

# Independent Advisory Panel Report

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

Report Number 2 on the Second Site Visit, 17-24 November 2013

Prepared by Mr. Anthony M. Zola, Resettlement Specialist and Chairman of the Independent Advisory Panel for the Asian Development Bank

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**Report Number 2  
of the Independent Advisory Panel on the Nam  
Ngiiep 1 Hydropower Project, Lao PDR  
Second Site Visit, 17-24 November 2013**

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**20 December 2013**

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## List of acronyms and abbreviations

ADB	Asian Development Bank
CA	Concession agreement
CIA	Cumulative impacts assessment
DONRE	District office of natural resources and environment
DFRM	Department of Forest Resources Management
E&S	Environment and social
EGATi	Electric Generating Authority of Thailand International Company
EIA	Environmental impacts assessment
EMP	Environmental management plan
EMMP	Environmental monitoring and management plan
EMU	Environmental Management Unit
ESD	Environment and Social Division
ESIA	Environment and social impacts assessment
IAP	Independent Advisory Panel
IFC	International Finance Corporation, World Bank Group
GOL	Government of Lao PDR
ha	hectare
LR	Lower reservoir
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
NTFP	Non-timber forest product
NTPC	Nam Theun Power Company
PAP	Project affected people
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	Resettlement and Ethnic Minority Development Plan
RMU	Resettlement Management Unit
SEA	Strategic environmental assessment
THPC	Theun-Hinboun Power Company
UR	Upper reservoir

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

## Second Site Visit, 17-24 November 2013

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### Introduction

1. This report consists of two parts: Part 1 presents the activities and actions of the Independent Advisory Panel (IAP) on the Nam Ngiep 1 Hydropower Project (NNP1) in Lao PDR; and, Part 2 presents a summary of the resettlement, social, environmental, and biodiversity issues related to the construction of the NNP1. Four separate annexes present the detailed findings of the individual members of the IAP.
2. The report was prepared by Mr. Anthony M. Zola, the Resettlement Specialist and Chairman of the IAP. The annexes were prepared by each member of the IAP.

### Part 1: Independent Advisory Panel Actions

3. The Independent Advisory Panel (IAP) on the Nam Ngiep 1 Hydropower Project (NNP1) in Lao PDR undertook a second visit to the NNP1 project site during the period 17-24 November 2013.
4. The IAP participating in the second visit was comprised of the following individuals:
  - Dr. Songwit Chuamsakul, Social Specialist
  - Dr. Richard Frankel, Environment Specialist
  - Dr. Kathy MacKinnon, Biodiversity Specialist
  - Mr. Anthony M. Zola, Resettlement Specialist
5. The IAP proposed to the Nam Ngiep 1 Power Company (NNP1PC) the following site visit schedule:
  - Visits in 2014: 4-11 May and 7-14 December
  - Visits in 2015: April, August, and December
  - Visits in 2016: April, August, and December
6. The IAP will prepare a report within approximately one month following each visit consisting of (i) issues of concern; (ii) actions by NNP1PC that are **required** by the IAP based on the NNP1 Concession Agreement, official / legal documents of the Government of Lao PDR (GOL), and international best practices; and, (iii) actions **recommended** by the IAP that NNP1PC should undertake. Actions required and recommended by the IAP will be time-based; meaning that NNP1PC will be obligated to or should undertake and/or complete these actions within the specified time period.
7. The IAP **categories of concern** are as follows: **high category** of concern requires the Developer to act immediately; a **medium category** of concern requires that the Developer act within 1-2 months; and, a **low category** of concern requires action

within six months. The categories of concern are consistent with those applied at other hydropower projects in Lao PDR that meet international standards.

8. Copies of this IAP report will be submitted to the following individuals:
  - (i) Ms Helen Cruda, Asian Development Bank
  - (ii) Mr Yoshihiro Yamabayashi, Managing Director, NNP1PC
  - (iii) Mr Kasem Chudthong, Deputy Managing Director, Environment and Social Department, NNP1PC
  - (iv) Mr Francois Demoulin, Senior Social Manager
  - (v) Ms Souksakhone Sihalath, Acting Assistant Manager, Natural Environment
  - (vi) Mr Shoji Tsutsui, Manager, NNP1PC
  - (vii) Mr Phisol Chansri, Assistant Vice President, EGAT International
  - (viii) Mr Vantheva, Team Leader, Lao Holding State Enterprise
  
9. The second IAP site visit was undertaken over a seven day period: from Monday, 18 November to Sunday, 24 November 2013. The IAP travel schedule was as follows:
  - Sunday, 17 November: Arrive Vientiane. Overnight in Vientiane (1 night)
  - Monday, 18 November
    - 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; and, (ii) overall progress on NNP1 project implementation and issues of concern. Also, Dr. Songwit met with officials of the Government of Lao PDR (GOL) on ethnic minority issues.
    - Travel to Paksan; overnight in Paksan (1 night).
  - Tuesday, 19 November
    - Travel from Paksan to Ban Hat Gniun host village; Houay Soup resettlement site; Ban Hatsaykham village to meet with the PAP; and, to nearby provincial protected areas (PPA). Overnight at Thidadao Resort, Ban Hat Gniun, Borikhan District, Bolikhamxai Province (1 night).
  - Wednesday, 20 November
    - Morning: Travel to Thathom District, Xieng Khouang Province.
    - Afternoon: Site visits to PAP villages at Ban Pou, Ban Hadsangkhone, Ban Piengta.
    - Overnight at Ban Thavieng, Thathom District, Xieng Khouang Province (1 night).
  - Thursday, 21 November
    - Travel from Ban Thavieng to Hom District, Vientiane Province (five hours)
    - Meeting on route with officials at the Thabok Forest Protection Sub-station, Phou Khao Khouay National Protected Area (NPA), Thaphabath District, Bolikhamxay Province.
    - Travel to Ban Longxane, Hom District, Vientiane Province; overnight at Ban Longxane (1 night).
  - Friday, 22 November
    - Social team: Visit PAP villages at Ban Houay Youak, Ban Sopyouak, Ban Soppouan, and Ban Houaypamom.
    - Environmental team: Observation visit to Phou Khao Khouay NPA and informal (un-scheduled) field meeting with Provincial Natural Resources and Environment (PONRE) official from Vientiane Province.
    - Overnight at Ban Longxane (1 night).
  - Saturday, 23 November
    - Morning: Travel to Vientiane Capital City
    - Afternoon: IAP prepares a brief presentation for NNP1PC management and staff.
    - Overnight in Vientiane (1 night).
  - Sunday, 24 November
    - Morning: IAP briefing for NNP1PC management and staff at Nam Ngiep 1 Hydropower Project office in Vientiane.
    - Afternoon: Follow-up technical discussions.
    - Evening: Return travel to home bases.

10. The remainder of this report consists of (i) Part 2: a summary of resettlement, social, environmental, and biodiversity issues, including the IAP's principal requirements and recommendations and level of concern; and, (ii) the findings of the IAP in the form of annexes as follows:
- Annex 1: Resettlement issues
  - Annex 2: Social issues
  - Annex 3: Environment 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: 7-12 January 2013 17-24 November 2013	Depleted and degraded soil at the Houay Soup resettlement site is the single most important issue for PAP to be resettled	<ul style="list-style-type: none"> <li>The Developer's Pilot Plan farm is demonstrating that rice and cash crops can be cultivated successfully at Houay Soup <b>without using chemical fertilizers</b>.</li> <li>The Pilot Plan farm manager is applying compost and bio-fertilizer to soils to raise rice yields.</li> <li>Soils designated for paddy (approx. 420 ha) at Houay Soup require significant upgrading.</li> </ul>	<ul style="list-style-type: none"> <li>In addition to the well-managed Pilot Plan farm, the Developer should invest in improving the soils in the lowland areas designated for rice production by the PAP <b>prior to</b> resettlement by PAP.</li> <li>An initial environmental examination (IEE) should be undertaken for the principal streams that drain the Houay Soup resettlement area – understood by the IAP to be the Houay Soup Gnai and Houay Soup Noy streams – prior to land clearing and preparation for resettlement.</li> <li>IEE also should be undertaken on any other perennial (but not seasonal) streams in the Houay Soup resettlement area.</li> </ul>	Medium
R2	Site visits: 7-12 January 2013 17-24 November 2013	Need to upgrade an estimated 500 ha of land designated for grazing of large livestock; prior to arrival of PAP with their cattle and buffalo	The area designated for grazing of large livestock (approx. 500 ha) should be sufficient but requires upgrading.	<ul style="list-style-type: none"> <li>The IAP <b>requires</b> that the Developer establish improved pasture at the areas designated for grazing <b>before</b> resettlement of the PAP.</li> <li>The IAP recommends that the Developer contact NAFRI to obtain recommendations for appropriate tropical grasses and legumes to establish in the grassland/ grazing areas at least one year prior to resettlement.</li> </ul>	Medium
<p>* Level of Concern:</p> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

## Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R3	Site visits: 7-12 January 2013 17-24 November 2013	<ul style="list-style-type: none"> <li>Designation of the Houay Soup area as a resettlement site by provincial and district authorities</li> <li>Current occupants and land users at Houay Soup resettlement area</li> </ul>	<ul style="list-style-type: none"> <li>The IAP was informed that the EIA approved by GOL/MONRE indicates that the Houay Soup area is the designated NNP1 resettlement area.</li> <li>However, Bolikhamxay provincial officials have not yet provided written certification for the Houay Soup site to the Developer.</li> <li>The Houay Soup area cannot be cleared or developed for resettlement without written authorization from provincial officials.</li> <li>Current occupants need to be surveyed and compensated for loss of current activities if they are impacted by PAP resettlement activities.</li> </ul>	<ul style="list-style-type: none"> <li>The IAP recommends that NNP1PC take immediate action to obtain written official approval from provincial authorities to designate the Houay Soup area as a resettlement site for PAP impacted by NNP1.</li> <li>The assets of current land users at Houay Soup situation should be surveyed immediately and compensation paid as soon as possible. This is required prior to clearing and preparing the land for PAP resettlement.</li> </ul>	High
R4	Site visits: 7-12 January 2013 17-24 November 2013	Impacts and disturbance of PAP in Ban Hatsaykham from construction of the Developer's base camp and construction of the dam access road.	<ul style="list-style-type: none"> <li>The Developer has accepted the IAP recommendation and now plans to resettle PAP at Ban Hatsaykham to the Houay Soup resettlement area before the PAP from Vientiane Province are resettled at the same site.</li> </ul>	<ul style="list-style-type: none"> <li>The Developer is <b>required</b> to prepare a site-specific environmental and social action plan (E&amp;S Action Plan) for relocation of PAP from Ban Hatsaykham to the Houay Soup resettlement site.</li> </ul>	High
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

## Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R5	Site visits: 7-12 January 2013 17-24 November 2013	Commercial development by camp followers around the Developer's base camp and other labor camps (for construction of roads and other project facilities) will have a significant negative impact on PAP in host villages located near those construction camps	The IAP was informed that a code of conduct has been formulated by the Developer and has been included in the REMDP.	<p>The IAP's recommendations remain unchanged (from IAP report no.1) as follows:</p> <ul style="list-style-type: none"> <li>• <b>Required:</b> The IAP requires that the Developer adopt a zero tolerance policy toward unethical and immoral social behavior by all employees of the Developer (including consultants and advisors), the Head Contractor, and all sub-contractors.</li> <li>• <b>Required:</b> The IAP requires that all employees – foreign and local -- of the Developer (including consultants and advisors), the Head Contractor, and all sub-contractors sign a Code of Conduct attached to their employment contracts.</li> <li>• The IAP recommends that the Developer introduces social awareness and management activities among communities through educational enhancement programs at host village schools and health education and outreach programs at public health centers throughout the project area.</li> <li>• All employees of the Developer, Head Contractor, and sub-contractors should be obligated to participate in social behavior and ethics classes.</li> </ul>	Medium
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>• Low - action recommended within 6 months</li> <li>• Medium - action recommended within 1-2 months</li> <li>• High - immediate action recommended.</li> </ul>					

## 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	<ul style="list-style-type: none"> <li>• Soil conditions and potential for flooding at the Thong Nam Pha resettlement site</li> <li>• "Internal relocation" of PAP to Nam Toum</li> <li>• Land ownership, soil conditions, and potential impacts on biodiversity at the Nam Toum relocation site</li> <li>• The exact number of PAP at 2UR who are expected to seek compensation for land impacted by NNP1 reservoir inundation</li> </ul>	The PAP at 2UR reported to the IAP that they had decided not to resettle at the Thong Nam Pha resettlement site, but to relocate their agricultural activities to the Nam Toum area located some 500 m from the villages of Pou, Hatsamkhone, and Piengta.	<ul style="list-style-type: none"> <li>• The IAP recommends that the Developer immediately determine the exact number of PAP at 2UR who will be impacted by reservoir inundation and who will require compensation (i.e., land for land, compensation for land).</li> <li>• The Developer should clarify and finalize the intentions of the PAP in 2UR.</li> <li>• The IAP recommends that the Developer should investigate the availability and status of the land for internal relocation at Nam Toum.</li> <li>• The IAP recommends that the Developer survey the land at Nam Toum with the Developer's consultants and district survey technicians working together; to determine land area available for internal relocation; including: land ownership, current use, compensation requirements, and the feasibility of relocation of agricultural activities of PAP in 2UR.</li> <li>• IEE should be undertaken for any rivers and streams in the Nam Toum area; to include impacts on local biodiversity.</li> </ul>	Medium
R7	Site visits: 7-12 January 2013 17-24 November 2013	Water supply for the Thong Nam Pha resettlement area	Resettlement of PAP at 2UR is not expected to take place.		Closed
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>• Low - action recommended within 6 months</li> <li>• Medium - action recommended within 1-2 months</li> <li>• High - immediate action recommended.</li> </ul>					

## Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R8	Site visits: 7-12 January 2013 17-24 November 2013	PAP and officials are eager to begin the resettlement process, considering that work on the NNP1 was initiated in 1989	<ul style="list-style-type: none"> <li>The joint venture company has been formed.</li> <li>Staff has been recruited --- and continues to be recruited --- to undertake tasks related to resettlement, asset surveys, public consultation, resettlement infrastructure development, etc.</li> <li>An asset survey is underway along the access road to the NNP1 dam site without a cut-off-date having been publically announced to potential PAP.</li> <li>Construction has begun on some sections of the access road.</li> </ul>	<ul style="list-style-type: none"> <li>Although knowledgeable and experienced foreign (non-Lao, non-Japanese, non-Thai) resettlement specialists have been recruited to manage complex, sensitive, ethnically-diverse, and highly challenging resettlement activities, the IAP was informed by senior NNP1PC management that these foreigners are assigned as advisors and consultants and are not allowed to serve in management positions. This is unacceptable to the IAP.</li> <li>The IAP recommends that individuals be recruited, judged, and assigned jobs based on their knowledge and experience and not on their nationality or ethnicity. If a non-Asian foreigner is experienced and is qualified to be a manager, she/he should be able to function as a manager, not as a consultant or an advisor.</li> </ul>	High
R9	Site visits: 7-12 January 2013 17-24 November 2013	The Developer has yet to provide details of the internal institutional structures that is needed to organize, manage, and implement the resettlement program	<ul style="list-style-type: none"> <li>The IAP has not been provided with either documentation or a clear understanding of the structure of environment and social operations at NNP1PC.</li> <li>The environment and social manager and staff appeared to be unclear about the sequence of the resettlement process; including for example, undertaking an asset survey for the dam access road without first publically announcing a cut-off-date to potential PAP.</li> </ul>	<ul style="list-style-type: none"> <li>The effectiveness and success of the Developer's significant investments in and efforts related to complex and detailed resettlement activities will depend on the wisdom, experience, and competency of environment and social managers.</li> <li>The IAP recommends that individuals should be recruited who have experience at other hydropower projects in Lao PDR; particularly experience with resettlement, public involvement, PAP compensation, and infrastructure development.</li> <li>Lessons from other projects should be applied when preparing the terms of reference for each unit established to support resettlement</li> </ul>	High
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

## Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R10	Site visits: 7-12 January 2013 17-24 November 2013	The Developer 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	IAP discussions with provincial and district officials indicate that the role and responsibilities of the EMU are unclear	The IAP reiterates its recommendation that ADB assist MONRE in convening a workshop to review the duties of the EMU for the Nam Ngiep watershed, to include the "lessons learned" from Nam Thuen 2 and the Theun-Hinboun projects.	Low
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>• Low - action recommended within 6 months</li> <li>• Medium - action recommended within 1-2 months</li> <li>• High - immediate action recommended.</li> </ul>					

## Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S1	Site visit, 7-12 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>Changing the Hmong lifestyle is not easy and will take time</li> </ul>	Many Hmong men and women are self-motivated and interested in operating small businesses	<ul style="list-style-type: none"> <li>The IAP recommends that NNP1PC staff should mention to the Hmong PAP that they will have a chance to open businesses in a larger village such as the Houay Soup Resettlement Site.</li> <li>Business and entrepreneurial training should be provided to interested Hmong, especially women to encourage them to open and expand their own businesses.</li> </ul>	Low
S2	Site visit, 7-12 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>Hmong culture and identity</li> <li>Hmong kinship or clan system</li> <li>Language</li> <li>Beliefs and spiritual ceremonies</li> <li>Marriage and family</li> <li>Funeral ceremonies</li> <li>Hmong clothing</li> </ul>	The Hmong in this area still practice Hmong traditional culture	<ul style="list-style-type: none"> <li>The IAP recommends that NNP1PC staff negotiating with the headman of each Hmong clan in the affected villages and respect their clan system. This will facilitate the movement of Hmong graveyards; some of which may perform only one moving ceremony, thus reducing unnecessary payments.</li> <li>Meetings should be held with each village headman and village committees and the headman of each clan in the village to negotiate compensation payments related to the moving of graveyards.</li> <li>The Hmong graveyards should be moved at least one year prior to moving the PAP.</li> </ul>	Low
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

## Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S3	Site visit, 7-12 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>Originally, according to the Hmong, soils in Houay Soup are poorer quality than the soils in the 5 affected villages.</li> <li>Land size is inadequate</li> </ul>	<ul style="list-style-type: none"> <li>Houay Soup has 6,000 hectares for village uses with 400 hectares for houses</li> <li>Houay Soup has been used for many decades by lowland Lao and Hmong at Ban Hat Gniun</li> <li>The original attitude that the soils were not good has changed; villagers in two villages now look forward to moving to Houay Soup.</li> </ul>	<ul style="list-style-type: none"> <li>The IAP recommends that the Developer works with the headmen of Ban Namyouak and Ban Houaypamom and the village committees. Working through the traditional system will benefit the project and will reduce unnecessary payment.</li> <li>NNP1PC should consider offering jobs to young educated Hmong, thus promoting a good image for the project and generating income for the Hmong at the same time.</li> </ul>	Low
S4 (Annex issue 5)	Site visit, 7-12 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>Food security is a major concern of the PAP.</li> <li>Soils at Houay Soup need improvement.</li> <li>Additional investigations are needed on the use of the whole resettlement site.</li> </ul>	The Pilot Plan site / demonstration farm is managed by a professional Hmong manager who understands Hmong customs and traditions and can demonstrate how PAP can prosper at the Houay Soup resettlement site.	<ul style="list-style-type: none"> <li>The IAP recommends that the Developer makes every effort to ensure that the PAP will have enough food for their families. Methods include support for the following: vocational training, jobs, compensation payments, scholarships for youth education, credit for small business, and protecting PAP rights.</li> </ul>	Low
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

## Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S5	Site visit, 7-12 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>Ban Hatsaykham relocation due to construction of Nam Ngiep 1 dam; to nearby lowland Lao Ban Hat Gniun</li> <li>Increased contact with outsiders and traders who are expected to gain access to the area.</li> </ul>	Construction of access road will take place in 2014	<b>Required:</b> <ul style="list-style-type: none"> <li>The Developer must prevent prostitution, drug dealing, gambling, and other social crime at the Developer's camp and at the Ban Hatsaykham relocation site.</li> <li>A zero tolerance policy needs to be put in place by the Developer, in close cooperation with local government officials; particularly the provincial and district governors, police, health officials, education officials, and social development officials.</li> </ul>	High
S6	Site visit, 7-12 January 2013	Approximately 117 households in Zone 2UR will be relocated to Thong Nam Pha resettlement site, Thathom District, Xieng Khouang Province	This group of PAP have decided not to resettle but to undertake internal relocation of their agricultural lands; within the village boundaries.		Closed
S7	Site visit, 17-24 November 2013	PAP compensation entitlements	Many PAP indicated that they had not yet been informed about their compensation entitlements.	<ul style="list-style-type: none"> <li>The IAP recommends that details of compensation should be provided to PAP as soon as possible, to curtail the current building of new houses and buildings.</li> </ul>	High
S8	Site visit, 17-24 November 2013	Interest in self-resettlement by many Hmong PAP	Self-resettlement is related to having sufficient food to consume for the entire year for many Hmong households	<ul style="list-style-type: none"> <li>The IAP recommends that Developer's staff focusing on working closely with the Hmong village headmen and village committees especially in Zone 2LR in Ban Namyouak and Ban Houaypamom. The leaders in these villages can assist with solving many challenges related to resettlement.</li> </ul>	Low
* Level of Concern: <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

## Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S9	Site visit, 17-24 November 2013	The project is required to work closely with the GOL at the national and local levels.	There are many Hmong officials at high levels at the national and local levels of government. Working with them would benefit the project.	<ul style="list-style-type: none"> <li>• NNP1PC should work with Hmong officials in the GOL to convince people to cooperate with the project.</li> <li>• If necessary, NNP1PC should seek a national or local government decree with implementing regulations to convince PAP to move to the Houay Soup resettlement site.</li> <li>• The IAP recommends that NNP1PC have periodic meetings with high-ranking Hmong officials in the GOL at the national and local levels to engage their support for the project. This also may facilitate the project and reduce unnecessary payments.</li> </ul>	Low
<p>* Level of Concern:</p> <ul style="list-style-type: none"> <li>• Low - action recommended within 6 months</li> <li>• Medium - action recommended within 1-2 months</li> <li>• High - immediate action recommended.</li> </ul>					

## Summary of Environmental Issues

Reference Document	Issue	Status	IAP Comments and Recommendations First Report (Jan. 2013)	IAP Comments this Site visit Second Report (Nov. 2013)	Level of Concern
E1- ESIA of NNP1	The multiple dams on the Nam Ngiep (NNP1 and upstream NNP2) and Nam Xan Rivers will impact on river and ecological flows, downstream fisheries and other aquatic life.	There appears to be no <u>Cumulative Impact Assessment (CIA)</u> for all the hydropower projects in the Nam Ngiep River Basin. And what other developments will impact on the same natural resources (mining projects, roads, etc.) in the project area?	<p>ADB should be requested to assist MONRE to carry out this study for the Nam Ngiep river basin or to have MONRE draft an agreement for the project proponent concerned to share the cost of a basin wide.</p> <p><b><i>ADB Comment: This is an issue of Government, not the Developer.</i></b></p> <p><b>Response by NNP1: It will be discussed between GoL and ADB. (Apr.2013)</b></p>	<p>Any significant cumulative basin impacts that the project will make need to be identified and predicted (e.g., altered river flows and related effects on aquatic ecology). Numerous planned hydropower projects that are impacting NPAs and village relocation sites are likewise impacting on remaining forest resources.</p> <p>The IAP notes that a CIA has been prepared and submitted by ERM to ADB for comments. ERM is awaiting a response from ADB.</p> <ul style="list-style-type: none"> <li>The CIA should include an updated integrated land use map for the affected provinces.</li> </ul>	<b>Medium</b>
<p>* Level of Concern:</p> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended</li> </ul>					

## Summary of Environmental Issues

Reference Document	Issue	Status	IAP Comments and Recommendations First Report (Jan. 2013)	IAP Comments this Site visit Second Report (Nov. 2013)	Level of Concern
E2-National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR, No. 561/CPI, June 2005	There are three hydropower projects under construction that will affect water quality, water use and water availability along the Nam Ngiep river.	Who is responsible for watershed management? Is this a joint-management operation involving government and the private sector (all three Project Proponents)? Or is it the responsibility of the three (or more) Project Proponents of hydropower projects in the watershed?	<p>MONRE, together with provincial and district government officers, and representatives of impacted communities, should participate to a special meeting to discuss future operation of the watershed. It is recommended that the Project Proponents develop together with GOL authorities a management plan for the sustainable usage and operation of the watershed.</p> <p><b>ADB Comment: This is an issue for Government, not the Developer.</b></p> <p><b>Response by NNP1: It will be implemented by MoNRE..</b></p>	The IAP will bring this issue to the attention of MONRE/DESIA again and ask MONRE to convene a workshop.	<b>Low</b>
E3- Biomass Clearance Plan, EMMP	Biomass clearance from the area of the future reservoir will be a significant construction activity.	What plans or guidelines does the PP have to Guide the biomass removal program? Who will be responsible to carry out the <u>biomass removal program</u> and to oversee the program? What environmental safeguards are being developed for the Developer/Project Proponent (PP) and their selected biomass removal contractors? Who selects the official logger for the reservoir area and is this same contractor responsible implement the biomass removal program? Who is responsible to oversee monitoring of these contracts and work crews? Is the EMO monitoring team empowered to stop the logger if he violates environmental safeguards? What use will be made of biomass removed from the reservoir? Is there a planned program to use biomass in a productive and environmentally safe manner?	<p>The IAP recommends that the PP requests a copy of the newly developed MONRE Guidelines for Biomass Removal by Hydropower Developers in the Lao PDR, dated December 2012.</p> <p>IAP is waiting for this study as it is important to meet and comply with Biomass Guidelines which prescribe requirements for data collection and monitoring pre-inundation (Appendix 2 Standards, 1.12 Reservoir Water Quality)</p> <p><b>Response by NNP1: Guidelines have been obtained and the Consultant has developed a detailed biomass removal plan.</b></p>	IAP will study the new CA Annex C requirements (April 2013) and review the detailed biomass removal plan when available.	<b>Closed</b>
<p>* Level of Concern:</p> <ul style="list-style-type: none"> <li>• Low - action recommended within 6 months</li> <li>• Medium - action recommended within 1-2 months</li> <li>• High - immediate action recommended</li> </ul>					

## Summary of Environmental Issues

Reference Document	Issue	Status	IAP Comments and Recommendations First Report (Jan. 2013)	IAP Comments this Site visit Second Report (Nov. 2013)	Level of Concern
E4- EIA Nam Ngiep 1 Hydropower Project (2012)	Information on fisheries in the Nam Ngiep is minimal. There are conflicting reports on how important fisheries are to the livelihood of project impacted villages.	The amount (quantity) and biodiversity of fisheries in the Nam Ngiep is not adequately documented.	<p>The IAP recommends that the EIA consultants clarify in their baseline studies (1) the proportion of family income derived from seasonal fishing; (2) the proportion of local diet protein derived from fish; and, (3) the importance of fisheries for subsistence or income.</p> <p><b>ADB Comments: Recommended ERM to include these questions in their surveys</b></p> <p><b>Response by NNP1: It will be discussed with the Consultants.</b></p>	Preliminary income from fisheries survey done; IAP is awaiting the updated baseline studies	<b>Low</b>
E5- ESIA NNP1, December 2012	Water quality in the Nam Ngiep River is being affected by upstream activities (apparently a mining activity is discharging untreated wastewaters and affecting the 'color' of the river water)	There is no information in the EIA documents on this issue. Coloring of the Nam Ngiep River needs investigation.	<p>The IAP recommends that sampling and analysis of the physical and chemical properties of the current water quality in the Nam Ngiep River would be useful to identify what are the pollutants, if any, coming from these upstream activities.</p> <p>The IAP recommends that the Developer identify those pollutants so that future construction activities of NNP1 are not blamed for water quality impacts coming from upstream development projects</p> <p><b>Response by NNP1: Water quality sampling and analysis have been started at the planned upstream reservoir and the dam site.</b></p>	IAP is satisfied with proposed water sampling program and awaiting preliminary findings. ERM revising environmental flow assessment.	<b>Closed</b>
<p>* Level of Concern:</p> <ul style="list-style-type: none"> <li>• Low - action recommended within 6 months</li> <li>• Medium - action recommended within 1-2 months</li> <li>• High - immediate action recommended</li> </ul>					

## Summary of Environmental Issues

Reference Document	Issue	Status	IAP Comments and Recommendations First Report (Jan. 2013)	IAP Comments this Site visit Second Report (Nov. 2013)	Level of Concern
E6 –MONRE, EIA Decree or the new Environmental Protection Law requires SEAs for key development sectors	The new EIA Decree or the new Environmental Protection Law requires SEAs for the key development sectors	There is no Strategic Environmental Study of the hydropower sector in Lao PDR. Such SEA would assess the impacts of existing and future proposed hydropower projects on NBCAs, protected forests, water resources and other related environmental assets of Lao PDR.	<p>The IAP recommends that MONRE promotes MEM to undertake a SEA of the hydropower sector in Lao PDR to include trans-boundary effects on downstream resources and ecologically sustainability. It is reported that MRC is interested in financing such a study at MEM.</p> <p><b>ADB Comments: This is an issue for Government, not the Developer.</b></p> <p><b>NPP1 Response: It will be implemented by MoNRE.</b></p>	<p>ERM was to consult MRC about the status of their plans to undertake SEA study on the hydropower sector in Lao PDR. IAP believes that this issue has yet to be resolved. Resource conflicts continue to surface (e.g., the proposed Nam Mang 3 dam in the Phou Khao Khouay NPA. An integrated land development map and study should be prepared for the three affected provinces that would permit MONRE and development agencies to discuss resource use policies and sustainability objectives.</p>	<b>Medium</b>
E7 –Site visit, 7-12 January 2013	The Developer 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	<p>IAP discussions with provincial and district officials indicate that the role and responsibilities of the EMU are unclear because there are new departments and duties in MoNRE and this project also has impacts in three provinces and several districts.</p> <p><b>Note that no meetings were held with the EMU during the IAP Nov. 2013 site visit.</b></p>	<p>The IAP is satisfied with Annex C, clause 78 (general provisions of responsibilities of EMU). But MONRE now includes new Department of Land, Water, and Forest Resources, in addition to Environment, and with 3 provinces impacted by NNP1, there will be inadequate funds to have district and provincial offices participate in the defined responsibilities. The budgets of Annex C for EMU and MONRE capacity building are inadequate. Managing the EMU remains a key GoL issue for the NNP1 watershed.</p> <p><b>ADB Response: This is an issue for Government, not the Developer.</b></p> <p><b>NNP1 Response: It will be implemented by MoNRE.</b></p>	<p>IAP finds that no progress has been made on this issue and will pursue the topic with MoNRE during the next planned site visit in May 2014.</p>	<b>Medium</b>
<p>* Level of Concern:</p> <ul style="list-style-type: none"> <li>• Low - action recommended within 6 months</li> <li>• Medium - action recommended within 1-2 months</li> <li>• High - immediate action recommended</li> </ul>					

## Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B1	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>• Options for implementing a biodiversity offset</li> <li>• Critical habitat along the dam access road</li> <li>• Activities along the dam access road need to be managed to reduce impacts</li> </ul>	<ul style="list-style-type: none"> <li>• ERM offset option review</li> <li>• Phou Khao Khouay NPA has high biodiversity value but weak management</li> <li>• Ongoing ERM survey</li> <li>• ERM study</li> <li>• Concern regarding the status of Houay Ngoua and compliance with ADB safeguards; area is degraded</li> <li>• An alternative route for the dam access road is prone to flooding</li> <li>• Only essential clearing is taking place along the access road in the Houay Ngoua PPA</li> </ul>	<ul style="list-style-type: none"> <li>• The ERM team should review a diversity of biodiversity offset options (See Annex 4)</li> <li>• Additional studies are required as follows:               <ul style="list-style-type: none"> <li>• Studies on fish species and populations</li> <li>• Data on species of NTFPs</li> </ul> </li> <li>• The provincial governor's proclamation of the Houay Ngoua reserve should be reviewed to ascertain exact status; provincial protected area or not.</li> <li>• The current access route should be used but NNP1PC to minimize environmental and social impacts by liaising with the district forest office to (i) limit clearing; and, (ii) reforest using native species.</li> <li>• Check points and spot checks should be arranged for vehicles and workers to prevent illegal removal of logs, NTFPs, wildlife.</li> <li>• A Code of Conduct should be imposed on contractors by the Developer to control construction traffic and workers; with a zero tolerance policy toward wood and wildlife poaching.</li> <li>• The Developer should invest in strengthening protection and management in national protected areas (preferably multiple sites), specifically in Phou Khao Khouay NPA, by supporting NGO work; and, explore options for cumulative biodiversity offset fund (with ADB and GoL and other donors).</li> <li>• To implement the biodiversity offset, simple institutional mechanisms should be operated through MONRE or the Environment Protection Fund. The mechanisms should reflect lessons learned and criteria from other funds.</li> <li>• Follow up with the director general of the Department of Forest Resources Management, MONRE regarding plans for a PA conservation fund; clarify the funds available for biodiversity offset and mitigation. Revise the NNP1PC budget if necessary.</li> </ul>	High

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B2	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	Quantities of NTFPs to be collected that are controlled annually by the district where "quotas" are issued to the villages	<ul style="list-style-type: none"> <li>ERM and socio-economic survey to give more data on NTFP use</li> </ul>	The Developer should work with PAP to test the NTFP quota system among villages based on a "sustainable yield" study in the designated areas of natural forest to be used for collection of such products to permit villages to continue earning disposable income from collection and sale of NTFPs.	Medium
B3	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>Wildlife capture and translocation proposed during construction phase</li> <li>Options for reallocation of wildlife translocation funds</li> </ul>	Not undertaken since translocation is difficult and costly, especially in forested areas. The current plan is unrealistic.	The Developer should look at lessons learned from Nam Theun 2 and adapt plans as needed. If translocation is not cost effective funds should be reallocated to other activities (e.g., wildlife surveys and monitoring)	Medium
B4	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	Workers and construction traffic removing forest resources, illegal logs and wildlife	Prohibition of illegal harvesting and trade is to be covered in the Developer's Code of Conduct	The Developer should exercise a zero tolerance policy	High
B5	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	Introduction of potentially invasive species as part of reforestation, agriculture schemes	Frogs to be raised by PAP are likely to be native species	The Developer should check to make sure that the proposed species to be introduced are known to be potentially invasive	Low
B6	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	NTFPs used by PAP for food security and cash income	PAP at all impacted villages are highly dependent on NTFPs	Protect sufficient natural forest within and adjacent to the resettlement sites for villagers to harvest NTFPs or provide alternative sources of income	Low
B7	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	Awareness of the importance of natural forests to the quality of life of PAP	PAP have a low awareness of the importance of the quality of forest to their lives and livelihood	Raise awareness among resettled villagers of the value of natural forests for protecting water quality and other ecosystem services	Low
<p><b>* Level of Concern:</b></p> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

## Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B8	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	<ul style="list-style-type: none"> <li>Monitoring of biodiversity</li> <li>Capacity of Provincial and District EMUs for Monitoring</li> <li>Community engagement in monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Biodiversity values are not monitored by anyone</li> <li>EMUs in 3 project provinces have limited capacity and resources</li> <li>Hmong villagers have good local knowledge</li> </ul>	Reservoir will give access to new areas above water line <b>Recommendations:</b> <ul style="list-style-type: none"> <li>Additional wildlife surveys should be undertaken in the upper watershed forests during construction to better define protection and monitoring</li> <li>Hmong villagers should be hired to assist with monitoring biodiversity values within the resettlement areas and surrounding forests</li> <li>Strengthen capacity 3 provincial EMUs for monitoring biodiversity/ environmental impacts.</li> </ul>	Medium
B9	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	Movement of students and teachers to the Thong Nam Pha resettlement site	Resettlement of PAP at 2UR is not expected to take place.		Closed
B10	Site visit, 14-19 January 2013 Site visit, 17-24 November 2013	Quality of translation for the environment team	Team translator was excellent and familiar with environmental terms		Closed
<b>* Level of Concern:</b> <ul style="list-style-type: none"> <li>Low - action recommended within 6 months</li> <li>Medium - action recommended within 1-2 months</li> <li>High - immediate action recommended.</li> </ul>					

# Annex 1: Resettlement Issues

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## Background

1. Inundation by the reservoir of the Nam Ngiep 1 Hydropower Project (NNP1) will cover the houses and productive lands of five villages and impact an additional three villages as follows:
  - Four villages in the Lower Section of the Reservoir (LR) in Vientiane Province (Zone 2LR);
  - Three villages in the Upper Section of the Reservoir (UR) in Xieng Khouang Province (Zone 2UR); and,
  - One village in the Construction Area in Bolikhamxay Province (Zone 3).
2. The number of project affected people (PAP) to be resettled from villages in Zone 2LR and Zone 3 is currently 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.
3. The resettlement site for these PAP is an area of approximately 6,000 ha called Houay Soup, located on the right bank of the Nam Ngiep river under the administrative jurisdiction of Ban Hat Gniun, Bolikhan District, Bolikhamxai Province. An estimated 800 ha of the 6,000 ha is available for the resettlement of the PAP. The IAP was informed that the GOL approved EIA mentions the Houay Soup resettlement area, but Bolikhamxai provincial officials have not yet approved use of the site in writing.
4. An as yet unspecified number of PAP in three villages in Thathom District, Xieng Khouang Province also will be required to undertake “internal relocation,” namely PAP from Ban Pou, Ban Hatsamkhone, and Ban Piengta (Zone 2UR). PAP from these villages originally were scheduled to be resettled to the Thong Nam Pha resettlement site. However, since most villagers’ houses would not be impacted and only agricultural production land would be impacted, and since the IAP visit in January 2013, the PAP have decided (i) not to resettle but to find new agriculture land nearby the villages; and, (ii) to relocate their rice and cash crop production activities to the newly identified land with the assistance of the Developer.
5. Resettlement is the responsibility of NNP1PC’s Environment and Social Department (ESD). The ESD will cooperate with provincial and district resettlement management units (RMUs) now established by the GOL, to implement resettlement and internal relocation. The Resettlement Working Group of the Provincial Resettlement Management and Living Condition Restoration Committee (PRMLCRC) and related GOL provincial authorities are expected to participate in and facilitate this process.

## Current Resettlement Issues and IAP Recommendations

**Issues of concern to the IAP at the Houay Soup resettlement area include the following:**<sup>1</sup>

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<sup>1</sup> 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.

6. **Issue:** An estimated 420 ha of the resettlement area has been found suitable for lowland rice production. Following numerous interviews of PAP during the November 2014 site visit, the IAP found that the issue most frequently mentioned by PAP was the poor quality soils at the Houay Soup resettlement area; particularly in the area designated for wet season rice production. The poor soils were mentioned particularly by those who have visited the proposed paddy production area of the Houay Soup resettlement site. In fact, since the soils have been used by residents of Ban Hat Gniun for many decades without being improved, they are depleted and are generally of poor quality.
7. The IAP visited the NNP1PC Pilot Plan (the demonstration center and pilot farm) located at the resettlement site. The manager has demonstrated that with the application of organic soil additives (i.e., bio-fertilizers) and crop rotation with legumes, reasonable rice yields are possible and can generate yields sufficient to meet PAP food security needs. PAP in general and even those who have visited Houay Soup and the Pilot Plan are not convinced of this.
8. The IAP also noted that there are several streams that flow through the Houay Soup area that are (i) likely to be important for drainage of the area during the long wet season; (ii) likely used by host villagers for fishing; and, (iii) located near agricultural production areas and therefore potential sources of water for irrigation. Construction of the NNP1 dam and resettlement and site development activities (e.g., land clearing, establishment of villages, installation of irrigation and drainage systems) can be expected to have impacts on these streams. (Issue R1)

**Recommendation:** The IAP repeats its recommendation that the Developer should invest in improving the soils in the lowland areas designated for rice production by the PAP prior to their resettlement. The process of soil improvement should begin immediately throughout the 420 ha designated for rice production to ensure food security as soon as possible following resettlement. Methods for improving the soils were recommended by the IAP in IAP report number one (February 2013).

**Recommendation:** The IAP recommends that communications with PAP be upgraded and efforts made to (i) convince PAP of the Developer's commitment to improving soils at Houay Soup prior to resettlement; (ii) convince unmarried men and women and young couples that an improved quality of life and better livelihood options are possible at Houay Soup; (iii) convince women that income diversification at Houay Soup is possible with irrigation that will generate income that can ensure family food and nutrition security; and, (iv) point out to PAP that off-farm employment opportunities will be provided by NNP1PC at Houay Soup, located near the NNP1 dam site, will be available that can generate supplementary income.

**Recommendation:** An initial environmental examination (IEE) should be undertaken for the perennial streams that flow through and drain the Houay Soup resettlement area – understood by the IAP to be the Houay Soup Gnai and Houay Soup Noy streams – prior to land clearing and preparation for resettlement.

9. **Issue:** PAP to be resettled from Hom District, Vientiane Province, along with the PAP from Ban Hatsaykham, Bolikham District, Bolikhamxai Province, together have several hundred head of cattle and buffalo that also will need to be resettled. These livestock will need to be provided with forage areas and fodder. They also will require vaccination. Livestock will be stressed as a result of the resettlement and will require good grazing areas upon arrival. (Issue R2)

**Required:** The IAP is pleased to note that an area of approximately 500 ha has been designated as grazing land for livestock at the Houay Soup resettlement area. The IAP

requires that the Developer establish improved pasture at the designated grazing areas **before** the PAP and their livestock are resettled. This requires the Developer to undertake a pasture improvement program on designated grassland areas using improved tropical grasses and legumes.

**Recommendation:** The Livestock Research Center of the National Agriculture and Forestry Research Institute (NAFRI) near Vientiane should be contacted to recommend the most appropriate tropical grasses and legumes for seeding in the grassland areas and grazing lands at Houay Soup and to provide consultants and advisors for pasture development and livestock vaccinations. The pasture research center at Ban Thaphra, Khon Kaen Province, Thailand also can provide pasture grass and legume seed and plant material for sowing on the grazing areas. Improved pasture will need to be sown at least one year prior to resettlement and grazing of the livestock.

10. **Issue:** The IAP was informed that the EIA approved for NNP1 by the GOL mentions that the Houay Soup area is designated as the resettlement area for PAP from NNP1. Written authorization from provincial and district officials that officially designates the resettlement site has not yet been obtained by NNP1PC.

11. In addition, the Houay Soup resettlement area reportedly has been used by many PAP from Ban Hat Gniun (and perhaps other communities) for several generations. These PAP will need to be compensated for their loss of productive land and other assets in the area. (Issue R3)

12. **Recommendation:** NNP1PC should take immediate action to obtain written authorization from provincial and district authorities to use the Houay Soup area for PAP resettlement, referring to approval of the EIA by the central government.

**Recommendation:** The assets of current land users at Houay Soup should be surveyed and compensation made as soon as provincial and district approval has been obtained. PAP from Ban Hatsaykham who use land in the Houay Soup area and who will be resettled at Houay Soup should not qualify for compensation since their agricultural lands are at Houay Soup.

13. **Issue:** The PAP village at Ban Hatsaykham will be impacted severely by the establishment of the Head Contractors camp near the village. Normal daily routines and habits of the PAP as well as village social structures and cultural aspects and livelihood practices are at high risk and will be disrupted as a result of a camp of 200 outsiders being established near the village. The creation of such a situation is unacceptable to the IAP. (Issue R4)

14. The PAP from Ban Hatsaykham have decided to be resettled to the Houay Soup resettlement site before the arrival of PAP from Vientiane Province. This early move will minimize risks to the affected community, as per International Finance Corporation (IFC) Performance Standard 1.<sup>2</sup> In addition, two objectives of the ADB's Safeguard Policy Statement will be fulfilled, namely:

- Avoid adverse impacts of projects on the environment and affected people, where possible; and,
- Minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible.

15. In addition, the terms and conditions of the GOL's Compensation and Resettlement Policy Framework (Table 5, page 28) will be met.

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<sup>2</sup> It should be noted that the IFC Performance Standards are a part of the Equator Principles.

**Required:** The IAP requires that the Developer prepare a site-specific environmental and social action plan (E&S Action Plan) for resettlement of PAP from Ban Hatsaykham. This E&S Action Plan is needed to promote and provide measures for engagement with affected communities on potentially negative issues and to ensure that relevant environmental information and social entitlements are disclosed and disseminated to them in a timely manner, consistent with IFC Performance Standard 1.

16. **Issue:** The IAP repeats this issue for emphasis: Based on experiences at other hydropower development projects in Lao PDR, the IAP fully expects that commercial development by camp followers will have a significant negative impact on PAP in host villages located near construction camps. Camp followers often are employed by unauthorized, illegal, ad hoc, and poorly constructed entertainment facilities established near construction camps. Because of weak law enforcement by local officials, sanitary and environmental conditions are deficient and social vices predominate, such as the sale of illegal substances, prostitution, gambling, and human trafficking. Poor social habits and behavior by construction workers, increased levels of vehicle traffic, and poor governance and weak local administration provide openings for vice and social immorality. Such conditions impact on both the physical and mental health of PAP in host villages.
17. The IAP insists on zero tolerance of depraved social behavior by employees of the Developer, Head Contractor, and all sub-contractors.
18. The IAP was informed by a NNP1PC representative that a code of conduct for employees (i) is included in the Resettlement and Ethnic Minority Development Plan (REMDP); (ii) had been drafted; and, (iii) was being finalized by senior management. (Issue R5)

**Required:** The IAP emphasizes and requires that the Developer adopt a zero tolerance policy toward unethical and immoral social behavior by all employees of the Developer, Head Contractor, and all sub-contractors.

**Required:** The IAP reiterates the requirement that all employees – foreign and local -- of the Developer, Head Contractor, and all sub-contractors (including advisors, consultants, and sub-contractors) sign a Code of Conduct attached to their employment contracts or other employment agreements that sets forth the IAP's and Developer's expectations of ethical and moral behavior. Contracts signed in Lao must include a Code of Conduct in the Lao language. Contracts signed in English, Japanese, Thai, or any other non-Lao language must include a Code of Conduct in that language respectively.

**Recommendations:** The IAP repeats the recommendation that the Developer introduces social awareness and management activities among communities through educational enhancement programs at host village schools and health education and outreach programs at public health centers throughout the project area. Similarly, all employees of the Developer, Head Contractor, and sub-contractors should be obligated to participate in social behavior and ethics classes (1-2 hours each) once each quarter to repeatedly raise the awareness of employees of the dangers and impacts of depraved social behavior.

**Issues of concern to the IAP in the 2UR villages in Thathom District, Xieng Khouang Province include the following:**

19. **Issue:** An NNP1PC representative informed the IAP (which was confirmed by PAP in the field in the 2UR area) that PAP had decided not to resettle at the Thong Nam Pha resettlement area (earlier designated by Thathom District officials). Instead, the

estimated 170 affected households in Ban Pou, Ban Hatsamkhone, and Ban Piengta villages had decided to undertake “internal relocation.” For the purposes of this project, internal relocation is being defined as follows: *PAP that remain in their current houses, but that relocate their agricultural production activities to (privately owned but) unused land nearby; within the boundaries of the impacted villages.* About 20 households are expected to lose all of their land as a result of reservoir inundation. Additional households will lose some of their agricultural lands.

20. In addition, some PAP agricultural land will be separated from the affected villages by branches of the reservoir, as a result of inundation. PAP will request that the Developer construct a track that will allow access to existing agricultural lands across a portion of the new reservoir.
21. The 2UR PAP have identified land at Nam Tong, located some 500 m from Ban Piengta village that is privately owned but unused by the landowner. The 2UR PAP will request that the Developer negotiate with the landowner to purchase this land for allocation to the impacted households in the 2UR area. (Issue R6)

**Recommendations:** The Developer should clarify the relocation plans of PAP in the 2UR area household by household. Land for internal relocation should be identified with the collaboration of the district RMU, and procured for allocation to PAP. The IAP recommends that the Developer prepare an internal relocation plan for each 2UR village. The IAP also recommends that necessary rapid biodiversity assessments and IEE be undertaken at the selected relocation site.

**Organizational and institutional issues of concern to the IAP include the following:**

22. **Issue:** The IAP is concerned about the lack of knowledge, judgment, and experience of management of environment and social operations.
  - One example is that even though an asset survey along the dam access road currently is underway, no cut-off-date has been announced publically to potential PAP.
  - The lack of announcing a cut-off-date may (*is likely to*) result in significant financial losses for NNP1PC. In fact, any structures or other assets established on the right of way of the access road can be (i) constructed quickly, in advance of the assets survey team’s arrival, and claims made for compensation; and, (ii) constructed after the assets survey has been completed and legitimate claims made for compensation for assets that have been “overlooked” or “missed” during the survey. Since no cut-off-date has been publically announced, the IAP foresees the Developer having to pay (i) excessive compensation for hastily constructed or “missed” assets; and, (ii) for yet another assets survey (the third??) after the cut-off-date has been publically announced. (Issue R8)

**Recommendation:** The IAP recommends that competent, knowledgeable, and experienced managers be engaged to manage complex, sensitive, ethnically-diverse, and highly challenging resettlement and compensation activities. Non-Asian or Asian resettlement specialists should be hired as direct-hire employees of NNP1PC and given senior management responsibility for planning, staffing, implementing, and reporting on the serious tasks required by pre-resettlement, resettlement, relocation, post-resettlement, and post-relocation programs.

23. **Issue:** The Developer has yet to provide details of the internal organization of environmental and social operations. The IAP is not satisfied that the apparent current organization structure of environmental and social operations is adequate to comprehensively organize, manage, implement, and follow-up on environmental and

social aspects of NNP1PC's challenging resettlement program. Clear terms of reference are needed for several important implementing units, namely: public involvement; community development; government liaison; land surveys; infrastructure design; and, supervisory personnel to manage construction of civil works related to infrastructure to support resettlement activities; as well as managers with experience in planning resettlement, implementing resettlement, and following-up on resettlement. The Nam Ngiep 1 case is particularly sensitive in that nearly all of the resettlers are from an ethnic minority group (Hmong). Current environmental and social management has no experience with these complex issues and has relegated those who do to be consultants or advisors; without giving them any management authority. (Issue R9)

**Recommendations:** The IAP recommends that NNP1PC recruit individuals who have experience at other hydropower projects in Lao PDR as resettlement managers (not consultants or advisors); particularly those with experience in resettlement, public involvement, organization and management of compensation, community infrastructure development, and livelihood improvement at other hydropower projects in Lao PDR; and, that these line managers be given authority to manage environmental and social obligations of NNP1PC.

24. **Issue:** The Developer is expected to contribute to capacity building of MONRE and to financially assist in establishing an Environmental Management Unit (EMU), which will be staffed by provincial and district officials from project affected areas. The role of the EMU is to monitor implementation of the EMP and to report on its adequacy and effectiveness to MONRE and the Developer. The EMU monitoring reports would include findings, deviations (if any) from the EMP and concession agreement (CA) commitments, and villager grievances. Based on IAP discussions with provincial and district officials, the role and responsibilities of the EMU are unclear. The duties of MONRE also have been expanded to include the departments of Land Planning, Forest Resource Management, and Water Resources Management. Thus, district staff assigned to these activities believe that they should be represented or involved in EMU monitoring and reporting activities as they have connecting or overlapping environmental issues. (Issue R10)

**Recommendations:** The IAP again recommends that ADB assist MONRE in convening a workshop to review the duties of the EMU for the Nam Ngiep watershed, to include the "lessons learned" from Nam Thuen 2 and the Theun-Hinboun projects. Other topics could include the role of the EMU in representing the integrated environmental conservation interests of MONRE at the regional and district levels; the transfer and best use of funds to be contributed by NNP1 and other hydropower project development and use of monitoring reports to inform project-affected-persons of monitoring results. In addition, the IAP believes that the preliminary budget developed for the EMU will be insufficient to cover district and provincial staff interested in participating in environmental conservation monitoring activities and should be re-evaluated given the expanded mandate of MONRE.

# Photos



A traditional Hmong household grouping at Ban Nam Youak village; one of the four Hmong villages in the 2LR area to be resettled to Houay Soup where the traditional Lao line village design will need to be modified to accommodate the Hmong preference for village organization



A three dimensional model of the Houay Soup area used by NNP1PC staff at 2LR villages, to orient 2LR PAP to the resettlement area; located at the Ban Sopyouak field office of NNP1PC in the village market (under construction); that will also have a local public information corner



Paddy area and model homes at the NNP1PC Pilot Plan (demonstration farm) at Houay Soup resettlement site on the Nam Ngieng river, Ban Hat Gniun, Bolikhan District, Bolikhamxay Province



Mixed farming model (e.g., poultry, home-plot vegetable garden, agroforestry) being demonstrated at the NNP1PC Pilot Plan at the Houay Soup resettlement site



NNP1PC staff conducting the asset survey at Ban Nonsomboun, Bolikhan District, Bolikhamxay Province, along the dam access road to the NNP1 dam; prior to any cut-off-date being announced publically



The IAP resettlement specialist meeting with Thathom District and Ban Hatsamkhone village representatives to discuss resettlement and relocation options in the 2UR area

# Annex 2: Social Issues

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## Introduction

1. This is a progress report of the second site visit to the Nam Ngiep 1 Hydropower Project (NNP1) that took place during on 17-24 November 2013. As the IAP Expert on Indigenous People (IP), I re-visited the five directly affected villages (four villages in Zone 2LR: Ban Namyouak, Ban Sopyouak, Ban Soppouan, and Ban Houaypamom in Hom District, Vientiane Province; and one village in Zone 3: Ban Hatsaykham in Bolikhan District, Bolikhamxay Province); and, two indirectly affected villages in Zone 2UR, Ban Pou and Ban Hatsamkhone in Thathom District, Xiengkhouang Province). And I also re-visited the Houay Soup resettlement site in Zone 3.
2. I met 79 affected villagers in formal meetings, except in Ban Hatsaykham in Zone 3 where there was an informal meeting. This trip I focused on meeting the Hmong, the most directly affected people from the project in the five villages (four villages in Zone 2LR and one village in Zone 3). As well as I met two high level Lao-Hmong authorities in the Lao Front for National Construction in Vientiane Capital. The Lao Front for National Construction is responsible for resolving conflicts among people and between the people and government organizations.
3. Due to time limitations in the villages and travel schedules, I spent one hour meeting with Hmong people in each village. I met Hmong leaders, Hmong elders, and young Hmong. I interviewed and observed them in as many cultural and social aspects as possible. The schedule of meetings was as follows:
  - 16 November 2013 - Arrival Vientiane, Lao PDR
  - 17 November 2013 - Preparing for meetings and site visit
  - 18 November 2013 - Formal meeting with NNP1PC Director and staff at NNP1PC Head Office in Vientiane Capital
    - Formal meeting with two (2) higher Lao Hmong Officials (Mr. Wang Soua Wakoua and Mr. Daowan Zouatukee) in the Lao Front for National Construction Office, Vientiane Capital
  - 19 November 2013 - informal meeting with 6 Hmong elders in Ban Hatsaykham, Bolikhan District, Bolikhamsay Province.
  - November 20, 2013
    - formal meeting with lowland Lao headman of Ban Pou, Hmong village headman of Ban Pou, 4 Hmong elders and informal discussing with about 20 Hmong villagers of Ban Pou, Thathom District, Xiengkhouang Province.
    - informal discussing with 4 Lao Lum villagers of Ban Hatsamkhone village, Thathom District, Xieng Khouang Province
  - November 21, 2013 - attended a formal meeting with Lao forest officials in the National Protected Area, Bolikhamxay Province
  - November 22, 2013 - formal meeting with Mr. Yia Yeng Va (Nyiab Yeeb Vaj – in Hmong) with 23 Hmong elders (both men and women) in Ban Houaypamom, Hom District, Vientiane Province
    - formal meeting with Mr. Khamsai Lor (Khamsaiv Lauj – in Hmong) and 2 Hmong elders, 1 man and 1 woman) in Ban Soppouan, Hom District, Vientiane Province
    - formal meeting with Mr. Thia Bee Ya (Thiaj Npis Yaj – in Hmong) and 6 Hmong elders (men) in Ban Sopyouak, Hom District, Vientiane Province
    - formal meeting with Mr. Khu Song Sai Tu (Khu Xiong Saiv Tub – in Hmong) with 26 Hmong Elders ( 4 of them were women) in Ban Namyouak, Hom District, Vientiane Province
  - November 23, 2013 - traveling back to Vientiane Capital from Hom District, Vientiane Province-preparing presentation paper and facts finding for meeting

- November 24, 2013 -formal meeting with NNP1 staff, presentation and discussion and return to Bangkok, Thailand

## Issues and Recommendations

4. **Issue: Houay Soup resettlement site:** There are more positive developments related to the Hmong people moving to the Houay Soup resettlement site. It was noted that the Hmong people have agreed that the quality of soils of the resettlement site are now acceptable, especially the Hmong people in two villages of Zone 2LR (Ban Soppouan and Ban Sopyouak) and Zone 3 (Ban Hatsaykham). This positive development is from the effort of the NNP1PC Pilot Plan (demonstration farm) that provided accurate information to the Hmong. According to the PAP of Zone 2LR, the quality of the soils at the Houay Soup resettlement site is only a half as good as the quality of the soils in their present villages, however, it is acceptable; especially to the headmen of Ban Soppouan and Ban Sopyouak. For this reason, more of the villagers in these two villages have agreed to move to Houay Soup. This is a good sign for the project. However, the Hmong at Ban Houaypamom and Ban Namyouak still insist that only a few of them agree to move. They complain about the quality of the soils and the unclear land distribution plan and land use after moving to Houay Soup. They do not know where the paddy fields are because today the land is covered with trees and bushes. These unclear issues confuse the Hmong people and they cannot make any final decision.

### Recommendations:

- NNP1PC staff should work with the headmen of the two villages (Ban Namyouak and Ban Houaypamom) and their village committees. There is no doubt that the headmen in the two villages are from the major clan in the villages; Mr. Yia Yeng Va (Mr. Nyiaj Yeeb Vaj – in Hmong), the headman of Ban Houaypamom is from the major clan (Va clan) in the village, Mr. Khu Xiong Sai Tu (Khu Xyooj Saiv Tub – in Hmong), the headman of Ban Namyouak is from the major clan (Xiong clan) in the village. In addition, the committees of each village represent each clan. Working through this system will benefit the project and will reduce unnecessary payments.
- NNP1PC should offer jobs to educated young Hmong in the villages: For example in Ban Namyouak there are more than 10 young Hmong who have bachelor degrees. Hiring these Hmong youth will benefit the project by both promoting a good image and generating income for the Hmong.

5. **Issue: Food security:** Food security is a priority issue of concern to the PAP, especially the Hmong in the five directly affected villages (four villages in Zone 2 LR: Ban Namyouak, Ban Sopyouak, Ban Soppouan, and Ban Houaypamom; and one village in Zone 3, Ban Hatsaykham). PAP stated: ***“We, Hmong live in these villages we grow rice and its produce is full in our barns. You must come to investigate our rice in the harvesting season and then you can see how best our soils are. We live here we have never starved. We, Hmong have an extended family, we have more children. A family has about 10 kids, if we do not have enough rice to feed our kids then our lives cannot continue.....and we have no education we cannot do other things to feed our kids.....”***

### Recommendations:

- Every effort is needed to ensure that PAP will have enough food for their families. Measures should include the following: vocational training, providing education, compensation payment, providing jobs, providing scholarships for youth, creating small business for PAP, protecting PAP rights, etc.

6. **Issue: Compensation:** The PAP are insufficiently informed about entitlements and compensation; particularly in Ban Houaypamom (Zone 2LR) and Ban Pou (Zone 3). However, the headman of Ban Soppouan (Mr. Khamsai Lor) of Zone 2LR mentioned that he knew a little bit about the compensation and he accepted the market prices being offered.

**Recommendation:**

- The details of entitlements and compensation must be done quickly otherwise new houses and buildings will be built in each village, leading to increased compensation being demanded.

7. **Issue: Increasing interest in self-resettlement:** The Hmong are considering self-resettlement. This is possible because they have sufficient food to consume for an entire year. It can be observed that the Hmong in Ban Houaypamom plan to divide the village into two groups and move into two nearby sub-villages at Ban Houayphakhao and Ban Houayhindaeng where they know people in the villages. Whereas some of the Hmong in Ban Spphouan will self-resettle into Ban Sam Sao Houay Sai (the Hmong village that is next to Ban Namyouak) where many of them are related.

**Recommendation:**

- NNP1PC should work closely with the Hmong village headmen and village committees, especially in Zone 2LR in Ban Namyouak and Ban Houaypamom. The headman in each village is from the larger clan and at least he is able to control his clan members who are the major group in each village. This means that if the village headman accepts the project then the majority group in each village also accepts the project. This can be seen in Ban Soppouan and Ban Sopyouak; originally these two villages did not accept the project because the village headmen had negative attitudes toward the project. But today they understand and accept the project and now there are more PAP in the two villages that accept the project.
- As I had observed in this second trip, I only met the village headman and some village committees in Ban Soppouan and Ban Sopyouak because the majority of the villagers listen to the village headman. They accept his decision making for all of them. In contrast, in two other Hmong villages, Ban Namyouak and Ban Houaypamom, the headmen in these villages still have negative attitudes toward the project. They cannot talk to the villagers and they cannot make any decision for their villagers. For this reason I observed that there were more PAP (more than 20 villagers) who came to each meeting to meet me. Each village headman mentioned that they could not make any decision for the villagers and allowed them to talk to me instead.

8. **Issue: Moving Hmong graveyards:** The Hmong people have lived in the project area for several generations. Since they are animist Hmong, their dead are buried. Therefore, there are several Hmong graveyards in the area; e.g., in Zone 2LR at Ban Sopyouak, there are about 70 Hmong graveyards that need to be moved. According to the Hmong people, since they are divided by clan system and each clan has its own spirits and ceremonies, moving a graveyard needs a single spiritual ceremony and each graveyard needs to be paid about US\$3,000. The single exception is the Hmong village in Zone 3 (Ban Pou); wherein their graveyards are located at a level higher than the reservoir inundation area.

**Recommendations:**

- NNP1PC should negotiate with the headman of each Hmong clan and pay compensation through their clan system; because several Hmong graveyards may

perform only one removing ceremony. This may reduce unnecessary compensation payments.

- NNP1PC staff should set up meetings with each village headman and the village committee, and the headman of each clan in the village, to discuss and negotiate compensation for graveyard relocation.
- Moving Hmong graveyards needs to be done at least one year prior to moving the villagers. Relocation of the Hmong graveyards should begin as soon as possible because there are so many of them.

**9. Issue: Being a Hmong entrepreneur – a challenging opportunity:** The IAP noted that there are several Hmong in the villages who operate their own business as merchants, especially Hmong women. Although the businesses are small, people have tried to help and support themselves; e.g., in Ban Houaypamom, the most remote and poorest village with very few visitors to the village, the Hmong women try to sell Hmong handicrafts (especially Hmong costumes) outside their small houses. This implies that these people have striven to adjust their lives to any situations whenever they have a chance. By living in a larger village like Houay Soup resettlement area, the Hmong will have more opportunity to build/create their own bigger businesses.

**Recommendations:**

- Starting or expanding businesses should be used as an incentive to the Hmong to move into a larger village such as Houay Soup resettlement site.
- Business and entrepreneurship training should be provided to the Hmong, especially women, to give them an opportunity to start or expand a business.

**10. Issue: Working with the Government of Lao PDR:** The project is required to work closely with GOL officials at the central and local levels. There are Hmong officials at high levels in both central and local governments. It is useful for the Developer to work closely with officials, seeking their advice and support to benefit the project.

**Recommendations:**

- It is the GOL's responsibility to care for their own people and the GOL alone can convince people to cooperate with the project; their advice and support are critical. Cooperation with the GOL at central and local levels should be sought since the project is being implemented to international standards and involves several countries and organizations.
- National and local decrees with implementing regulations may be needed to convince PAP to move to the Houay Soup resettlement site.
- Meetings with high-ranking Hmong officials (in the GOL) at both central and local levels are required to obtain support with convincing the PAP to resettle and support the project. This may facilitate the project and reduce unnecessary payments.

**11. Site visit in May 2014:** During my next site visit in May 2014, I would like to concentrate on four villages in Zone 2LR, specifically: Ban Namyouak, Ban Soupyouak, Ban Soppouan, and Ban Houaypamom; and, especially Ban Namyouak and Ban Houaypamom, the two Hmong villages where the majority of the Hmong PAP prefer to be self-resettlers.

## Annex 3: Environmental Issues

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1. **Issue:** The planned development of several hydropower projects in the Nam Ngiep River Basin will result in water, land, biodiversity conservation, and natural resource utilization conflicts. These issues are already apparent in our site visits throughout the river basin. A Strategic Environmental Assessment (SEA) of the Hydropower Sector in Lao PDR is needed to assess the impacts of planned hydropower developments on the National Biodiversity Conservation Areas, protected and reserved forests, water resources, fisheries, land allocations and availability, and other related environmental issues (environmental flows, pollution control, and waste management). The EIA Decree 2010 requires a SEA for the key development sectors, like hydropower. The Ministry of Energy and Mines (MEM) and the Ministry of Natural Resources and Environment (MONRE) should seek funds to undertake this SEA for the hydropower section and in particular for the Nam Ngiep River Basin (as a SEA of the regional development plan).
2. A SEA of the hydropower sector is reportedly underway by MEM with financial support from the Mekong River Commission. The IAP requested to be informed of the progress of this study during the first site visit. No information has been received.

**Recommendation:** The Nam Ngiep Power Company Ltd. should request a meeting with MEM and MONRE officials to be held on the first working day of the next scheduled IAD site visit in May 2014 to discuss (i) the status of a SEA for the hydropower sector; and, (ii) the need for a SEA or CIA specifically designed to cover development of the Nam Ngiep river basin.

3. **Issue:** The Developer is required to contribute to capacity building of MONRE and to financially assist in establishing an environmental management unit (EMU), which will be manned by provincial and district representatives from project affected areas. The role of the EMU is to monitor on implementation of the environmental management plan (EMP) and to report on its adequacy and effectiveness as well as investigating grievances from project-impacted-persons dealing with environmental issues. Based on discussions held between the IAP and Provincial and District Officers during site visit #1 (January 2013), the role and responsibilities of the EMU are unclear because of jurisdictional boundaries (the EMU crosses into three provinces and there are three hydropower projects undergoing development at the same time), and the institutional overlaps (central MONRE, Provincial DONRE, and District level administration) for monitoring and reporting duties. The duties of MONRE have also expanded to include the departments of Land Planning, Forest Resource Management, and Water Resources Management, and thus district staff assigned to these activities believe that they should be represented or involved in EMU monitoring and reporting activities as they have connecting or overlapping environmental issues.

**Recommendations:** The IAP had recommended that ADB assist MONRE in conducting a workshop to review the functions and duties of the EMU for the Nam Ngiep watershed, to include the “lessons learned” from the Nam Thuen 2 and Theun-Hinboun Expansion projects. ADB responded that this was the responsibility of the GoL. The IAP is recommending that the Developer request a meeting with MONRE during the upcoming site visit in May 2014 to discuss these issues; of how the EMU will represent these integrated environmental conservation interests of MONRE at the regional and district (local) levels. The IAP recommends that some of the funds to be contributed by NNP1 to capacity building in MONRE be utilized to organize a workshop with MONRE and other hydropower project developments to review and discuss how the EMU should be

structured to carry out its assigned duties and the financial needs to cover the Nam Ngiep River Basin. The IAP believes that the preliminary budget developed for the EMU will be inadequate to cover the list of district and provincial staff interested in participating in environmental conservation monitoring activities and that the EMU budget should be re-evaluated given the expanded mandate of MONRE and the involvement of several hydropower projects in the same river basin.

4. **Issue:** Excessive clearance of biomass, specifically commercial size trees, was witnessed by the IAP along the access road to the dam site. The remains of a Vietnamese logging camp was found together with unacceptable pollution impacts and wide pathways of complete biomass removal were witnessed by EDL crews to make way for overhead power lines. Both activities were occurring in the PPA (provincial protected area) along the existing road, which is the proposed route of the access road to the dam site.

**Recommendation:** The IAP finds that the loss of forest cover in the PPA is excessive and that this area should not be considered as a reserve of biodiversity value. The Developer should be allowed to begin its planned construction activities to upgrade this existing developed transport route.

# Annex 4: Biodiversity Issues

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1. This report is based on visits by the Biodiversity Expert and other IAP members to the reservoir and resettlement sites for NNP1 in the Nam Ngiep and Nam Xan catchment areas, discussions with the Developer and ERM teams and a visit to, and discussions with officials of the Phou Khao Khouay National Protected Area (NPA).
2. Since the first IAP visit in January 2013, considerable progress has been made in addressing many of the issues raised, including additional biodiversity data collection by ERM (see table). In the interim period the IAP also had the opportunity to review additional draft reports and the draft biodiversity offset options paper prepared by the ERM consultants.

## Background

3. Prior to endorsing support for the NNP1 project, ADB management requires confirmation on the following issues:
  - (i) Sufficient basis to conclude the absence in the project-affected areas of critical habitat (ADB's Safeguard Policy);
  - (ii) Suitability of identified potential terrestrial and aquatic offset sites; and,
  - (iii) Written commitment of the GoL to implement the biodiversity offset program at identified potential offset sites.
4. **Issue: Critical habitat loss along the dam access road:** In 2010 the Houay Ngoua area was declared a reserve to protect a remnant area of forest. Subsequently the Wildlife Conservation Society (WCS) prepared a draft management and action plan for the Houay Ngoua "Provincial Protected Area" based on earlier faunal surveys in the area. This management plan was never implemented and the forest reserve area continues to suffer from logging and agricultural clearance. The current dam site access road runs through part of the Houay Ngoua reserve. ADB has expressed concern that the forests of Houay Ngoua may qualify as a "critical habitat" and trigger environmental safeguards. The Houay Ngoua provincial protected area is a relatively small area (4,900ha) of forest that is not connected to other forest blocks. Our understanding is that the area is a forest reserve (i.e., reserved for forestry activities) rather than a protected area for conservation. Parts of the Houay Ngoua forest are already degraded through deforestation and further threatened by ongoing clearing for agriculture.
5. Biodiversity and wildlife values in the reserve are already reduced by habitat loss, fragmentation and hunting. Nevertheless biological surveys have recorded the presence of some threatened tree species; these species are threatened throughout their range because of logging and forest clearance; it is highly unlikely that the remnants of the Houay Ngoua forest can be considered as significant or critical habitat for these species. The Provincial Forest Authority (with management authority for Houay Ngoua) have recently approved removal of large trees by a Vietnamese company along the road as part of clearance activities associated with installation of power lines by Electricité de Lao (EdL). Some 300 logs were removed from within the reserve just prior to the IAP visit. The Provincial Forestry Office also has plans for replanting part of the reserve as a (rubber?) plantation and has designated an additional area for regeneration, although new clearing continues.

**Recommendation:** Review the provincial governor's proclamation of the reserve in 2010 to confirm whether it is a reserve for forestry or a provincial protected area with conservation as a primary objective.

**Recommendation:** Given its degradation and continuing threats, Houay Ngoua cannot be considered as a viable biodiversity offset, but NNP1PC should limit and mitigate the impacts of the dam access road on habitat and wildlife within the reserve.

- 6. Issue: Possible alternative access road:** ADB had requested ERM to review potential alternative access routes to avoid Houay Ngoua. The old road giving access to the village of Ban Hat Gniun and Ban Hatxaykham skirts the boundaries of the Houay Ngoua forest and runs along the valley bottom between Houay Ngoua and another "forest reserve" on top of the ridge to the east. Unfortunately this road is low-lying and subject to flooding, thus is less suitable for heavy construction traffic. This road also runs through agricultural fields. Improving access for dam traffic along the alternative road is unlikely to lead to closure of the current road, especially as the new power lines follow that route, and could lead to increased access and pressure on the remaining ridge forests. The alternative route along the "old" road has logistical, social and biodiversity issues and is unlikely to reduce access along the well-used existing road.

**Recommendation** Continue to upgrade the current access route but take appropriate action to minimize and mitigate environmental and social impacts.

- 7. Issue: Mitigation along Access Road:** The remaining forests in Houay Ngoua are already being further impacted by the following: a) roadside clearance for power lines by EdL; and, b) continuing clearance for agriculture by villagers. It is important that in upgrading the access road, NNP1PC institutes measures to cause as little habitat destruction as possible (e.g., limited clearing of forest trees). The company should liaise with provincial forestry authorities and the provincial environmental management unit (EMU) to strengthen capacity for management and monitoring in the watershed and project areas.

**Recommendation:** Liaise with provincial forestry authorities to a) allow only essential clearing along access roads and in the forest reserve; and, b) support reforestation efforts using native species.

**Recommendation:** Support the EMU to strengthen capacity for protection and monitoring to limit biodiversity impacts.

**Recommendation:** Impose a Code of Conduct on contractors and sub-contractors for construction traffic and workers; and, check points and spot checks for vehicles, with a zero tolerance policy for illegal removal of logs, NTFPs, and wildlife.

- 8. Issue: Options for biodiversity offset:** Biodiversity offsets are activities that are specifically designed to compensate for biodiversity loss. They can have measurable impacts and gains. Offsets should:
- Not conflict with existing communities' uses or access, in a manner which cannot be resolved by compensation by the Company; and,
  - Not conflict with any existing mining concessions.
- 9.** Given the extent of on-going and planned developments in Lao PDR, it is also important to ensure that any proposed offsets are realistic, permanent, sustainable, and not likely to conflict with other government land-use and development decisions (e.g., production forests, hydropower dams, etc.).

10. ERM have provided a useful review of potential biodiversity offsets and conducted a review and workshop to assess feasibility and government preferences. The IAP biodiversity expert agrees with many of the recommendations made, but feels that sustainable forest management in production forests, though desirable, is not realistic as a biodiversity offset. Similarly recent information in regard to Houay Ngoua makes the reserve **unsuitable** as a biodiversity offset (see table below).

	<b>Condition</b>	<b>Comment</b>	<b>Recommendation</b>
Huay Ngua “PPA”	Degraded, agriculture clearance	Not suitable Offset	Mitigation to minimize impact of access road
<i>Nam Ngiep watershed protection forests</i>	Lower level forests used for shifting cultivation, NTFP collection and hunting	No GoL appetite to create new PA from production forests. Reservoir will give enhanced access to forests above waterline	Further wildlife surveys during construction phase to establish baseline data for monitoring impact of dam and changed access
<i>Village forests/reforestation</i>	Shifting agriculture and collection of NTFPs and wildlife	Retain forests in resettlement area for NTFP collection	Investments in reforestation should plant native species
Phou Khao Khouay NPA	Threats and weak management	Important Biodiversity area close to NNP1.	Potential site for BD Offset
<i>Sustainable Forest Management</i>	All lowland forests for production – logging reduces biodiversity values	SFM worthwhile but not appropriate for offset. GoL unlikely to re-designate any production forest for conservation areas	Work with other donor SFM projects to target forests in watershed area.
Nam Xan valley	Forests under threat from logging, mining, 3 HEP schemes	Unrealistic to expect creation of new PA in Nam Xan watershed	Under current development plans, not realistic for offset
<i>Nam Xan watershed/river</i>	Heavily threatened by current and proposed development (HEP) and logging	Aquatic habitats impacted by activities outside their boundaries	Not realistic as biodiversity offset given ongoing and planned development
Nam Kading NPA	Threats but WCS supporting management	Important Biodiversity area	Potential site for BD offset activities
Biodiversity Offset Window e.g. EPF – multiple sites	Existing national protected areas under threat and under-resourced	Could share offset benefits across multiple sites	Investigate potential for cumulative offset fund in Lao PDR (with ADB and other donors)

11. Almost all lowland and accessible hill forests are designated as production forests (for logging) and the GoL is unlikely to re-designate any of these areas for conservation. It

therefore seems unrealistic to propose establishment of a new conservation area and/or expansion of existing conservation areas. Moreover the current national protected area system is severely under-resourced and also threatened by planned developments as well as illegal activities.

12. With regard to offsets for aquatic biodiversity, aquatic systems are impacted by activities way beyond their immediate boundaries. Given HEP dams' planned, ongoing logging and substantial cultivation along rivers, it would be extremely difficult to protect/manage any offset aquatic ecosystem in the Nam Xan river basin to conserve aquatic biota.

**Recommendation:** Explore opportunities to strengthen protection and management in national protected areas of recognized biodiversity value as part of biodiversity offset (preferably multiple sites).

13. **Issue: Phou Khao Khouay NPA as a biodiversity offset site:** Phou Khao Khouay NPA is part of the national protected area network and relatively close to the project site (a main highway through the NPA provides access to the upper dam site). The NPA is an area of 200,000 ha of evergreen, mixed deciduous, and pine forests, which is linked by forest corridors to the upper watershed of the Nam Ngiep river. The western part of the NPA was previously logged and some habitat areas have been degraded by shifting agriculture which seems to be continuing along lower boundaries of the PA. The Ministry of Defence with MONRE is responsible for protecting and managing the PA but management is weak. Threats include illegal logging, hunting and proposed new development. The NPA includes two hydropower dams and at least one village surrounded by agricultural lands. There also are plans to construct a third dam and reservoir, Nam Mang 1 with Chinese funding, while the military and villagers are grazing cattle within the park. Nevertheless the PA retains important biodiversity values with populations of Asian elephant, tigers, white-cheeked gibbons, langurs, and other IUCN Red List species as well as 153 bird species.

**Recommendation:** Strengthen management of the Phou Khao Khouay NPA as part of the biodiversity offset, involving NGO support.

14. **Issue: Implementing Biodiversity Offsets:** The offset options proposed by ERM provide a useful analysis of potential modalities and governance options for a biodiversity offset. Options include establishing new institutions (such as a Nam Ngiep River Basin Committee or a new Watershed Management and Protection Authority) or putting funds through existing government institutions. Establishing new institutions can be costly in terms of running costs so much depends on the overall budget and funding mechanism chosen and funds to be allocated from the ERM workshop preferred options seem to be to put funding either through MONRE and/or the Environmental Protection Fund. Based on discussions with the Director-General of DFRM-MONRE, GoL already is considering creating a sinking conservation fund to support management of existing conservation areas.

**Recommendation:** Review institutional mechanisms and past experience, as well as lessons learned from offset conservation funds elsewhere.

**Recommendation:** Follow up with the director general of DFRM-MONRE regarding plans for a protected area conservation fund

15. **Issue: Biodiversity offset fund design:** Whether MONRE or the Environmental Protection Fund (EPF) is chosen to manage biodiversity offset funds, it will be important to establish a separate window for biodiversity offset. This could be site-specific or cumulative, and linked to national biodiversity offset funds to which other donors could contribute. In either case it would be useful to have a transparent project selection process whereby the EPF (or

MONRE) could invite proposals to be reviewed by a panel including representation from MONRE, NNP1 and independent scientific advisors against specific biodiversity and other criteria.

**Recommendation:** ADB should discuss with other donors the potential for a cumulative offset fund in Lao PDR to support conservation initiatives.

**Recommendation:** The Developer should review relevant experience from other conservation funds in regard to governance, project selection criteria, etc. before proceeding; to make the most effective use of investment funds.

- 16. Issue: Available funding for offset / mitigation:** It is unclear from the Concession Agreement (CA) what funds are available for biodiversity offsets and/or specific management activities (see Annex C). Biodiversity activities started in table total \$3.7m (including \$1.65m for forest restoration, \$1.176m for aquatic surveys, \$788,000 for wildlife protection) over the life of the project. However there is another \$1 million for the EPF and another \$6.24 million allocated for the Environmental Management Fund (which includes watershed monitoring). Smaller sums also have been allocated for conservation awareness (\$168,000), capacity building for MONRE (\$165,000) and wildlife translocation (\$90,000). It is unclear how these funds will be used and in some cases there seems to be overlap with other budget lines e.g. \$2.176 million for watershed management. Since the budget seems to originally have been prepared in 2007, it would be useful to revise based on up-to-date information and recognized needs.

**Recommendation:** To make most effective use of capital resources, the Developer should clarify funds available for a) biodiversity offset; and, b) mitigation activities.

**Recommendation:** The Developer should revise budget based on current realities and needs.

- 17. Issue: Wildlife translocation:** The Concession Agreement specifically allocates funds for wildlife capture and translocation during the construction phase, prior to inundation, although the budgets seem both unrealistic and inconsistent throughout the annex. Capturing wildlife for translocation is extremely difficult and expensive, especially in a forest environment. The proposed translocation activities over six years prior to impoundment make little sense. It would be more useful to conduct more detailed surveys of the upper dam site and watershed during the construction phase, including above the expected high water level to better define protection and monitoring activities in the watershed forests. This could involve engagement and training for Hmong people to collect useful data based on their local knowledge and experience as forest users.

**Recommendation:** The IAP recommends that the Developer look at lessons learned from Nam Theun 2 on the effectiveness of wildlife translocation, including monitoring of released animals.

**Recommendation:** The Developer should review desirability of translocation and consider re-allocation of funds to other activities; e.g., wildlife surveys and monitoring pre- and post inundation.

**Recommendation:** The Developer should conduct additional wildlife surveys in upper watershed forests during construction phase to better define protection and monitoring activities, including Hmong villagers where possible.

- 18. Issue: Capacity of province and district environment teams:** The Concession Agreement allocates a modest budget of \$165,000 for strengthening capacity at MONRE. It

will be especially important to strengthen capacity at the provincial level as the three provincial EMUs have very limited capacity and budgets but will bear the responsibility for monitoring at the project site, watershed, and offset sites.

**Recommendation:** The Developer should develop a detailed program in consultation with MONRE and provincial natural resources authorities to strengthen the capacity of provincial EMUs for monitoring biodiversity and other environmental impacts.

19. These comments and concerns have been shared with NNP1 staff at the wrap up meeting, with ERM during field visits and with the ADB Environment team in a teleconference on 5 December 2013.