5th IAP Report

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R3	<ul style="list-style-type: none"> • Designation of the Houay Soup area as resettlement site by GOL authorities • Inclusion of adjusted size and land use plan for Houay Soup in the revised IEE • Significantly smaller size of Houay Soup area that is available for PAP resettlement • Designation of 3,715 ha in the PFA for sole use of PAP settling at Houay Soup 	<ul style="list-style-type: none"> • GOL certificate granted to NNP1PC for 1,745 ha at Houay Soup resettlement area outside national protection forest area (PFA); an additional 648 ha also has been degazetted from PFA by MONRE. Total area for resettlement is 2,393 ha • 3,715 ha remains in PFA; will be managed through an integrated Natural Resources Management Plan • Asset registration completed in Houay Soup area. Except for those affected by the access roads and the transmission lines, no PAP using land in Houaysoup have been compensated as REDP Zone 5 update is accepted by ADB. 	<p>Recommendations</p> <ul style="list-style-type: none"> • The IAP recommends that all mitigation measures made in any revised version of the Houay Soup IEE be implemented. • The revised IEE for Houay Soup should reflect (i) 648 ha degazetted from the PFA; and, (ii) a broad framework for sustainable conservation and use of remaining 3,715 ha remaining in the PFA, with details to be finalized through participatory land use planning (PLUP) following relocation of PAP. • The IAP recommends that construction of critical infrastructure at Houay Soup (as defined by the ADB) should begin as soon as possible to ensure the smooth resettlement of PAP from Hatsaykham. Clearance should be obtained from the ADB. 	High	<ul style="list-style-type: none"> - NNP1PC will monitor and ensure the implementation of the IEE mitigation measures for the resettlement site development - The revised IEE including the annexed Integrated Natural Resources Management Plan deal specifically with the management of the 648 ha and the 3,715 ha protection forest - NPP1PC is ready to commence construction of critical infrastructure as soon as the compensation for the concerned land has been provided to the PAPs. This has now been done for part of the land where the critical infrastructure shall be constructed

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R4	A large number of PAP in Zone 2LR have stated repeatedly that they prefer not to resettle at the Houay Soup resettlement area; that instead they will self-resettle	<ul style="list-style-type: none"> • According to the CA, NNP1PC is responsible for two options: (i) resettle PAP at Houay Soup; or, (ii) pay cash to PAP for self-resettlement based on unit compensation • Official cut-off-date for the project area is 11 April 2014 • PAP at 2LR have stated that the cut-off-date is date they receive compensation payment for assets • PAP assets survey is nearly completed at 2LR; 48 PAP in Ban Namyouak refuse to cooperate in asset registration survey. • Deputy Governor of Xaysomboun Province said PRLRC would declare a new cut-off- date after asset registration is completed; with compensation paid immediately to those who opt for cash. For those refusing to decide, GoL would require them to move to Houay Soup. 	<p>Recommendations</p> <ul style="list-style-type: none"> • The IAP recommends that PAP who choose to self-resettle should be interviewed and assisted to prepare self-resettlement plans based on a draft self-resettlement plan format prepared in consultation with the RMUs and approved by the PRLRC; to document PAP their choice of future livelihood development; and, to ensure PAP are not self-relocating to areas not approved by GOL. • The IAP recommends that compensation payments be initiated soon after the asset survey, the choice survey, and the self-resettlement livelihood plans are completed. • The IAP recommends that the GOL-NNP1PC prepared flowcharts be used to deal with PAP refusing to cooperate with asset registration process. 	High	<ul style="list-style-type: none"> - The self-resettlement process outlined in the REDP requires each PAP to prepare a self-resettlement plan, which must be approved by the PRLRC; NNP1PC will assist the PAPs with preparation of these self-resettlement plans and the application process. - NNP1PC is committed and obligated to ensure prompt payment of compensation - With respect to PAPs objecting to the asset registration, the approach of NNP1PC is to reach consensus through consultation and only use the flowchart as a last resort

R5	<p>Extraordinary delay in resettlement of PAP from Ban Hatsaykham</p> <p>Need for PAP from Hatsaykham to cultivate crops beginning in March 2016</p> <p>NNP1PC has scheduled resettlement of PAP from Hatsaykham during the 2016 growing season</p>	<ul style="list-style-type: none"> • A social management action program (SMAP) is being effectively implemented at Ban Hat Gniun village and Ban Hatsaykham hamlet to minimize impacts from nearby construction camps • Ban Hatsaykham will not be moved to the Houay Soup resettlement site until March 2016 • Based on the indicative choice survey, only one PAP family from Hatsaykham now agrees to move to Houay Soup. Some PAP in Zone 3 refuse to make a choice between self-resettlement/cash compensation or relocation to Houay Soup. • GOL has created a task force to talk to PAP as part of the negotiation process for the final choice survey. For those refusing to decide, GoL would require them to move to Houay Soup • GOL and NNP1PC have prepared a flow chart concerning how to deal with PAP who refuse to make a choice about moving to Houay Soup or not 	<ul style="list-style-type: none"> • The IAP has recommended since 2013 that PAP at Ban Hatsaykham be moved early to the Houay Soup resettlement area or be relocated temporarily to another part of Ban Hat Gniun village to minimize impacts from construction activities. This move has not taken place for various reasons. The IAP is very disappointed that a temporary relocation was not undertaken. • The IAP supports the GOL decision to move to Houay Soup those PAP who refuse to decide. • The IAP understands that the PAP at Ban Hatsaykham have lost confidence in NNP1PC and no longer believe that the resettlement process will benefit them. <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP recommends that NNP1PC management establish immediately a special task force to take command of and organize the Hatsaykham resettlement process. This task force should be headed by an experienced resettlement specialist and should consist of mostly GOL officials linked to the RMU. The activity should be planned, organized, and implemented with 	Urgent	<ul style="list-style-type: none"> - NNP1PC has established a task force consisting of experienced persons from both NNP1PC and GOL. The task force is now working on the issues - As described in the REDP, NNP1PC will implement the rice and transitional assistance support programme to support PAPs during the resettlement. The rice supplement programme will provide 100% rice support for the first two years and then gradually reduce over the next three years
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No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
			<p>military precision; and, in such a way that PAP have time to prepare land and plant their main crops during the 2016 growing season.</p> <ul style="list-style-type: none"> The IAP recommends that NNP1PC prepare immediately an emergency food and nutrition security program that will provide food and financial support to Hatsaykham PAP who are unable to undertake both resettlement and crop cultivation (of their main crop) at the same time. 		

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R6	Commercial development by camp followers around the Developer's base camp and other labor camps will have a negative impact on PAP in host villages located near those construction camps	<ul style="list-style-type: none"> • The "zero tolerance" policy has been adopted by the Developer. • A code of conduct is attached to every contract and emphasized by an instruction from the Bolikhan District Governor on social behavior by construction workers • SMAP is being implemented in the impacted areas • Experienced staff are implementing social management activities among PAP and camp followers • The number of restaurants and beer bars has decreased at Ban Hat Gniun and Ban Hatsaykham • A police sub-station has been established to ensure law enforcement 	<p>The IAP is satisfied that sufficient actions have been taken to reduce unethical and immoral social behavior by all employees of the Developer (including consultants and advisors), the Head Contractor, and all sub-contractors.</p> <p>Lapses can and will occur however and the situation should be closely monitored by NNP1PC and inspected periodically by the LTA.</p>	Closed	<ul style="list-style-type: none"> - NNP1PC appreciates the IAP's recognition of the successful implementation of the programme - NNP1PC recognizes that lapses could occur and is committed to continue the implementation of the SMAP as planned

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R7	<ul style="list-style-type: none"> • Demarcation of fully supply level of the Nam Ngiep 1 reservoir • Livelihood restoration of PAP in three villages in Zone 2UR • Policy level clarification is needed related to islands in the NNP1PC reservoir and use of drawdown zones 	<ul style="list-style-type: none"> • The assets survey is completed at Zone 2UR; follow up survey is needed because the detailed demarcation of full supply level of the Nam Ngiep 1 reservoir has not been completed • Issues related to use of islands and drawdown zones need to be addressed • PAP are waiting for a more intensive NNP1PC program to provide training for new, non-agricultural livelihoods • Livelihood development team at 2UR requires stronger leadership 	<p>Recommendations</p> <ul style="list-style-type: none"> • The IAP recommends that the detailed demarcation of the full supply level of the Nam Ngiep 1 reservoir by NNP1PC engineers should be completed as soon as possible. The current demarcation is insufficient to finalize the asset survey. • The IAP recommends stronger leadership and management the livelihood development team at 2UR. 	Medium	<ul style="list-style-type: none"> - The detailed demarcation in 2UR of the full supply level is ongoing and will be completed in March 2016. - The assets registration already considered the uncertainties associated with the current demarcation of the EL 320 m Full Supply Level and the additional demarcation will not have implications on the registration - NNP1PC recognizes the need to strengthen the leadership of the livelihood programme in 2UR by not only seeking more competent persons to join the team but also develop effective tools to be engaged in work implementation. The preparation and implementation of the Annual Implementation Plan together with capacity building to the team help to ensure significant progress. - The 2UR Livelihood team has been fully staffed since December 2015, and is now intensifying the 2UR livelihood activities

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R8	<ul style="list-style-type: none"> • Organizational and institutional issues related to both NNP1PC and the GOL • Effectiveness of the Xaysomboun RMU • Hom District officials have not been well informed by Xaysomboun RMU about resettlement issues and procedures • Integrated planning by NNP1PC needs to be demonstrated 	<ul style="list-style-type: none"> • Xaysomboun RMU is providing only weak support to NNP1PC in coordinating pre-resettlement activities in Zone 2LR • Hom District officials report lack of knowledge of NNP1PC project details; lack leadership from Xaysomboun RMU • 2016 AIP not completed; should demonstrate integrated planning by technical, environmental, and social units • Monthly reports have not been sent to IAP in the past 	<ul style="list-style-type: none"> • Xaysomboun RMU is not facilitating the smooth resettlement of PAP in Zone 2LR, resulting in confusion and lack of trust • Delays in pre-resettlement activities in Zone 2LR hurt the image of NNP1PC and discredit management and staff, and cause confusion among PAP <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP recommends that ways and means be identified and implemented to strengthen the Xaysomboun RMU. • The IAP recommends that NNP1PC work closely with the Xaysomboun RMU to provide orientation and familiarization to Hom District officials to facilitate NNP1PC's ability to work in Zone 2LR. • The IAP recommends that NNP1PC complete and submit the 2016 AIP for review as soon as possible. 	Medium	<ul style="list-style-type: none"> - NNP1PC has increased the collaboration with the DCC and RMU - NNP1PC has set-up a special task force - NNP1PC has set-up a satellite offices in Hom District and Ban Soupyouak in 2LR. NNP1PC has conducted an exhibition in Hom District for the district officials and other concerned parties to orientate them about the Project with emphasize on the resettlement programme - The AIP 2016 will be completed in February 2016

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
R9	<ul style="list-style-type: none"> The NNP1PC internal management and organization needed to implement resettlement are weak Procurement procedures needed to facilitate important and time-sensitive field operations are complex and slow; and, may effect resettlement activities Flow of funds are being delayed by ESD managers, not by the Finance and Accounting Department 	<ul style="list-style-type: none"> Release of funds for SMO and EMO field activities continues to be delayed by ESD management resulting in delays in field operations related to preparations for resettlement Procurement is delayed resulting in delays in field operations and preparations for resettlement NNP1PC is hiring senior (retired and formerly high ranking officials) Lao to give NNP1PC a higher profile without considering their lack of hands-on field experience in hydropower, resettlement, and livelihood restoration 	<ul style="list-style-type: none"> The TOR for the IAP stipulates that the IAP is required to review monthly reports The experience of senior NNP1PC employees from other high profile hydropower projects is not being applied by key NNP1PC and GOL decision makers <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that NNP1PC send the monthly progress reports to IAP at the same time they are sent to ADB The IAP recommends that NNP1PC use senior Lao with experience in working on other hydropower RMU to work with the Xaysomboun RMU. Senior Lao without experience in working on hydropower projects should be used only at selected official meetings and not hired as NNP1PC staff. 	High	<ul style="list-style-type: none"> NNP1PC thought that the IAP had received the monthly reports since October 2015; be that as it may, NNP1PC will from now on submit the monthly reports to the IAP directly; however, NNP1PC would like to emphasize that the purpose of this is to help the IAP prepare for their missions and bring them up to date on progress and issues. NNP1PC has engaged persons with extensive experience in hydropower and working with GOL to work with RMU and other GOL counterparts. <p>In addition, NNP1PC engages senior Lao persons (even if they have no direct experience in hydropower or resettlement works) based on their ability to communicate effectively and directly with the Hmong PAPs. In this connection, it should be noted that in order to make significant progress and catch-up with delayed milestones, respect and good standing within the Hmong Community is vital and more important than experience in hydropower.</p>

Summary of Social Issues

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
S1	<ul style="list-style-type: none"> Livelihood Programs Agricultural products and market 	In Zone 3 (Ban Thaheua, Ban Hat Ngiun, and Ban Hatsaykham) the livelihood programs have been improved and accepted by the PAP (e.g. vegetables, mushroom growing, chicken, fish, and frog raising). These programs are successful and have generated 2,000,000-3,000,000 kip income per month for many PAP families. However, the programs have not started yet in Zone 2LR and Zone 2UR.	<p>Recommendation</p> <p>The IAP recommends that when the security in Xaysomboun Province is back to normal then the Project should start the livelihood programs in Zone 2LR and Zone 2UR as soon as possible. And livelihood program fund in each village is required. So far, these products from the programs are needed by the local markets and are consumed by the villagers in the communities.</p>	Medium	<ul style="list-style-type: none"> NNP1PC started the livelihood programmes in 2LR and 2UR in early 2015 and both programmes have been ongoing ever since as reported in the Quarterly Progress Reports See also NNP1PC response to Comment No. S4 in the 5th IAP Report NNP1PC is developing mechanisms to improve the micro-finance systems in 2UR, Zone 3 and Zone 5
S2	<ul style="list-style-type: none"> Hmong graves removal 	So far, there are about 900 Hmong graves (more than 600 graves in the 4 villages of Zone 2LR, and 268 graves in Ban Pou of Zone 2UR, and 2 graves in Ban Hatsaykham of Zone 3.	<p>Recommendation</p> <p>The IAP recommends that the Hmong graves in Zone 2LR should be compensated quickly so that the PAP can undertake the needed spirit ceremonies/rituals before impoundment. The removal of each grave requires Hmong people to perform their indigenous rituals for several days. It means that in Zone 2LR may take 2-3 years to remove all Hmong graves</p>	High	<ul style="list-style-type: none"> NNP1PC is currently in the process of completing the registration of additional graves in 2UR; and in close coordination with ADB, NNP1PC is developing a plan to fast track the compensation for graves while still maintaining compliance with ADB's safeguards
S3	Resettle to Resettlement Site (Houay Soup) and self-resettlement	<ul style="list-style-type: none"> According to PAP, 2 households of Ban Namyouak, Zone 2LR and 1 household of Ban Hatsaykham Zone 3 decided to move to Houay Soup. The rest choose self-resettlement. According to PAP, moving Mr. Vang Moua, Manager of Pilot Project in Houay Soup, to Ban Pou of Zone 2UR, has caused confusion among the PAP. They perceived his transfer means the Project is abandoning Houay Soup 	<p>Recommendation</p> <p>The IAP recommends that the Project continues to improve Houay Soup, the Resettlement Site, as planned. There will be more PAP who decide to move to Houay Soup if the Project is able to develop Houay Soup and its infrastructure and facilities.</p>	High	<ul style="list-style-type: none"> NNP1PC is committed to continue to improve Houay Soup and promote the resettlement site

No.	Issue	Status	IAP comments and recommendations	Level of concern*	NNP1PC Response
S4	Food security and livelihood programs	In Zone 3 (Ban Thaheua, Ban Hat Ngiun, and Ban Hatsaykham) the livelihood programs have improved and are accepted by PAP. These programs are successful and have generated significant income for many PAP families. However, programs have not started in Zone 2LR and Zone 2UR.	<p>Recommendation</p> <p>The IAP recommends that when the security in Xaysomboun Province is back to normal the Project should start livelihood programs in Zone 2LR and Zone 2UR as soon as possible. A livelihood program fund in each village is required. Products from NNP1PC programs are needed by local markets and are consumed by local communities.</p>	Medium	<ul style="list-style-type: none"> - See NNP1PC response to S1
S5	<p>There are more people from outside both Hmong and Lao Loum during the Hmong New Year Festival when the IAP visited Ban Hatsaykham, Zone 3.</p> <p>In Zone 3: Following establishment of the construction camps, drug abuse, prostitution, alcohol drinking, crimes, fighting, gambling, stealing, and other crimes increased</p>	<p>The IAP observed and was informed that the issues are under control. It is obvious that the issues are better than last year. The PAP, communities, and relevant district officials have paid more attention to the issues. Some karaoke shops in Zone 3 have been closed. However, the IAP has been informed that there are still many sex workers in Zone 3, especially along the road in Ban Hat Ngiun</p>	<p>Recommendation</p> <ul style="list-style-type: none"> • The IAP recommends the Project discusses and solves the issue with village leaders, local committees, police, and Bolikhan authorities. If not, drug abuse will impact not only Hatsaykham but Project workers and Lao Loum communities; this issue requires close observation and investigation • The IAP recommends that it is required to enforce the Lao Laws. The Project has to work closely with the village headmen, the district and provincial authorities. 	High	<ul style="list-style-type: none"> - Law enforcement is the responsibility of the Lao Government. NNP1PC is facilitating law enforcement through the support provided to district and provincial police, including the construction of a police post in Hat Gniun village. This police post enables 6 police officers to be based there full time. - Furthermore, NNP1PC has a zero tolerance policy to the use of drugs by NNP1PC staff, contractors and sub-contractors.

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S6	The PAP have requested 9 new more items of assets and cultivated land that is located above 320 meters of the flood for compensation	The 4 villages of Zone 2LR (Ban Namyouak, Ban Sopyouak, Ban Sopphuane, and Ban Houaypamom) have requested addition of 9 items, including assets and cultivated land (in case of Ban Sopphuane; that is located above 320 masl, since it cannot be cultivated after impoundment) for compensation from the Project.	<p>Recommendation</p> <p>The IAP recommends that the GOL (district and provincial levels), the Project, and PAP representatives set up a committee to discuss and find a solution together immediately. Otherwise issues will spread to other villages and might create more problems for the Project. For land above 320 masl, the Project should explain the PAP entitlements a per the compensation policy in the REDP and PRLRC Decree of 21 August 2015.</p>	High	<ul style="list-style-type: none"> - NNP1PC has established a task force consisting of experienced persons from both NNP1PC and GOL. The task force is now working on the issues
S7	Self-resettlement	The Hom District Governor promised PAP of Zone 2LR that they would be allowed to self-resettle to Houaysai and Samsao and nearby villages which are close to the old PAP villages. Otherwise they have to move to Houay Soup, no other choice.	<p>The IAP understands from Mrs. Bouaphane Likaya, a Member of the National Assembly of Lao PDR and a national level Hmong leader that a decree granting cash payment to self-resettlers may be difficult.</p> <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP supports her recommendation that PAP be resettled at Houay Soup. <p>The IAP recommends that NNP1PC take time to brief national level Hmong leaders about the REDP entitlements of Hmong PAP.</p>	High	<ul style="list-style-type: none"> - The rights to self-resettlement and cash compensation are clearly stated in Lao Law, in the Concession Agreement and further elaborated in the REDP
S8	In Zone 2LR, 49 households have refused to register their assets with the Project.	In Ban Namyouak of Zone 2LR, there are 49 PAP households that have refused to register their assets with the Project. Their reasons include: (1) the unit rate is very low; (2) the GOL does not support any good and proper resettlement site for them; (3) they require quick cash payments. The IAP has been informed that these PAP request additional discussions with the GOL and the Project.	<p>Recommendation</p> <p>The IAP recommends that the GOL-NNP1PC flow charts be implemented while keeping local village leaders informed and systematic and continuous dialogue with PAP so that fair solutions can be found for all PAP.</p>	High	<ul style="list-style-type: none"> - NNP1PC has established a task force consisting of experienced persons from both NNP1PC and GOL. The task force is working with local leaders on the issues. The approach is to reach consensus through consultation and only use the flowchart as a last resort

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S9	Collaboration with Xaysomboun Province, Zone 2LR, and 2UR	The security issue in Xaysomboun Province in November – December 2015 and during the IAP site visit might cause delays in activities in Zone 2LR and 2UR. It is understood that several missions and activities in the 2 zones could not take place for several weeks.	Recommendation The IAP recommends that the Project works through the RMU, Vice Governor and the Governor of the Xaysomboun Province. Whenever Project staff visit the site, they should visit and inform the Governor of Hom District and related officials in the district. In addition, Project staff should visit village's leaders, IP elders, the head of women's group, head of the youth group, etc. This is also a strong recommendation from the Vice President of the Lao Front for National Construction.	High	- It should be noted that NNP1PC has a permanent presence in Hom and in the Soupyouak in 2LR
S10	Cut-off-date	The last cut-off date was August 15, 2015 and the PAP have been informed. In Zone 2LR, PAP from the 4 villages have requested 9 new items of assets to be considered for compensation from the Project. Ban Sopphuane of Zone 2LR has requested the cultivated land above 320 meters to be considered for compensation because the cultivated land cannot be used anymore.	Recommendation The IAP recommends that the GOL (district and provincial levels), the Project, and the representative from the PAP, must set up a committee to discuss and find a solution together immediately. Otherwise the issues will spread to other villages and might create more problems for the Project.	High	- NNP1PC has established a task force consisting of experienced persons from both NNP1PC and GOL. The task force is working with local leaders on the issues and conducting consultations with the PAPS
S11	Community participation	The IAP was informed that the Project staff shall meet the village leaders when they visit the villages, especially in Ban Hatsaykham, Zone 3. The village leaders said that the number of social issues has decreased and that they can help/support the Project to solve other social problems as they arise in the community.	Recommendation The IAP recommends that more community participation be applied as an additional tool to prevent more social issues /crimes from occurring, e.g. in Ban Hatsaykham. Representatives of the Lao Front for National Construction can be mobilized to help resolve issues in the village.	Medium	- NNP1PC is aware of the risk of more social/crime issues and NNP1PC will consult with the village authorities on how to the community can participate more in the prevention of social issues
S12	Asset registration	The IAP has been informed that the asset registration in Zone 2LR is still slow and behind the schedule since the lack of staff and insufficient tools. The asset registration deadline is due on January 31, 2016. However, according to the PAP, they said that this may be impossible.	Recommendation The IAP recommends that the asset registration in Zone 2LR be finished quickly. This requires sufficient support to Project staff and tools. This requires to move some Project staff from other zones to Zone 2LR temporarily. Without sufficient staff and tools, the asset registration cannot be finished within the schedule.	High	- NNP1PC has mobilized additional resources to speed-up the assets registration in 2LR

Summary of Environmental Issues

No.	Issue	Status	IAP comments and recommendations	Level of Concern	NNP1PC Response
E1	There are four hydropower projects under construction that will affect water quality, water use and water availability along the Nam Ngiep river. An organizational arrangement is needed to manage the watershed resources and enable communications and cooperation between the hydropower companies.	<ul style="list-style-type: none"> The watershed management plan (WMP) started in May 2015 and is on-going. The focus of the action plan is to develop a WMP and undertake necessary surveys and establish the WMO. Overlapping concessions, cumulative and trans-boundary impacts from hydropower, mining, and other development projects within the watershed necessitate consideration of an integrated management and monitoring plan for the Nam Ngiep watershed. NNP1PC Watershed Team has been meeting with MONRE, provincial and district officers, to discuss management issues of the watershed. However, representatives of other Project Proponents in the watershed have not been in attendance. An integrated watershed management plan necessitates involvement of all key stakeholders and how they can share resources, data and improve communications. Little information is provided in the NNP1PC Monthly Progress Reports. 	<p>Recommendation</p> <p>The IAP recommends that NNP1PC continues its efforts to contact all Project Proponents of the four hydropower projects being developed along the Nam Ngiep River and organize an annual meeting to be hosted by NNP1PC to discuss sharing water flow and water quality data and other issues of interest or concern to the four Project Proponents and concerned government agencies.</p>	Low	<ul style="list-style-type: none"> NNP1PC will facilitate and collaborate with the hydropower projects in the Nam Ngiep watershed through the watershed management planning and implementation process in consultation with the NNP1 Watershed Management Committee and the National Watershed Management Committee. The Environmental Compliance and Monitoring team routinely supply surface water quality results to other sections of the NNP1PC and to external partners such as the EMU. This information will also be used for the watershed management planning with upstream counterparts.
E2	NNP1PC is expected to contribute to capacity building of MONRE and assist in establishing the EMU staffed by provincial and district representatives from project affected areas	<ul style="list-style-type: none"> IAP discussions with the EMU of Bolikhamxay indicate that NNP1PC is a priority project for GOL and EMU would like to join in monthly monitoring site visits to contractors' camps and construction sites. Funds have been received from NNP1PC to start compliance monitoring and the EMU Bolikhamxay issued its first report in November 2015. NNP1PC Monthly monitoring reports are also now 	<p>The IAP is satisfied with the efforts that the EMO is now making to include training for the EMU in compliance monitoring and reporting on a regular basis.</p> <p>Recommendations</p> <ul style="list-style-type: none"> The EMU reports should be sent to both NNP1PC and MONRE and include an assessment of the adequacy and effectiveness of implemented mitigation measures being made by the company and its contractors. The EMU lacks any monitoring equipment, but they can be made aware of what 	Medium	<ul style="list-style-type: none"> The EMU is briefed routinely (fortnightly) on progress made by NNP1PC to improve WWTS at the workers' camps. This includes sharing water quality data and participating in routine compliance inspections. NNP1PC has addressed the noncompliance issues raised by the EMU via MONRE's web-based inspection and monitoring database.

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		<p>available at the EMU (but in English only; Lao translations were requested).</p> <ul style="list-style-type: none"> Although the LTA were unable to visit the EMU of Xaysomboun Province, it was reported that MONRE has started the Integrated Spatial Planning (ISP) for Xaysomboun Province. It is believed that Xaysomboun has now received NNP1PC monitoring reports. The EMO should include training programs for the Xaysomboun EMU in compliance monitoring and site inspections as part of its AIP 2016. 	<p>parameters are relevant and how the EMO Compliance Monitoring team samples the environment to measure and analyze the adequacy of protective measures being implemented by both the company and its contractors.</p> <ul style="list-style-type: none"> It is important for the EMU to see the improvements being made to the wastewater treatment plants at the various construction camps and to verify that the improved treatment systems are producing an effluent that meets the Lao effluent standards. Both the EMO and the EMU should be briefed on the waste treatment technologies being implemented at the various camp sites (how the systems work and how they should be maintained). Likewise, the EMU should participate in discussions with communities on how best to manage their solid wastes from both the resettlement communities as well as the construction sites. These efforts should include separation, recycle and reuse of all waste materials, with the goal to create new job opportunities for community members. This emphasis on recycle and reuse of wastes should include the collection of biomass from the future reservoir. It is possible to recycle over 90% of the solid wastes currently being thrown away in the sanitary landfill. Separation and recycle will thus save considerable landfill capacity and result in savings for the company as well as creating new jobs, income and new product opportunities for the resettlement communities. Similar planning and training should be included for the EMU of Xaysomboun as construction work proceeds in the province. The AIP 2016 should clarify and detail the training programs to be introduced to the EMUs of both 		<ul style="list-style-type: none"> NNP1PC constantly seeks system improvements where it is identified that the effluents do not comply with the CA requirements. In 2016, NNP1PC will construct and operate its own water quality laboratory which will dramatically improve the company's ability to check the effectiveness of WWTS, as well as more comprehensively monitor surface water quality. NNP1PC has a comprehensive recycling program for NNP1 Construction waste and the waste generated in the host villages. A recycle waste bank with pressing machine to reduce the volume of recyclable waste has been established to generate income for local villages. This waste bank maybe expanded after an initial trial period of six months from February 2016. NNP1PC will continue to carry out on the job training for the EMUs including with respect to wastewater treatment, water quality monitoring, waste management and compliance inspections of construction works. NNP1PC has discussed and will continue to work with MONRE to organize a lessons learnt workshop for the EMUs in Nam Ngiep watershed and the EMUs of THXP and NT2.

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			<p>provinces. The training should include all environmental issues that need to be improved in 2016 by the Contractor. Training includes joining in monthly joint inspections made by the EMO together with the Contractor and involvement in discussions of the proposed changes by the Contractors to correct outstanding environmental issues and non-compliances. The EMU can thus witness the compliance and monitoring approach used by EMO to ensure that the Contractor and all Sub-contractors meet with the conditions of Annex C of the CA and the ADB SPS.</p> <ul style="list-style-type: none"> The IAP again recommends that NNP1PC convene a workshop combining the EMUs of both provinces and MONRE to review duties of the EMU for Nam Ngiep watershed. MONRE should be invited as workshop organizer to review “lessons learned” from Nam Theun 2 and the Theun-Hinboun projects, and include the expanded mandate of MONRE to oversee integrated environmental conservation interests of water, forest, and biodiversity protection at the regional and district levels. It is believed that this training emphasizing “lessons learned” from other EMUs in hydropower development will serve as a very effective tool to promote capacity building of the EMUs. This should be followed by a planned visit to the Theun-Hinboun hydropower project in Bolikhamxay Province together with the EMU for the Theun-Hinboun project to review their responsibilities, their learning experiences, weaknesses, strengths, and to include field exercises with them to witness mitigation measures, and analyze findings. The workshop would greatly benefit the Company and the capacity building efforts of the project. Funds spent for this workshop would be well spent and beneficial to all parties. 		

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E3	<p>The management of the environment is not in compliance with (1) the CA Obligation 2.2 Obligation to Implement Environmental Measures which states that the Company (NNP1PC) must ensure that the HCCEMMP is prepared by the Head Construction Contractor in accordance with the Concession Agreement.....and ensure that the Head Construction Contractor implements the approved HCCEMMP; and (2) the ADB Safeguard Requirements 1: Environment, Section 2. Environmental Planning and Management, para. 15, which states that when a third party's involvement (meaning a contractor, or an operator of an associated facility)</p>	<ul style="list-style-type: none"> The Main Contractor (CWC) has three staff designated to manage and oversee the environmental, health and safety (EHS) obligations of the CWC and its Sub-contractors (Mr. Santi Sayakoummane, Environmental Specialist; Mr Taguchi Tomohiro, EHS Manager; and Mr Lester Palarca, Safety Engineer) in accordance with the CA and the ADB Safeguards. The IAP is satisfied with the new arrangement as long as supervision of environment affected activities of the CWC and its Sub-contractors is carried out by CWC in accordance with best practices and commitments of the ESMMP-CP. CWC is still dependent upon NNP1PC to provide all technical inputs, environmental monitoring, and reporting, plus meeting with the Sub-contractors to implement acceptable solutions to environmental issues. The NNP1PC site activities have shown an improvement from the past as was observed and agreed both by IAP and LTA during this site visit. However, CWC is still not operating in accordance with ADB Safeguards and IFI Performance Standards. CWC is thus not operating in accordance with ADB Safeguards or IFI Performance Standards. 	<p>The IAP believes that the CWC is non-compliant with ADB's Environmental Safeguards and IFC Performance Standards. CWC's non-compliance is the borrower/client's (NNP1PC) non-compliance as far as ADB and other lenders are concerned.</p> <p>Recommendations</p> <ul style="list-style-type: none"> NNP1PC must continue to pressure the CWC to carry out its environmental management obligations both for the CWC and its sub-contractors in accordance with best practices. This means that the Technical Division (TD) must work closely with the EMO and not be in conflict with the EMO requests for improved CWC environmental actions to manage both their obligations and those of their sub-contractors. The IAP is satisfied with the technical inputs of the Environmental Engineering Consultant to resolve design problems with the wastewater treatment systems of the sub-contractors, the CWC Main Camp, and the Owner's Camp. However, the implementation of the designs was not in accordance with the Consultant's recommendations. The TD allowed the EHS Managers of the CWC to change the design criteria. This is very surprising because TD would not allow the contractors to change approved designs of any civil works for the dam or power plant. The revised wastewater treatment plants are not properly constructed and need to be reconstructed for the third time in order to ensure operation efficiency and ability to achieve effluent standards. The Technical Division and the EMO should not have allowed the Contractors to deviate (change) the approved designs. The EMO was negligent in its inspection work because they did not report or record any non-compliances for the wastewater treatment plants. EMO has a set of 	Very High	<ul style="list-style-type: none"> NNP1PC will continue to monitor and assess the effectiveness of the environmental measures and compliance with legal and contractual requirements. NNP1PC constantly seeks system improvements where it is identified that the effluents do not comply with the CA requirements. In particular, NNP1PC will check the compliance of the WWTS with effluent standards and implement any necessary redesigns in case of noncompliance. In 2016, NNP1PC will construct and operate its own water quality laboratory which will dramatically improve the company's ability to check the effectiveness of WWTS, as well as more comprehensively monitor surface water quality. Effluent monitoring will be extended to all effluents, including those dispersed on roads and the playing field as part of the treatment process. The dispersing of waste water into the local environment will be suspended if the values exceed the national standards. These progress with respect to wastewater treatment issues will be reported in the Environmental QMR Quarter 1, 2016 <ul style="list-style-type: none"> It is not a correct statement that TD allowed the EHS Managers of the CWC to

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	will influence implementation of the EMP, the borrower/client (meaning NNP1PC) has control or influence over the actions and behavior of the third party, and will collaborate with the third party to achieve the outcome consistent with the requirements for the borrower/client.		<p>drawings. Why didn't they inspect the construction works of the wastewater treatment plants and report deviations from agreed upon designs? The EMO and the EHS Managers of Obayashi allowed the construction of the WWPTs to go forward without any checking of the construction works against the drawings.</p> <ul style="list-style-type: none"> The designs are based on referenced international standards and thus CWC and its sub-contractors should build the treatment systems and install equipment as specified in the detailed design drawings. There should be no deviation from the design drawings unless agreed upon by a joint meeting between the EMO, TD, and the contractor in question. The EMO is also taking samples to check on efficiency of the systems. The samples are not representative because they are not composite samples so the analytical results are not representative of what is going into or being discharged from the WWTPs. The EMO is also not sampling the effluent if there is no discharge (to a water course). This is in violation to the CA and to ADB Environmental Safeguards. 		<p><i>change the design criteria.</i> TD delivered the written design improvements from the Expert to the Contractor with the directions that they follow the recommendations. All camp's Waste Water Treatment Systems are being inspected regularly to ensure that the upgrade is done in accordance with the technical design provided by the independent consultant. The upgrade is in progress in 3 priority camps namely and March 2016 has been set as deadline.</p>
E4	Management of wastes from construction sites and camps of sub-contractors is not compliant with guidelines of the ESMMP-CP and do not meet the requirements of Annex C to the CA. NNP1PC has not prepared and	<p>Several violations of the standards are evident:</p> <ol style="list-style-type: none"> Solid wastes are still being dumped into the temporary pits of the NNP1PC landfill without separation of recyclable wastes for reuse or sale to recycle firms; The temporary pits are unlined and do not have a leachate collection system. The pits should be covered and protected from rainwater seeping or draining into the pits; and, 	<ul style="list-style-type: none"> The Main Contractor, Obayashi, understands that it is their responsibility to ensure that all sub-contractors meet waste treatment and waste management standards agreed upon in the CA and EMP for all types of construction and worker wastes (air, liquid, solids and hazardous wastes). The TD has provided technical assistance for CWC and its sub-contractors by hiring a licensed environmental engineer to provide designs for the wastewater treatment plants and the sanitary landfill needed for the construction camps and the NNP1PC project. 	Very High	<ul style="list-style-type: none"> NNP1PC has a comprehensive recycling program for NNP1 Construction waste and the waste generated in the host villages. A recycle waste bank with pressing machine to reduce the volume of recyclable waste has been established to generate income for local villages. This waste bank maybe expanded after an initial trial period of six months from February 2016.

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	<p>approved a SSES MMP for the Landfill Management Plan and submitted it to MONRE prior to commencing construction work covered by the SSES MMP (see Clause 68 of Annex C to the CA). NNP1PC has obligations to minimize and recycle waste (see Clause 57 of Annex C, CA).</p>	<p>3) Septic tanks wastes from sub-contractor septic tanks are temporarily being collected and disposed of by outside contractors. Disposal requests are being managed by NNP1PC and disposal sites and lime treatment is being approved by NNP1PC until a proper sewage treatment plant is installed on-site.</p>	<ul style="list-style-type: none"> The IAP is not convinced that the proposed sanitary landfill design meets “best practices” for economic operation of landfills. A compacted clay liner should be adequate enough to meet the impermeability criteria of a properly designed landfill. The leachate system can be made large enough to ensure evaporation of collected leachate. <p>Recommendations:</p> <ul style="list-style-type: none"> The main focus of the solid wastes collection and treatment system for the construction and operation phases of the project must be on maximizing separation and recycle of waste materials and not disposal of all solid wastes into the landfill. Some 95% of the wastes disposed in the landfill can be recycled. It is far more economic for NNP1PC to invest in a recycle industry (separation, compaction and recycling technologies for reusing solid wastes) than in expanding the sanitary landfill to meet projected solid wastes generation volumes throughout the CA. Creation of job opportunities for villagers to utilize wastes as raw materials for new products will pay for itself in future livelihood developments, save on investment & operation costs of the sanitary landfill, and create a healthier and cleaner environment for the resettlement communities. The AIP 2016 should focus on a “green technology” approach to management of solid wastes from the contractors and from all project impacted communities. The design of the sanitary landfill appears excessive for the location and intent to meet safe disposal standards. The pits should have a compacted clay lining to encircle the pit and minimize seepage. An additional impervious liner below the leachate collection system appears 		<ul style="list-style-type: none"> The NNP1PC is also successfully running a food waste collection program between host villages and worker canteens. This program has improved the domestic animal weight gain, fecundity and market sale value. NNP1PC is of the opinion that the landfill design is appropriate and in compliance with applicable international standards and best available techniques. Furthermore, with respect to the liner system of the landfill, NNP1PC has carefully followed the design criteria recommended by the independent expert.

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			<p>excessive since the landfill does not receive <i>mixed construction, industrial, and domestic wastes</i> (see <i>USEPA Guidelines</i>). The leachate drains to a series of ponds to maximize evaporation during wet season. These design criteria are adequate for the environmental safeguards of the project as long as the EMO, CWC and all sub- contractors ensure that hazardous materials and hazardous wastes are separated out of construction wastes and are managed separately in accordance with international best practices.</p> <ul style="list-style-type: none"> • Work should proceed quickly on completing the specifications of the final design and construction of the sanitary landfill. • NNP1PC needs to calculate a disposal fee with concurrence of CWC and all subcontractors to cover the cost of construction and operation of the sanitary landfill for the NNP1 project. • NNP1PC will operate the landfill throughout the CA using the collected fees to pay for operation. Communities using these facilities need to be instructed on the Guidelines for solid wastes collection and disposal. Disposal fees would vary over time to reflect the net costs of collection, separation, recycle and residual disposal costs 		
E5	<p>Cooperation and support from TD to EMO is necessary to implement corrective actions by CWC and sub-contractors on outstanding environmental issues.</p> <p>Compliance Monitoring frequency and parameters to be monitored needs to</p>	<ul style="list-style-type: none"> • Visits to construction camps and work sites by the IAP and LTA Environmental Specialists showed improved awareness and attention to environmental issues by CWC and its sub-contractors. • Inspection monitoring is taking place regularly between EMO,CWC, and sub-contractors, with scheduled meeting times so that contractors can respond to non-compliances with agreed upon corrective actions and within an acceptable time frame for implementation. 	<p>Review of EMO Monitoring and Inspection Team activities is showing improved support and cooperation from TD to implement corrective actions by CWC and sub-contractors on outstanding environmental issues. This needs to be extended to the newly redesigned wastewater treatment systems. TD needs to insist the CWC and its sub-contractors follow the design drawings and specifications of the environmental engineering consultant and build the required treatment systems to meet the standards specified in the consultant’s reports.</p> <p>Recommendations</p>	High	<ul style="list-style-type: none"> - NNP1PC is currently updating the ESMMP-CP and will outline improved contractor monitoring frequency and procedures. This will include increased monitoring by the contractor of the effectiveness of treatment systems. - Noncompliance with environmental requirements are discussed and followed-up with the contractor at weekly meetings and critical issues are presented at weekly

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	be re-evaluated in a new Annual Implementation Plan (AIP) for 2016. This plan needs to be urgently drafted, reviewed, and approved within January of 2016.	<ul style="list-style-type: none"> An Environmental Manager of CWC's EHS team is now inspecting work sites and camps of subcontractors together with EMO Compliance team members to ensure environmental performance standards 	<ul style="list-style-type: none"> The IAP strongly endorses the involvement of NNP1PC environment managers in field inspections to ensure full cooperation of senior EHS manager support from the CWC and its subcontractors. Outstanding environmental issues should be monitored more frequently using relevant parameters to verify adequacy of mitigation measures and to document results achieved. The overall environmental monitoring program needs to be revised and updated in a new AIP 2016. The monitoring program should be flexible and modified to clarify the extent of an adverse environmental impact or to prove acceptability of an implemented mitigation measure. 		<p>management meetings chaired by the Managing Director of NNP1PC</p> <ul style="list-style-type: none"> Based on the recommendations of IAP and as part of the revision of the ESMMP-CP, NNP1PC is reviewing the monitoring programmes and will make all necessary changes. These revisions will be reflected in the AIP 2016.
E6	The Biomass Removal Plan for the reservoir has been approved by all parties and a contractor selected for implementation. The approved plan lacks key biomass details (such as amount of soft and hard biomass for each of the 18 priority removal areas; elevations limits for removal); there is no detailed implementation plan for their removal; and there is no mention of any utilization of the waste biomass for making charcoal,	NNP1 has requested a site specific ESMMP from the selected BRP Contractor for each of the 18 priority biomass removal areas. The SSESMMMP are expected to be ready in the first quarter of 2016 for review and approval by GoL, NNP1, and local government agencies who will be involved in monitoring the implementation.	<p>The IAP is concerned that the Biomass Removal Plan was approved by all parties without any reference to making beneficial use of the waste biomass for villager livelihood development, soil improvement, or other beneficial uses of timber, such as raw materials for construction of chairs and tables for schools, collection and storage of wood for fuel, development of village nurseries, using valuable seedlings for future agro-forestry development, non-timber forest products, etc.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> The IAP advises that NNP1 should organize a special meeting among key SMO and EMO staff to discuss potential uses of biomass from the future reservoir which would benefit impacted villages and development of livelihood options. The results of the meeting should be incorporated into the biomass removal implementation plan and a team from within EMO assigned to oversee the BRP contractor, his removal and storage of useful biomass for villager use, and livelihood training needed for preparation and use of the reclaimed biomass. 	Medium	<ul style="list-style-type: none"> NNP1 is further discussing with Xaysomboun Province on the potential beneficial use of waste biomass and lesser valued biomass for the communities Based on the discussions with Xaysomboun Province, NNP1PC (EMO, SMO, and TD) will consider the practicalities and feasibility of measures to utilize the lesser valued biomass. NNP1PC EMO Inspection team will monitor the implementation of the BRP Code of Practice NNP1PC will check that the biomass removal contractor in accordance with the contractual obligations: i) is not using any hazardous materials in the reservoir area; ii) will not hunt or poach.

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	<p>firewood, a soil conditioner or biomass use by villagers to improve livelihood support or development.</p> <p>The Code of Practice lists numerous management and mitigation measures that are the responsibility of the Owner to verify, provide training, and carry out compliance monitoring. Is the EMO set up to handle this new responsibility? The AIP 2016 needs to address this new activity and clarify all E&S requirements.</p>		<ul style="list-style-type: none"> • The same Environmental Auditing team needs to be familiar with and oversee the Environmental and Social Safeguards of the BRP as described in the Code of Practice for Biomass Removal (pgs 49-56 of the BRP for NNP1, July 2015). • The IAP recommends that the EMO review the Code of Practice with the BRP Contractor to ensure that there is no use of hazardous materials within the reservoir area, no maintenance of vehicles, zero tolerance for hunting or poaching of any kind, etc. and that he understands what he must do to implement the Code of Practice. This Compliance Monitoring work will require a new team of EMO staff to work within the reservoir area and the AIP 2016 needs to address this new activity in considerable detail. 		

Biodiversity

	Issue	Status	IAP Comments and Recommendations	Level of Concern	NNP1PC Response
B1	Options for implementing a biodiversity offset (long-term issue)	Watershed biodiversity surveys completed –no suitable offset site in watershed. Three other sites proposed by provinces also not suitable	Recommendation Verify suitability of Nam Mouane in BKK and/or another suitable site outside project provinces	Very High	<ul style="list-style-type: none"> - The survey in Nam Mouane watershed will commence in February 2016. . - NNP1PC has prepared a Technical Note describing the approach to biodiversity offset site selection and BOMP preparation. The Note has been sent to ADB.
B2	Activities along the dam access road need to be managed to reduce impacts (ongoing issue)	Degradation, logging and forest clearance for agriculture along access roads. EPF grant allocated (Dec 2015) but not yet under implementation	Recommendation <ul style="list-style-type: none"> • Work with provincial authorities to limit forest clearance along new dam access road (still an issue). Company to monitor effectiveness of PONRE implementation of EPF grant 	High	<ul style="list-style-type: none"> - PONRE is still preparing the proposal to the EPF and NNP1PC is assisting the PONRE and has e.g. so far financed a consultation meeting with the province and the district. - It is still a long process before the proposal is finalized and approved by EPF. - Once approved, NNP1PC intends to consult and advise the PONRE in terms of monitoring.
B3	Poor knowledge of wildlife populations and distribution in project area, Surveys in Nam Ngiep watershed needed to determine a) suitability of are for offset and b) needs for mitigation activities	BIORAP survey completed in watershed (August 2015). No suitable offset site in NNP1 watershed but some interesting species populations that could merit special actions	Recommendation <ul style="list-style-type: none"> • Integrate results of survey in watershed management plan to protect key species 	Closed	
B4	Data on NTFPs collection	Not clear what info has been collected as part of asset surveys at different sites	The IAP assumes that information on NTFP use has been incorporated into asset assessments for compensation. NNP1C to advise	Closed	-

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B5	Workers and construction traffic removing forest resources, illegal logs and wildlife	Prohibition of illegal harvesting and trade is covered in the Developer's Code of Conduct (ongoing issue)	Recommendation The Developer should enforce a zero tolerance policy on illegal logging, hunting and wildlife trade by the employees of the Developer, Contractor, and all sub-contractors. Ongoing need. EMO to report on any infractions	High	- NNP1PC has so far not encountered any issues related to illegal logging, hunting and wildlife trade, but NNP1PC is closely monitoring and inspecting relevant sites to ensure that there is no illegal logging, hunting and wildlife trading by employees and contractors. The zero tolerance policy is in the NNP1PC safeguard documents and are being implemented.
B6	Introduction of potentially invasive species as part of reforestation, agriculture schemes	Plans for aquaculture in reservoir to improve livelihoods (ongoing)	Recommendations <ul style="list-style-type: none"> The Developer should check to make sure that the proposed species to be introduced are NOT potentially invasive Need careful review to ensure no introduction of exotic species with likely negative impact on native fish fauna. 	Low	- The plans for aquaculture development will include prevention of introduction of invasive species. - Propagation of native fish species included in the plans.
B7	NTFPs used by PAP for food security and cash income	PAP at all impacted villages are highly dependent on NTFPs NRM report for Houay Soup recommends zoning of forest according to land capacity and advocates another consultancy to assess NTFPs at Houay Soup	Recommendations <ul style="list-style-type: none"> Protect sufficient natural forest within and adjacent to the resettlement sites for villagers to harvest NTFPs or provide alternative sources of income DoLA has allocated large area of protection forest for PAP use at Houaysoup. Rather than another consultancy suggests participatory planning with PAPs at resettlement site 	High	- The National Protection Forest in Houay Soup has officially been allocated to NNP1PC with land use certificate. - A forest management plan will be developed as part of NNP1PC Watershed Management Plan, which will deal with NTFP utilization by PAPs. - NNP1PC will support participatory land use planning in Houay Soup in accordance with the procedures and steps in the INRMP and the REDP Zone 3

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B8	<ul style="list-style-type: none"> Monitoring of biodiversity Capacity of provincial and district EMUs for monitoring Community engagement in monitoring 	<ul style="list-style-type: none"> Biodiversity values are not monitored by anyone EMUs in project provinces have limited capacity and resources Hmong villagers have good local knowledge Long term issues 	<p>Reservoir will give access to new areas above water line</p> <p>Recommendations</p> <ul style="list-style-type: none"> Additional wildlife surveys should be undertaken in the upper watershed during construction to define protection and monitoring needs Hmong villagers should be hired to assist with monitoring biodiversity within resettlement areas and nearby forests Strengthen capacity of provincial EMUs to monitor impacts on biodiversity and environment. (still valid for BIORAP) 	<p>Medium</p> <p>High</p>	<ul style="list-style-type: none"> An initial biodiversity baseline survey has been completed in NNP1PC watershed area. The biodiversity management in the watershed area will be part of the Watershed Management Plan. Forest protection and monitoring needs will also be dealt with through the Watershed Management Plan and this will include how to involve the relevant communities including with respect to the Houay Soup forest area NNP1PC is training the EMUs on environmental monitoring and NNP1PC has discussed with EMU also to conduct training on biodiversity issues relevant to the Project.
B9	Suitability of Watershed as Biodiversity Offset (unresolved issue)	Updated BOF still identifies XSB watershed as potential offset site –critical to get biodiversity assessment underway asap to determine suitability,	Survey completed. Provinces agree watershed NOT appropriate as offset site	Closed	-
B10	<p>Appropriate and integrated Watershed management activities</p> <p>Initiate development of ISP for XSB</p>	<p>The watershed now falls mainly within the boundaries of XSB Province which lacks an integrated spatial plan</p> <p>ISP delayed (Dec 2015)</p>	<p>Recommendations</p> <ul style="list-style-type: none"> Work with MONRE and environmental offices in XSB to develop ISP NNP1C work with XSB to prioritize and complete planning for districts within watershed as critical input to watershed management plan 	Very high	<ul style="list-style-type: none"> Ongoing – NNP1PC is working with MONRE and Xaysomboun Province to develop the ISP.
B11	Construction activities and increased access will lead to further habitat loss in watershed and along ROW for transmission lines	Villagers already clearing forests around dam site to expand agricultural activities	<p>Recommendation</p> <p>Develop guidelines and mitigation plans to minimise habitat loss due to construction activities and for restoration and rehabilitation of impacted areas. NNP1C to monitor habitat infractions in watershed</p>	High	<ul style="list-style-type: none"> Loss of habitats is dealt with through the implementation and monitoring of the ESMP-CP and the SS-ESMPs. The WMP will include the mitigation of habitat loss caused by economic activities.

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B12	Working with MONRE to manage watershed management activities	Current budget request from MONRE focuses mainly on vehicles and salary supplements, – need to refocus on actions, Watershed Management Action Plan prepared and budget s released to PONRE	Little progress with WMP (Dec 2015) Interim action plan and budget in prep with WMOs	Very High	<ul style="list-style-type: none"> - In the beginning of January 2016, NNP1PC disbursed the first lot of watershed management funds to the Watershed Management Committee (WMC). - NNP1PC is working closely with DFRM. - NNP1PC recently arranged a coordination meeting with WMC and agreement was reached with the WMC on the next steps to be undertaken under the Watershed Priority Action Plan.
B13	Capacity of environmental units at MONRE to manage watershed management activities	MONRE has very limited capacity at all levels (especially at province and district levels).	Developer’s EMO to work with MONRE to seek capacity and mentoring opportunities (e.g., involvement of provincial officers in XSB ISP) Ongoing	High	<ul style="list-style-type: none"> - NNP1PC is aware of the capacity issues and will continue to work with DFRM for the watershed management activities and EMU for the environmental monitoring. - With respect to ISP, DEQP is leading the capacity building of the provincial technical ISP committees and NNP1PC is funding this.
B14	Appoint Biodiversity Offset Committee of technical experts with appropriate expertise	<ul style="list-style-type: none"> • Outstanding issue • Required by 31 December 2014 according to financial agreement with ADB 	Biodiversity Offset Advisory Committee appointed with well qualified international and national experts	Closed	-
B15	Watershed Management Plan should include Houay Soup forests and be integrated with ISP for XSB	MONRE require 4,250 ha of protection forest in Houay Soup resettlement area to remain as forest Dec 2015 DoLA has agreed PAPs should have sole use of Houay Soup forests	<ul style="list-style-type: none"> • NRM report identifies options according to land quality. • Activities in protection forest in Houay Ngua and Houay Soup to be implemented in accordance with WMP objectives. • Forest activities at Houay Soup to be funded under Resettlement Plan 	Very High	<ul style="list-style-type: none"> - The Houay Soup area will be under the umbrella of the Watershed Management Plan but will not be dealt with in the Xaysomboun ISP, because HS area is in Borikhamxay Province. - The draft WMP will be ready by 31 July 2016 and finalized by 31 Oct 2016.

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B16	Collaboration with NNP2 on watershed management	Developments at NNP2 impact on watershed, including water quality and aquatic biodiversity No recent contact with NNP2	Recommendation Initiate further contact with NNP2 to facilitate collaboration and complementarity of watershed management	High	<ul style="list-style-type: none"> - As part of the Watershed Management Planning, NNP1PC will facilitate stakeholder workshops involving concerned projects in Nam Ngiep Watershed. - See also response to E1. - NNP1PC has cooperation with NNP2 in terms of hydraulic monitoring.
B17	Biodiversity Offset Frame-work and Choice of Offset Site	Not new issue but important to reopen discussions on potential offset site beyond watershed	Advised MONRE and PONRE the need to review potential offset sites outside watershed PONREs agreed and suggested 3 alternative sites outside watershed but none suitable for offset	Closed	-
B18	Watershed Management Plan	Not yet started (Dec 2015) but decisions already made on budget and resource allocations	Recommendation Little progress with WMP (Dec 2015) Urgent that Watershed Management Planning team is mobilized and managed as one integrated team rather than multiple consultancies and sub-plans managed separately.	Urgent	<ul style="list-style-type: none"> - At a coordination meeting held with WMC, NNP1PC and WMC agreed on the next steps to be undertaken under the Watershed Priority Action Plan. - WMC will hire a consultant to assist with the Watershed Management Plan. - The Secretariat of the WMC functions as the Planning Team together with the in-house teams of NNP1PC.
B19	Watershed Management Action Plan	Action plan and activities agreed before Watershed Management Plan in place	Ongoing discussions Prioritize activities in line with PONRE mandates and capacity	Closed – see B12	-
B20	Potential Offset Site outside Watershed	Reopen discussion for offset site outside watershed but within XSB/BKX	Agreed with PONREs – new offset sites proposed and surveyed	Closed	-

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B21	Biodiversity Offset Management Plan	Revised deadline for Offset management plan now extended to 1 May 2016,	Deadlines will need to be revised again to accommodate delays on choice of Biodiversity Offset site and WMP	High	<ul style="list-style-type: none"> - New deadlines have been agreed with ADB as follows: - 28 February 2017 for draft Biodiversity Offset Management Plan (BOMP) - 30 April 2017 for the final BOMP
B22	Budgets for Watershed Management and Biodiversity Offset	Modest budgets allocated but decisions and allocations already being made before adequate plans in place. Ongoing concern	Funding to be allocated according to clear objectives and outcomes. Review opportunities for supplemental funding	High	<ul style="list-style-type: none"> - The funds for watershed management and biodiversity offset are in separate budget lines. The allocation of these funds will be dealt with in the WMP and the BOMP. - The BOMP will also deal with opportunities for supplemental funding
B23	Watershed Management Plan	Separate subplans being prepared. By consultants	Recruit watershed management specialist and establish one integrated watershed management team	High	<ul style="list-style-type: none"> - The approach agreed with the Watershed Management Committee is that the planning team shall consist of and be led by the concerned GOL organizations working closely together with the in-house teams of NNP1PC. This is to ensure ownership, sustainability and to ensure that the planned activities are implemented. - International experts (reviewers) will in due course be recruited to review and provide comments on the draft Watershed Management Plan.
B24	Conservation of remaining populations of rare and endangered species in watershed	Important species populations identified at Phou Samsao and Phu Katta and surroundings	Identify opportunities for species conservation activities in XSB from the Environment Protection Fund (EPF)	High	<ul style="list-style-type: none"> - In addition to the biodiversity management plan in the watershed area, Xaysomboun province is preparing a proposal to EPF for forest protection in the province. Such forest protection may involve conservation of species.
B25	Surveys Nam Mouane as potential Offset site	BKX proposed 77000ha at Nam Mouane site – need to assess biodiversity values and access for technical assistance	Surveys to be initiated by March 2015 for draft report June and final decision Sept 2015	Urgent	<ul style="list-style-type: none"> - The survey in Nam Mouane Watershed will commence in February 2016.

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B26	Survey at 2 nd back-up site for potential offset	Proposed sites Khoun Xe Nong Ma, Xe Sap have high biodiversity potential but outside project provinces	Surveys to be initiated by March 2015	High	- NNP1PC's approach is to complete the survey of Nam Mouane Watershed first and only if this site is found not to be suitable as an offset site, NNP1PC will then discuss with the concerned GOL Authorities about alternative sites.
B27	Biomass clearance –	Site plans under prep	Review detailed site plans to ensure no new access into watershed forests	High	- There will not be any new access to the biomass clearance sites in the reservoir.
B28	Staffing for Watershed Management and Biodiversity team	Still vacant positions	Fill team positions, with competent staff and work more closely with other EMO and SMO staff to avoid constant need to outsource activities to consultants	Closed	
B29	Financial flows and procurement issues	Serious delays on contracting essential activities e.g. BIORAP survey and BOAC due to procurement delays	NNP1C Finance Dept. needs to work with EMO to facilitate contracts and speedy mobilization of activities.	Closed	

List of Acronyms

ADB	Asian Development Bank
AIP	Annual implementation plan
BAC	Biodiversity Offset Advisory Committee
BKX	Bolikhamxay Province
BRP	Biomass removal plan
CA	Concession agreement
DEQP	Department of Environmental Quality Promotion
DFO	District forestry office
DFRM	Department of Forest Resources Management
DG	Director-general
DoLA	Department of Land Administration
DONRE	District office of natural resources and environment
EGATI	Electric Generating Authority of Thailand International Company
ESMMP-CP	Environmental and social management and monitoring plan construction period
EMO	Environmental Management Office
EMU	Environmental Management Unit
ESD	Environment and Social Division
ESIA	Environmental and social impacts assessment
GOL	Government of Lao PDR
IAP	Independent Advisory Panel
IEE	Initial environmental examination
ISP	Integrated spatial planning / Invasive species program
LTA	Lenders' technical advisor
MEM	Ministry of Energy and Mines
MONRE	Ministry of Natural Resources and Environment
NNP1	Nam Ngiep 1 hydropower project
NNP2	Nam Ngiep 2 hydropower project
NTFPs	Non-timber forest products
PAP	Project affected people
PFA	National protection forest area
PONRE	Provincial office of natural resources and environment
REMDP/REDP	Resettlement and Ethnic Minority Development Plan
RMU	Resettlement Management Unit
SMO	Social Management Office
TD	Technical Division
UR	Upper reservoir
WMP	Watershed management plan
WWTP	Waste water treatment plant