

# Independent Advisory Panel Report

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Project Number: 41924

March 2013

Document Stage: Final

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

Report Number 1 on the First Site Visit, 8-19 January 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 1, Version 2  
of the Independent Advisory Panel on the Nam  
Ngiep 1 Hydropower Project, Lao PDR  
First Site Visit, 8-19 January 2013**

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**5 March 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
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
PRMLCRC	Provincial Resettlement Management and Living Condition Restoration Committee
RMU	Resettlement Management Unit
SEA	Strategic environmental assessment
THPC	Theun-Hinboun Power Company
UR	Upper reservoir

# Report Number 1, Version 2 of the Independent Advisory Panel on the Nam Ngiep 1 Hydropower Project, Lao PDR First Site Visit, 8-19 January 2013

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## Introduction

1. This report [incorporates comments from the Asian Development Bank \(ADB\) on Report Number 1 of the Independent Advisory Panel \(IAP\)](#) and consists of two parts: Part 1 presents the activities and actions of the 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 IAP on the Nam Ngiep 1 Hydropower Project in Lao PDR was convened at 10:30 hours on Sunday, 13 January 2013, at the Hotel Khamvongsa, Vientiane, Lao PDR. It was noted with dissatisfaction that at the time of mobilization, no member of the IAP had yet signed a contract with the Electric Generating Authority of Thailand International (EGATi) Company.
4. The IAP consists 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. During the IAP meeting on 13 January 2013, the Panel members selected Mr. Anthony Zola as their chairman. Mr. Zola agreed to serve as chairman for one year after which he would ask for a re-endorsement by the IAP.
6. The IAP decided that the following site visit schedule will be followed:
  - Visits in 2013: 8-19 January and 17-24 November
  - Visits in 2014: March and October/November
  - Visits in 2015: January, May, and October
  - Visits in 2016: January, May, and October
7. The IAP will prepare a report within one month following each visit consisting of (i) issues of concern; (ii) actions by NNP1 that are **required** by the IAP based on the NNP1 Concession / License Agreement, official / legal documents of the Government of Lao PDR (GOL), and international best practices; and, (iii) actions **recommended** by the IAP that NNP1 should undertake. Actions required and recommended by the IAP will be time-based; meaning that NNP1 will be obligated to or should undertake and/or complete these actions by a specific date. The IAP **categories of concern**

are of 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.

8. The IAP reports will be submitted to the following individuals:
- (i) Mr. Yoshihiro Yamabayashi, Project Director
  - (ii) Mr. Phisol Chansri, EGATi
  - (iii) Mr. Vantheva Bouakhasith, Lao Holding State Enterprise

Copies of the IAP reports will be submitted to the following individuals:

- (i) Mr. Tsutsui Shoji
- (ii) Mr. Xong Yangxawa
- (iii) Dr. Charles Mehl

9. The IAP noted that the Developer had engaged consultants through ERM-Siam to undertake a technical assessment related to the resettlement sites and biodiversity offset options. The IAP will take into consideration all comments, findings, and recommendations of ERM in preparing their periodic reports and in formulating their recommendations for the Developer.

10. Each subsequent field visit of the IAP will cover a period of seven days. The IAP proposes the following travel schedule for each IAP visit:

- Sunday: Arrive Vientiane. Overnight in Vientiane (1 night)
- Monday to Sunday: Field visits and briefings as follows:
  - Monday: Briefing by NNP1 managers and staff at the Nam Ngiep 1 Hydropower Project office in Vientiane or Paksan 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. Travel to Paksan; overnight in Paksan (1 night).
  - Tuesday: Travel to Ban Hat Gniun host village; visits to Houay Soup resettlement site and Hatsaykham PAP. Overnight at Thidadao Resort, Ban Hat Gniun, Borikhan District, Bolikhamxai Province (1 night).
  - Wednesday: Morning: Continue visits to Ban Hat Gniun host village; visits to Houay Soup resettlement site and Hatsaykham PAP. Afternoon: Travel to Thathom District. Overnight at Ban Thavieng, Thathom District, Xieng Khouang Province (1 night).
  - Thursday: Morning: Visits to Thong Nam Pha resettlement site; visits to PAP villages at Ban Pou, Ban Hatsamkhone, Ban Piengta. Afternoon: Travel to Paksan. Overnight in Paksan. (1 night)
  - Friday: Travel to Hom District, Vientiane Province; visit PAP villages at Ban Houay Youak, Ban Sopyouak, Ban Soppouan, and Ban Houaypamom. Overnight at Ban Longxon (1 night).
  - Saturday: Morning: Continue visits to PAP villages at Ban Houay Youak, Ban Sopyouak, Ban Soppouan, and Ban Houaypamom. Afternoon: travel to Vientiane Capital City; Evening: IAP prepares brief for NNP1 management and staff. Overnight in Vientiane (1 night).
  - Sunday: Morning: IAP briefing for NNP1 management and staff at Nam Ngiep 1 Hydropower Project office in Vientiane. Afternoon: Report preparation. Evening: Return travel to home bases.

11. The remainder of this report presents 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

12. A summary of the issues presented in the annexes and the principal requirements and recommendations and level of concern are presented in **Part 2** of this report.

## 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 visit, 7-12 January 2013	Depleted and degraded soils at the Houay Soup resettlement site	The Developer's Pilot Plan / demonstration farm is using agricultural chemicals and soil additives to demonstrate rice production Soils in area designated for paddy require improvement	The Developer should invest in improving the soils in the lowland areas designated for rice production by the PAP <i>prior to</i> resettlement of the PAP from the four villages from Vientiane Province and the village of Ban Hatsaykham.	Medium
R2	Site visit, 7-12 January 2013	Need to upgrade grazing land prior to arrival of PAP cattle and buffalo	Grazing area should be sufficient but require upgrading.	<ul style="list-style-type: none"> <li>The IAP requires that the Developer establish improved pasture at the areas designated for grazing <b>BEFORE</b> the PAP are resettled.</li> <li>Contact NAFRI to recommend appropriate tropical grasses and legumes for seeding in the grassland areas and grazing lands.</li> </ul>	Low
R3	Site visit, 7-12 January 2013	Current occupants and land users at Houay Soup resettlement area	Current occupants need to be surveyed and compensated	<ul style="list-style-type: none"> <li>The assets of current land users at Houay Soup situation should be surveyed.</li> <li>Land users / occupants may be entitled to compensation for loss of agricultural land for use as project land</li> </ul>	Low
R4	Site visit, 7-12 January 2013	Impacts and disturbance of PAP in Ban Hatsaykham from Developer's camp	Current plan is not to move these PAP	<ul style="list-style-type: none"> <li>IAP requires that PAP at Ban Hatsaykham be at least temporarily relocated to Ban Hat Gniun; or, resettled early at the Houay Soup resettlement area.</li> <li>The Developer should prepare an environmental and social action plan (E&amp;S Action Plan) for temporary relocation of PAP from Ban Hatsaykham.</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 visit, 7-12 January 2013	Commercial development by camp followers will have a significant negative impact on PAP in host villages located near construction camps	Impact of camp followers is not taken seriously by Developer	<ul style="list-style-type: none"> <li>• Required: The IAP 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.</li> <li>• Required: The IAP requires all employees – foreign and local -- of the Developer, 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 visit, 7-12 January 2013	Soil conditions and potential for flooding at the Thong Nam Pha resettlement site	A detailed site survey of the Thong Nam Pha resettlement site has yet to be conducted.	<ul style="list-style-type: none"> <li>The Developer should take soil samples for professional analysis.</li> <li>The land should be surveyed with the Developer's consultants and district survey technicians working together.</li> <li>The site should be surveyed to determine the potential from flooding from the Nam San and Nam Pha rivers.</li> </ul>	Low
R7	Site visit, 7-12 January 2013	Water supply for the Thong Nam Pha resettlement area	Several possible sources exist to provide a water supply for the resettlement site.	<ul style="list-style-type: none"> <li>Water supply for the resettlement site is critical.</li> <li>The IAP recommends investigating several sources of water for the resettlement site's water supply including gravity flow from the upper reaches of the Nam Pha river; bore wells at the resettlement site; and, connecting into the Thathom District / Ban Sibounheuang municipal water supply.</li> </ul>	Low
R8	Site visit, 7-12 January 2013	PAP and officials are eager to begin the resettlement process, considering that work on the NNP1 was initiated in 1989	A joint venture company is expected to be organized by March 2013. Construction of access roads is expected to begin during the 2012-2013 dry season, with impacts on Ban Hat Gniun and Hatsaykham	Every effort should be made to establish the joint venture company as soon as possible, so that public consultation and involvement related to resettlement begin as soon as possible	High
R9	Site visit, 7-12 January 2013	The Developer has yet to provide details of the internal institutional structures that is needed to organize, manage, and implement the resettlement program	No substantive work has been undertaken related to public involvement / community development; government liaison; land surveys and infrastructure design; and, supervisory personnel to supervise construction of civil works related to infrastructure	<ul style="list-style-type: none"> <li>The IAP recommends that lessons should be learned from other hydropower development projects; particularly lessons related to resettlement and community infrastructure development.</li> <li>Such lessons should be applied preparing clear terms of reference for each unit established to support resettlement</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 Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S1	Site visit, 7-12 January 2013	Changing the Hmong lifestyle is not easy and will take time	The Hmong in this area still practice Hmong traditional culture	<ul style="list-style-type: none"> <li>The IAP recommends that good infrastructure, better and higher education levels with scholarships for the Hmong youth, various occupation training, and social welfare should be provided in both Houay Soup and Thong Nam Pha resettlement sites.</li> <li>In addition, finding a market for agricultural produce is needed.</li> </ul>	Low
S2	Site visit, 7-12 January 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	<p>Required:</p> <ul style="list-style-type: none"> <li>Hmong graveyards need to be moved before inundation of the reservoir area.</li> <li>Hmong graveyards are needed at both the Houay Soup and Thong Nam Pha resettlement sites.</li> <li>A typical small Hmong house located next to the designated resettlement houses in Houay Soup needs to be built for the Hmong to perform their spiritual ceremonies.</li> <li>The Developers should set up meetings with the leader of each clan to talk and discuss related issues and problems.</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	<ul style="list-style-type: none"> <li>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> </ul>	Required: <ul style="list-style-type: none"> <li>More opportunities should be offered to the Hmong.</li> <li>Promulgate a decree with implementing regulations at the provincial or national level to convince PAP resettlers to move.</li> <li>The Developer needs to communicate more with the PAP through a systematic and continuous public involvement program.</li> <li>Proper / legal compensation needs to be paid to all PAP.</li> <li>The provincial and district Resettlement Management Units representing concerned organizations, affected villagers, and related civil society organizations need to quickly determine entitlements and compensation.</li> <li>Compensation payments need to be made directly to affected families</li> </ul>	Low
S4 (Annex issue 5)	Site visit, 7-12 January 2013	<ul style="list-style-type: none"> <li>Soils at Houay Soup need improvement.</li> <li>Additional investigations are needed on the use of the whole resettlement site.</li> </ul>	Pilot Plan site / demonstration farm the IAP observed that the Developer has done several good things but that still more is needed	Required: <ul style="list-style-type: none"> <li>The Developer needs to launch a public involvement program to disseminate to PAP more information about entitlements and the Developer's activities at the resettlement sites.               <ul style="list-style-type: none"> <li>A decree with implementing regulations at the provincial or national level may be needed to convince PAP to move to the Houay Soup resettlement site.</li> </ul> </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*
S5 (Annex issue 6)	Site visit, 7-12 January 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 2013	Required: <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 relocation site.</li> <li>A zero tolerance policy needs to be in place by the Developer, working in close cooperation with local government officials; particularly provincial and district governors, police, health officials, education officials, and social development officials.</li> </ul>	High
S6 (Annex issue 8)	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	<ul style="list-style-type: none"> <li>About 200 hectares will be provided</li> <li>No details are available about exact size and condition of the resettlement site.</li> </ul>	Required: <ul style="list-style-type: none"> <li>Visit to the Thong Nam Pha resettlement site by PAP is needed.</li> <li>More details about Thong Nam Pha site are needed.</li> <li>Diversified occupational opportunities for affected people should be promoted</li> <li>A <a href="#">decree with implementing regulations at the provincial or national level may be needed to convince PAP to move to the Thong Nam Pha resettlement site.</a></li> <li>The exact numbers of affected people in the three villages need to be surveyed urgently.</li> <li>More details about entitlements and compensation need to be discussed with the PAP.</li> <li>Proper compensation needs to be paid to PAP once details of resettlement are completed; with compensation being paid directly to affected families.</li> <li>The provincial and district Resettlement Management Units representing concerned organizations, affected villagers, and related civil society organizations need to quickly determine entitlements and compensation.</li> </ul>	Medium
* 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 Environment Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
E1	ESIA of NNP1	The multiple dams on the Nam Ngiep (NN1 and upstream NN2) and Nam San rivers will impact on ecological flows, downstream fisheries and other aquatic life.	There appears to be no <u>Cumulative Impact Assessment</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?	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 CIA. <b><i>This is an issue for Government, not the Developer</i></b>	Low
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?	MONRE, together with provincial and district government officers, and representatives of impacted communities, should be invited 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. <b><i>This is an issue for Government, not the Developer</i></b>	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>					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
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 <u>biomass removal program</u> ? Who will be responsible to carry out the biomass removal program and to oversee the program? What environmental safeguards are being developed for the PP and their selected biomass removal contractors? Who selects the official logger for the reservoir area and is this same contractor responsible to implement the biomass removal program? Who is responsible to oversee the monitoring of these contracts and their work crews? And is the EMO monitoring team empowered to stop the selected logger if he violates the environmental safeguards? What use will be made of the biomass removed from the reservoir? Is there a planned program to use this biomass in a productive and environmentally safe manner?	<ul style="list-style-type: none"> <li>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.</li> <li>The PP should discuss the NNP1 Proposed Biomass Removal Plan with MONRE and clarify responses to the listed questions.</li> </ul>	Low
E4	EIA Nam Ngiep 1 Hydropower Project (2012); Guy Ziv, et al, "Trading-off Fish Biodiversity, Food Security, and Hydropower in the Mekong River Basin", Environmental Sciences, January 2012.	Information on fisheries in the Nam Ngiep are 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.	The IAP recommends that the EIA Consultants clarify in their baseline studies (1) the proportion of family income that is derived from fishing (according to the season); (2) the proportion of local diet protein that is derived from fish; and, (3) the importance of fisheries for subsistence or income source.	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>					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
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.	<ul style="list-style-type: none"> <li>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.</li> <li>The IAP recommends that the Developer identifies those pollutants so that the future construction activities of NNP1 are not blamed for water quality impacts coming from upstream development projects.</li> </ul>	Low
E6	MONRE, EIA Decree, February 2010; Environmental Protection Law, December 2012	Does the new EIA Decree or the new Environmental Protection Law require SEAs for the key development sectors?	There is no Strategic Environmental Study of the hydropower sector in Lao PDR. Such an SEA would assess the impacts of existing and future proposed hydropower projects on the NCBAs, 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 transboundary effects on downstream resources and ecological sustainability.</p> <p>It is reported that MRC is interested in financing such a study at MEM.</p> <p><b><i>This is an issue for Government, not the Developer</i></b></p>	Medium
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	IAP discussions with provincial and district officials indicate that the role and responsibilities of the EMU are unclear	The IAP 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.	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 Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B1	Site visit, 14-19 January 2013	Options for biodiversity offsets	<ul style="list-style-type: none"> <li>Biodiversity forest offset areas at Nam San, behind the Thong Nam Pha resettlement site, have been allocated for production and logging that is currently underway</li> <li>Lack of resources within MONRE and PONRE and at district level to manage existing conservation forests</li> </ul>	<ul style="list-style-type: none"> <li>The ERM team should review a diversity of biodiversity offset options (See Annex 4)</li> </ul>	Medium
		Aquatic biodiversity offset	<ul style="list-style-type: none"> <li>Most rivers in region, including Nam Ngiep have multiple dams planned or under construction and are impacted by other developments in the watersheds</li> <li>Information suggests that several dams are planned for Nam San river. Logging already underway in catchment area will impact aquatic ecosystems.</li> </ul>	<ul style="list-style-type: none"> <li>Additional studies on fish species and populations in Nam Ngiep needed (especially migratory species)</li> <li>Options for an offset for aquatic biodiversity may be unrealistic given the impact on aquatic systems of activities way beyond their boundaries.</li> </ul>	
B2	Site visit, 14-19 January 2013	Quantities of NTFPs to be collected that are controlled annually by the district where “quotas” are issued to the villages	Village quotas are checked by the district at the factory, where NTFPs are sold and the district collects a “resource tax” from the factory based on quantity (	<ul style="list-style-type: none"> <li>Additional studies are required as follows:                             <ul style="list-style-type: none"> <li>Data on species of NTFPs collected and importance for livelihoods</li> </ul> </li> <li>Trial the 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.</li> </ul>	Medium
B3	Site visit, 14-19 January 2013	Wildlife capture and translocation proposed during construction phase	Capturing wildlife for translocation is extremely difficult and expensive	Look at lessons learned from Nam Theun 2 and adapt plans as needed.	Low
B4	Site visit, 14-19 January 2013	Workers and Construction traffic removing forest resources, illegal logs and wildlife	This will become a serious issue after construction crews and camp followers arrive	Exercise zero tolerance policy	Low

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B5	Site visit, 14-19 January 2013	Introduction of potential invasive species as part of reforestation, agriculture schemes	Frogs to be raised by PAP are likely to be native species	Check whether proposed species are known to be potentially invasive	Low
B6	Site visit, 14-19 January 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	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
B8	Site visit, 14-19 January 2013	Monitoring of biodiversity	Biodiversity values are not monitored by anyone	Engage villagers in monitoring biodiversity values within the resettlement areas and surrounding forests	Low
B9	Site visit, 14-19 January 2013	Movement of students and teachers to the Thong Nam Pha resettlement site	Students and teachers are not sure about moving to the Thong Nam Pha resettlement site	Clarify how Thong Nam Pha occupants will be affected by the allocation of those "temporary" lands to the new resettlement villagers	Low
B10	Site visit, 14-19 January 2013	Quality of translation for the environment team	Team translator was helpful but unfamiliar with environmental terms which sometimes created confusion	The IAP requests that the Developer provide a professional translator with knowledge of environmental terms for future IAP visits by the environment team.	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>					

# Annex 1: Resettlement Issues

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## Background

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 in Vientiane Province (Zone 2LR);
- Three villages in the Upper Section of the Reservoir in Xieng Khouang Province (Zone 2UR); and,
- One village in the Construction Area in Bolikhamxay Province (Zone 3).

The number of project affected people (PAP) to be resettled from villages in Zones 2LR and 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.

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 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.

In addition, an as yet unspecified number of PAP in three villages in Thathom District, Xieng Khouang Province also will be resettled, namely PAP from Ban Pou, Ban Hatsamkhone, and Ban Piengta (Zone 2UR).

The resettlement site for these PAP is an area of approximately 200 ha called Thong Nam Pha, located on the left bank of the Nam San river under the jurisdiction of Ban Sibounheung, Thathom District, Xieng Khouang Province. [The IAP was informed by senior district officials that this site was only recently identified and offered for consideration as a resettlement site by district authorities; subsequent to preparation of the Resettlement and Ethnic Minority Development Program \(REMDP\). The IAP was informed that the Developer's representatives had visited the site in late December 2012.](#)

Resettlement will be carried out under the supervision of the Resettlement Management Unit (RMU), to be established by the GOL, and with the assistance of the Infrastructure Section and Resettlement Section of the Environment and Social Division (ESD) of the NNP1 Project. They will be assisted by the Resettlement Working Group of the Provincial Resettlement Management and Living Condition Restoration Committee (PRMLCRC) and related GOL provincial authorities.

## Current Resettlement Issues and IAP Recommendations

Issues of concern to the IAP at the Houay Soup resettlement area include the following:

1. **Issue:** An estimated 420 ha of the resettlement area has been found to be suitable for lowland rice production. However, PAP who have visited the proposed paddy production area of the resettlement site indicate that the soils have been depleted and are of poor quality. Other PAP report that portions of the resettlement area have been used by PAP in Ban Hat Gniun for many decades without being improved in any way. The PAP state that the Pilot Plan (the NNP1 demonstration center and pilot

farm) located at the resettlement site has demonstrated that both organic and chemical soil additives (i.e., fertilizers) will be required to generate yields sufficient to meet PAP food security needs. This will increase the burden on resettled PAP through increased costs for agricultural chemicals and labor requirements. Currently PAP do not use chemicals or soil additives on their rice crops and have a taste preference for rice produce without agricultural chemicals or soil additives.

The IAP visited the Houay Soup resettlement area during a site visit to the Project Area in early January 2013, and more specifically the area at which PAP from Ban Hatsaykham are expected to be resettled. [The area visited was covered with fallow forest](#), rehabilitating following several years of use by PAP for rice and upland crop production (recently harvested pineapple plants were observed). Soil tests have been undertaken in the area by the Developer and soils have been found to be acid. (Issue R1)

**Recommendation:** The Developer should invest in improving the soils in the lowland areas designated for rice production by the PAP *prior to* resettlement of the PAP from the four villages from Vientiane Province and the village of Ban Hatsaykham. This 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. IAP suggestions for improving the soil include the following:

- Application and incorporation of biochar into the soil;
- Planting of legume crops (cowpea, groundnut, beans, peas, alfalfa, clover, and lentils) that can be ploughed into and incorporated into the soil;
- Transport into the area by trucks of high-quality topsoil from other areas, including Mekong River alluvial soils; and,
- Fabrication of topsoil using organic matter transported into the area from other locations, including the application of decomposed organic matter from urban solid waste and animal manure.

2. **Issue:** PAP to be resettled from Hom District, Vientiane Province, along with the PAP from Ban Hatsaykham, Bolikhan District, Bolikhamxai Province, together have many hundreds of cattle and buffalo that also will need to be resttled. They will require upgraded grazing land at Houay Soup resettlement area on which their resettled livestock can graze beginning on day one of the resettlement process. (Issue R2)

**Required:** The IAP is pleased to note that approximately 500 ha have been designated as grazing land for livestock at the Houay Soup resettlement area. The IAP requires that the Developer establish improved pasture at the areas designated for grazing **BEFORE** the PAP are resettled. This requires the Developer to undertake seeding of all designated grassland areas with improved tropical grasses and legumes beginning in the 2013 wet season (May to October 2013). This is to ensure that forage crops are well established before the arrival of PAP livestock and that livestock mortality linked to animal malnutrition is minimized.

**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.

3. **Issue:** The current users of the Houay Soup resettlement area should be surveyed and may need to be compensated for their loss of crops, trees, and other land-based assets in the area. As was pointed out to the IAP by the PAP during the site visit to Ban Hat Gniun and Ban Hatsaykham, the land at Houay Soup has been used

intermittently by them for nearly 200 years. Thus, it is likely that PAP from both villages have assets at the Houay Soup site that qualify for compensation. (Issue R3)

**Recommendation:** The assets of current land users at Houay Soup situation should be taken into consideration when the asset survey is conducted. In addition, since the Houay Soup area will be used as a resettlement site, it is considered to be 'project lands.' As such, depending on the policy of the Resettlement Management Unit (RMU) and district and provincial officials, land users / occupants may be entitled to compensation for loss of agricultural land for use as project land; in this case project lands are land taken by the GoL and the Developer to serve as the resettlement site for PAP from four villages in Vientiane Province and 33 households from Ban Hatsaykham.

4. **Issue:** The PAP village at Ban Hatsaykham will be impacted severely by the establishment of the Head Contractors camp in 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 a few meters from the village. The creation of such a situation is unacceptable to the IAP. (Issue R4)

**Required:** The IAP requests that PAP from Ban Hatsaykham be resettled to the Houay Soup resettlement site, **or** temporarily relocated from Ban Hatsaykham to a suitable area close to Ban Hat Gniun. [This site should be identified in collaboration with district and village authorities and community leaders and a technical assessment undertaken by ERM as to the temporary site's suitability for temporary relocation. The Developer should clarify any changes recommended by ERM and make the necessary revisions and adjustments in the REDP.](#) This is a mitigation measure necessary to minimize risks to the Affected Community of Ban Hatsaykham, as per International Finance Corporation (IFC) Performance Standard 1.<sup>1</sup> In addition, two objectives of the ADB's Safeguard Policy Statement require that such impacts be addressed, 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.

In addition, the GOL's Compensation and Resettlement Policy Framework (Table 5, page 28) requires that the Developer must ensure that the impacts of disruption are lessened.

**Recommendation:** The Developer should prepare an environmental and social action plan (E&S Action Plan) for temporary relocation of PAP from Ban Hatsaykham. The E&S Action Plan for Ban Hatsaykham should provide details of the temporary relocation of the PAP and should be prepared in consultation with and with the participation of the PAP in the village and the host village, likely to be Ban Hat Gniun. This E&S Action Plan is needed to promote and provide means for adequate engagement with Affected Communities on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated to them, consistent with IFC Performance Standard 1.

5. **Issue:** 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.

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<sup>1</sup> It should be noted that the IFC Performance Standards are a part of the Equator Principles.

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 local administration provide openings for vice and social immorality. Such conditions impact on both the physical and mental health of PAP in host villages.

The IAP insists on zero tolerance of depraved social behavior by employees of the Developer, Head Contractor, and all sub-contractors. (Issue R5)

**Required:** The IAP 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 requires all employees – foreign and local -- of the Developer, Head Contractor, and all sub-contractors sign a Code of Conduct attached to their employment contracts or other employment engagement agreements that sets forth the IAP's and Developer's expectations of ethical and moral behavior by all employees. 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.

**Recommendations:** 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. 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 at the Thong Nam Pha resettlement area are fewer and include the following:

1. **Issue:** Soil conditions at the Thon Nam Pha resettlement area are unknown. Although the site is located between the Nam San and Nam Pha rivers, thus indicating that alluvial soils likely are present, the IAP is concerned that the site has not been used more extensively by local communities. The area may be have problem soils or may be prone to flooding from the two adjacent rivers. The reasons for minimal use of this site by local communities need to be investigated thoroughly. (Issue R6)

**Recommendations:** The Developer should take soil samples for professional analysis. The land should be surveyed with the Developer's consultants and district survey technicians working together. This will ensure that district officials have confidence in the survey and will more easily verify the survey results and authorize the land to be used for resettlement. Such a survey also will reveal if the area is used by occupants and uncover any potential problems with the location; and, determine if any compensation will need to be paid to current occupants. Similar to the Houay Soup resettlement area, the Developer should initiate a Pilot Plan at the Thong Nam Pha resettlement site to determine the best crops and crop varieties to be cultivated and prepare recommendations for cropping patterns and farming systems that are acceptable to the resettled PAP.

2. **Issue:** The IAP feels that there should be no problem providing a village water supply system sufficient to meet the needs of 150-200 resettler households. The district public works technician confirmed that the headwaters of the Nam Pha river could be used to provide a gravity flow village water supply. In addition, the location of the resettlement site between the Nam San and Nam Pha rivers also ensures that bore wells could be used for village water supply if necessary. A third alternative for water supply is to link the resettlement area to the Thathom District / Ban Sibounheuang municipal water supply system that is expected to be completed by 2014. Water from the Nam Pha river also can be used to supply gravity flow water for irrigating paddy lands in the resettlement area; ensuring water for supplementary irrigation in the wet season as well as water for dry season irrigation. (Issue R7)

**Recommendations:** The IAP recommends that a comparative cost analysis should be conducted to determine the most cost effective village water supply system for the resettlement site. In addition, Nam Pha river water quality should be tested for suitability to be used for the resettlement village water supply system. In addition, the Developer should confirm that the Thong Nam Pha resettlement area does not flood during the wet season.

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

1. **Issue:** PAP and officials contacted by the IAP during the site visit were eager to begin the resettlement process, considering that work on the Nam Ngiep 1 Hydropower Project was initiated in 1989. [The IAP was informed that a joint venture company between and among Kansai, Electric Generating Authority of Thailand \(EGAT\), and Lao Holding State Enterprise is planned and expected to be established by March 2013; for the purpose of implementing the hydropower project.](#) (Issue R8)

**Recommendation:** Formation of the joint venture company that would act on behalf of the Developer should be accelerated. Every effort should be made to establish the joint venture company as soon as possible, so that public consultation and involvement related to resettlement begin as soon as possible.

2. **Issue:** The Developer has yet to provide details of the internal institutional structures that is needed to organize, manage, and implement the resettlement program. Clear terms of reference are needed for several critical implementing units, namely public involvement / community development; government liaison; land surveys and infrastructure design; and, supervisory personnel to supervise construction of civil works related to infrastructure to support resettlement activities. (Issue R9)

**Recommendations:** The Developer should learn lessons from other hydropower development companies in Lao PDR (i.e., Nam Theun Power Company, Theun-Hinboun Power Company) about the approach, methodologies, administrative and management systems, and resettlement operations used by them, particularly lessons related to resettlement and community infrastructure development. Such lessons should be applied preparing clear terms of reference for each unit established to support resettlement and for each position within each operational unit.

3. **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 representatives 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 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.

# Annex 2: Social and Indigenous Peoples' Issues

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## INTRODUCTION AND BACKGROUND

The IAP Expert on Social and Indigenous People issues visited the Nam Ngiep 1 Hydropower Project (NNP1) for the first time on 7-14 January 2013. The aims of the site visit included the following: (i) to have meetings with Lao authorities; (ii) to have meetings with the directly affected people and indirectly affected people; and, (iii) to visit the resettlement sites.

About one hour was spent meeting with each Lao official. The Social Specialist had five meetings with five different authorities at the provincial and district levels in three provinces as follows:

- Meetings with the Provincial authorities
  - 8 January 2013
    - Meeting with Mr. Xao Lor, Vice President of Lao Front for National Construction, Vientiane Province
    - Meeting with Mr. Vongsamai, Vice Governor of Vientiane Capital
  - 10 January 2013
    - Meeting with Mr. Khamsing, Vice Governor of Bolikhamxay Province.
- Meetings with district authorities
  - 8 January 2013
    - Meeting with Mr. Pao Lor, Chief of Palavek Focal Development Point, Hom District, Vientiane Province
  - 11 January 2013
    - Meeting with Vice Governor of Bolikhan District, Bolikhamxay Province
  - January 12, 2013
    - Meeting with Mr. Thongpeng Vice Governor of Thathom District, Xieng Khouang Province

For the affected people and villages, one to one and one-half hours was spent meeting each village headman and village committees, including walking around each village.

For the two resettlement sites, about two hours was spent exploring the Houay Soup resettlement site and the Pilot Plan (Demonstration Farm), Bolikhan District, Bolikhamxay Province; and, one hour at the Thong Nam Pha resettlement site in Thathom District, Xieng Khouang Province. [The IAP was informed by senior district officials that the Thong Nam Pha site was only recently identified and offered for consideration as a resettlement site by district authorities; subsequent to preparation of the REMDP. The IAP was informed that the Developer's representatives had visited the site recently.](#)

Regarding the affected people: I wanted to have a small meeting with each village headman together with four village committee members (two men and two women) in each village. However, actual meetings included more committee members and villagers (6-14 persons) joined me. At each meeting there were more men than women, particularly in the Hmong villages. I had nine meetings with 67 villagers (both headmen and village committees) from the affected nine villages: four villages in Zone 2LR, Hom District, Vientiane Province; two villages in Zone 3 in Bolikhan District, Bolikhamxay Province; and three villages of Zone 2UR in Thathom District, Xieng Khouang Province.

The IAP Social Specialist spoke Hmong with the affected Hmong people and Lao and Thai with the lowland Lao and Khmu as follows:

Meetings with village headmen, and village committee members:

- Zone 2 LR: Ban Namyuoak, Ban Sopyouak, Ban Soppouan, and Ban Houay Pamom in Hom District, Vientiane Province;
  - 9 January 2013: Meeting with Mr. Khu Xiong, Ban Nam Youak headman and five village committee members; Meeting with Mr. Thia Bee, Ban Sop Youak headman and six village committee members; Meeting with Mr. Khamsai Lor, Ban Soppouan headman and seven village committee members;
  - 10 January 2013: Meeting with Mr. Ngia Long Va, Ban Houay Pamom headman and seven village committee members.
- Zone 3: Ban Hat Gniun and Ban Hatsaykham, Bolikhan District, Bolikhamxay Province:
  - 11 January 2013: Meeting with Mr. Phouvieng Phiakaew, Ban Hat Gniun headman and seven village committee members; Meeting with Mr. Pornsee Xiong, Ban Hatsaykham headman and seven village committee members.
- Zone 2 UR: Ban Pou, Ban Phiengta, and Ban Hatsamkhone, Thathom District, Xieng Khouang Province:
  - 12 January 2013: Meeting with Mr. Kham-uan Saithanee, Ban Pou headman and eight village committee members; Meeting with Mr. Sainaen Saiyakong, Ban Phiengta headman and seven village committee members; Meeting with Mr. Moontha Thippavong, Ban Hatsamkhone headman and 14 village committee members and villagers.

Other social plans and technical assessments prepared by the Developer and the Developer's consultants will be reviewed in detail by the IAP Social Specialist once those documents have been finalized.

## Current Indigenous People Issues and IAP Recommendations

Issues of concern to the IAP Social Specialist at the Houay Soup resettlement area include the following:

1. **Issue:** The Hmong and the Houay Soup resettlement site from Lao authorities' perspectives: The Hmong in this area still practice traditional culture. They are farmers and they grow rice, fruit, and vegetables. They also raise buffalo and cattle. Thus, changing the Hmong lifestyle in this area is not easy and will take time.

The Government has informed the Hmong people since 1989 about relocating them to the Houay Soup resettlement site. The Hmong people have asked for a better location however no other place is available. The majority of the directly affected Hmong people in the five villages (Zone 2LR and Zone 3) are willing to be relocated to the Houay Soup resettlement site since this is the Government's policy. However, around 40 percent of them do not want to move to Houay Soup; they plan to move to live with their relatives in other places. These self-resettlers will require compensation from the Developer. The compensation rate that should be paid to them is the most important question that they want to know.

The Hmong people are very concerned about their lives after moving to Houay Soup. They have a low level of education and live in extended families, so each family has many children. They cannot survive only growing rice at Houay Soup, but depend on

hunting, gathering NTFPs, and livestock raising. The Hmong can adjust their lives if new occupations can be found for them.

According to the authorities, life at the resettlement site will be better in the long-term future. Any Hmong people who do not move to Houay Soup will lose their opportunity. The government will not allow anybody to move in after the deadline has been set.

**Recommendations:** Good infrastructure, better and higher education levels with scholarships for the Hmong youth, occupational training, and social welfare should be provided at both Houay Soup and Thong Nam Pha resettlement sites. In addition, finding a market for agricultural produce is needed. [Creation of the two resettlement sites may require a special decree with implementing regulations from the provincial or national level to convince PAP resettlers to move.](#) The IAP was told that the Bolikhamsay provincial governor has visited the resettlement site and indicated that he would resolve the issues of the affected people.

## 2. **Issues related to the Hmong people from affected villagers' perspectives:**

- *Hmong culture and identity:* According to the Hmong village headmen and village committees in the six affected villages (four directly affected villages in Zone 2 LR, one directly affected village in Zone 3 [Ban Hatsaykham], and one indirectly affected village in Zone 2 UR [Ban Pou]), the most important unique cultural and identity characteristics of the Hmong people include the following: the Hmong kinship (clan) system, Hmong language, Hmong beliefs and spiritual ceremonies, Hmong New Year festival, Hmong marriage and family, Hmong funeral ceremonies, and Hmong clothing. Each of these Hmong cultural and identity characteristics are intricate and connected to one another. The IAP Social Specialist would like to address these important unique cultural and identity aspects that are related to the situations in the six Hmong villages, with selected recommendations, as follows.
- *Hmong kinship or clan system:* Kinship is the primary identity of the Hmong and it is the most important social mechanism of this ethnic group. Being a Hmong is to belong to a division, a clan, and a group of relatives. A Hmong child is trained for inter-dependence rather than independence. He is a part of network from birth, belonging, not only to his parents but to the larger group, as well. The Hmong kinship is a patrilineal one, so descent is traced through the father's side. It is the father's clan to whom one goes for help. The Hmong kinships (clans) in the six villages are:
  - Ban Nam Youak: there are 5 clans; Hur, Lor, Ya, Xiong, and Va. The Va clan has only 1 household in the village.
  - Ban Sop Youak: there are 7 clans; Ha, Hur, Lor, Ya, Xiong, Va, and Vue. The Ya, Xiong, Va, Lor, and Hur clans are the majority groups in the village.
  - Ban Soppouan: there are 5 clans; Hur, Lor, Ya, Xiong, and Va. The Lor, Hur, and Va clans are the majority groups in the village.
  - Ban Houay Pamom: there are 4 clans; Ya, Tho, Xiong, and Va.
  - Ban Hatsaykham: there are 5 clans; Xiong, Ya, Tho, Va, and Lor. The Xiong clan is the majority group in the village.
  - Ban Pou: there are 8 clans; Lee, Lor, Va, Ya, Ha, Jang, Mua, and Xiong. The Ya clan is the majority group in the village.
- *Language:* The majority of the Hmong in the six villages are White Hmong who speak the White Hmong language. They also are able to speak the Green Hmong language, since the languages are similar. For the Lao language: Hmong men are able to speak Lao fluently, whereas only about 50 percent of Hmong women in the affected villages speak Lao. Particularly, there are few Hmong women in Zone

2UR (Ban Pou) who speak Lao because many of them only recently (10 years ago) moved from remote mountainous areas in Houa Phan Province.

- *Beliefs and spiritual ceremonies:* There are three important Hmong ceremonies and one festival that are most important in Hmong life: spiritual ceremonies; the wedding ceremony; and, the funeral ceremony; and, the Hmong New Year festival. As Hmong, they are required to perform these ceremonies and festivals. The Hmong in the six villages are animists (except 14 households are Christians, namely: 6 households in Ban Sop Youak, and 8 households in Ban Soppouan). As animists, each ceremony and festival is crucial and has its own value and function. Without these ceremonies and festivals Hmong life cannot continue.
- *Marriage and family:* Hmong people are exogamous and their descent lines are patrilineal. They consider a son more valuable than a daughter. They view a daughter as “she is raised for the benefit of other Hmong clans.” For this reason, Hmong do not invest in their daughters. This can be seen in the six villages: young Hmong girls have to marry as soon as possible, even when they are still very young (only 14-15 years old of age).
- *Funeral ceremonies:* The dead are buried in the Hmong culture. A funeral ceremony will be performed for five to seven days for an adult and one to three days for a child. In Hmong culture, finding a good place to bury a deceased adult is required. This belief is that the dead will return to influence his family. A better grave for a parent and grandparent will bring a good future for his sons and grandsons. Destroying a graveyard cannot be accepted in the Hmong culture since it destroys the future of younger generations.
- *Hmong clothing:* Hmong people in affected villages wear Hmong clothing / costumes only during the New Year festival, wedding ceremonies, and funeral ceremonies. Generally, they prefer to wear casual clothes like lowland Lao.

**Required:**

1. Hmong graveyards need to be moved before inundation of the reservoir area.
  2. Hmong graveyards are needed at both the Houay Soup and Thong Nam Pha resettlement sites.
  3. A typical small Hmong house located next to the designated resettlement houses in Houay Soup needs to be built for the Hmong to perform their spiritual ceremonies.
  4. The Developers should set up meetings with the leader of each clan to talk and discuss related issues and problems.
3. **Issue:** Houay Soup resettlement site from the directly affected Hmong people perspectives. According to the Hmong people, the soils in Houay Soup are poorer quality than the soils in the five directly affected villages. In addition, the land size (6,000 hectares for village uses with 400 hectares for houses) is inadequate for the 438 Hmong households with 2,842 persons (405 households with 2,625 persons from four villages from Zone 2LR, and 33 households with 217 persons from one village of Zone 3 [Ban Hatsaykham]). In addition, Houay Soup is a dead end place. The Hmong agree with the Government to have this project because it will generate income and wealth for the country. For this reason, the Government should compensate the Hmong by identifying other better and larger places for them. The Hmong have lost investments in infrastructure (roads, electricity, water supply, good schools, health centers, development projects, etc.) and other assistance from the Government for 20 years because of the delays of this project. Officials have cut budgets and investments and not supported the villages. The Hmong have been told that their villages will be relocated, causing them both mental and physical stress and complications. They have lost opportunities to improve themselves for a long time. Thus, the Hmong need the project to become reality as soon as possible. According

to the Hmong, the majority of them will not move to the Houay Soup resettlement site because they cannot survive there. They said that they would go to stay with their relatives in other places.

Compensation is a priority topic at every meeting but the IAP has insufficient information about proposed entitlements for PAP. The Hmong are less developed and have less education than any other ethnic group in the area. Food security is the most important issue for the Hmong people. They said that they know only to grow rice, vegetables, and fruit for their own consumption, as they say *“our backs face the sunlight and our faces face the earth (soils).”* Thus, the Hmong still need additional technical training and knowledge to survive at the Houay Soup resettlement site.

**Required:**

1. As mentioned above, more opportunities should be offered to the Hmong.
  2. [Promulgation of a decree with implementing regulations at provincial or national level may be required to convince the PAP resettlers to join the project.](#)
  3. The Developer needs to communicate more with the PAP through a systematic and continuous public involvement program.
  4. Proper / legal compensation needs to be paid to all PAP.
  5. The provincial and district Resettlement Management Units representing concerned organizations, affected villagers, and related civil society organizations need to quickly determine entitlements and compensation.
  6. Compensation payments need to be made directly to affected families.
4. **Issue:** Houay Soup resettlement site from the perspective of the indirectly affected lowland Lao people at Ban Hat Gniun. The lowland Lao in Ban Hat Gniun are very positive and pleased to have this project near their village. They mentioned that their community has suffered for a long time since they do not have any infrastructure (road, electricity, water supply, health center, and schools, etc.) in the village; and, saying that *“we have lived in the dark world all our lives.”* They said that if the project becomes true then the village will become a larger one. There will be more facilities, more prosperity, and the village will become a modern one. There are around 40 families from Ban Hat Gniun who have occupied some land at the Houay Soup resettlement site. They mentioned that they would ask official permission to continue to occupy their land at the Houay Soup resettlement site in the future.
5. **Issue:** IAP perspectives on Houay Soup Resettlement Site. The IAP Social Specialist took time to explore the Houay Soup area. It was observed that the soils could be improved. Additional investigations are needed on the use of the whole resettlement site. At the Pilot Plan site / demonstration farm the IAP observed that the Developer has done several good things but that still more is needed.

**Required:**

1. The Developer needs to launch a public involvement program to disseminate to PAP more information about entitlements and the Developer’s activities at the resettlement sites.
  2. [A provincial or national decree with implementing regulations may be needed to convince PAP resettlers to move to the Houay Soup resettlement site.](#)
6. **Issue:** Ban Hatsaykham relocation issue. Related to construction of the Nam Ngiep 1 dam, relocation of the directly affected Hmong in Zone 3 at Ban Hatsaykham will take place in 2013. It is likely that they will be relocated to Ban Hat Gniun, the nearby lowland Lao village. Thus, there will be more contact with outsiders and traders are

expected to gain access to the area. The Hmong, as an underdeveloped ethnic group will face more transitional problems than any other ethnic group.

**Required:**

1. The Developer must prevent prostitution, drug dealing, gambling, and other social crimes at the Developer's camp and at the relocation site.
  2. A zero tolerance policy needs to be in place by the Developer, working in close cooperation with local government officials; particularly provincial and district governors, police, health officials, education officials, and social development officials.
7. **Issue:** Zone 2UR village headmen and village committees perspectives on the NNP1 Project. There are three affected villages with five ethnic groups in Zone 2UR:
- Ban Pou consists of lowland Lao, Khamu, and Hmong;
  - Ban Phiengta is lowland Lao (Thai Dum); and,
  - Ban Hatsamkhone is lowland Lao (Lao Phouan).

The three villages are located on a highway west of Thathom District, Xieng Khuoang Province; nine kilometers from Thathom town. The lowland Lao people (Thai Dum and Lao Phouan with 210 households) are the dominant group in the villages. There are 114 households of Hmong (111 households in Ban Pou and three households in Ban Phiengta, and six households of Khmou in Ban Pou). The population of the three villages is 1,971. For the Hmong people, the majority of them moved to Ban Pou around 10 years ago; they have less education than any other ethnic group; and, they are animists. Most people in the three villages are farmers and rice is their staple crop. Raising livestock also is important. Good infrastructure has been provided.

The villagers support the Government's development efforts and accept this project in order to create wealth for the country. However, they need proper compensation from the Developer and the Government. Many of them do not want to be relocated because they have good houses. Furthermore, some of them do not wish to be separated from their siblings. Some PAP wish to live in both locations (i.e., the Thong Nam Pha resettlement site and their old village; since flood waters will flood only their farms but not their houses).

8. **Issue:** Thong Nam Pha resettlement site from the perspective of the lowland Lao. There will be approximately 117 households (exact numbers are not yet available) in Zone 2UR that will be relocated to Thong Nam Pha resettlement site. The affected villagers know that there 200 hectares of land will be provided for them. No details are available about the size and condition of the resettlement site. The three village headmen and village committees are positive about the resettlement site although many of them have never visited the site before. However, they know that the soils in Thong Nam Pha are much better than the soils at the Houay Soup resettlement site in Bolikhan District, Bolikhamxay Province.

**Required:**

1. A visit to the Thong Nam Pha resettlement site by PAP in the affected villages is needed.
2. More details about the Thong Nam Pha resettlement site are needed.
3. Diversified occupational opportunities for affected people should be promoted at the resettlement site.
4. [A provincial or national decree with implementing regulations may be needed to convince PAP resettlers to move to the Houay Soup resettlement site.](#)

5. The exact numbers of affected people in the three villages need to be surveyed urgently.
  6. More details about entitlements and compensation needs to be discussed with the PAP.
  7. Proper compensation needs to be paid to PAP once details of resettlement are completed; with compensation being paid directly to affected families.
  8. The provincial and district Resettlement Management Units representing concerned organizations, affected villagers, and related civil society organizations need to quickly determine entitlements and compensation.
9. **Issue:** Thathom District authorities' perspectives on Thong Nam Pha resettlement site. Government policy is to resettle all three villages of affected people to the Thong Nam Pha resettlement site, located three kilometers from Thathom District Office. The IAP feels that this is a good location, but requires additional information and site details. District officials report that Thathom is growing very fast and it needs more people; population was 14,676 in 2012. District authorities would like more people to move in to expand the population to around 20,000 by 2015.
10. **Issue:** IAP perspectives on Thong Nam Pha resettlement site. The IAP Social Specialist observed the Thong Nam Pha site and considers the soils more fertile than soils at Houay Soup. For example, there are more tall trees and ground cover; and, wild beans grow at the site.

# Annex 3: Environment Issues

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The environment issues have been identified based on a site visit to the NNP1, interviews with district and provincial officials and village headmen and villagers; and, following a preliminary review of project documents during the period 14-18 January 2013. The IAP is responsible for reviewing documents, work in progress, and future plans, and to give advice to the Developer to improve environment and social (E&S) activities. During the initial visit to site, the Environment Specialist identified the following environmental issues of concern for the Developer:

1. **Issue:** Is there a Cumulative Impacts Assessment (CIA) for all the hydropower projects in the Nam Ngiep River basin?
  - The multiple dams on the Nam Ngiep (NNP1 and upstream NNP2) and Nam San rivers will impact on ecological flows, downstream fisheries and other aquatic life. And what other developments will impact on the same natural resources (mining projects, roads, etc.) in the project area? (Issue E1)

**Recommendation:** The GOL should request ADB to assist MONRE to carry out this study for the river basin or to have the Project Proponents share the cost of a basin-wide CIA.

2. **Issue:** The construction activities of these three hydropower projects will have significant impacts on local resources and communities. Are all aspects covered in the proposed EMPs? What Guidelines or Performance Standards are referenced by the PPs for construction environmental issues? What pollution control activities will be monitored? Who is responsible for watershed management? Is this a joint-management operation involving government and the private sector? Or is it the responsibility of the three (or more) project developers in the watershed? (Issue E2)

**Recommendation:** The IAP anticipates that these questions will be addressed in documents now being prepared by the Developer.

3. **Issue:** A significant construction activity will be preparation of the reservoir area prior to filling. What plans or guidelines does the project proponent (PP) have to guide the biomass removal program? Who will be responsible to carry out the biomass removal program and to oversee the program? What environmental safeguards are being developed for the PPs and their selected biomass removal contractors? Who selects the logger for the reservoir area? the contractor for the biomass removal program? Who is responsible to oversee the monitoring of these contracts and the work crews? And is the monitoring team empowered to stop the selected logger if he violates the environmental safeguards? What use will be made of the biomass removed from the reservoir? Is there a planned program to use this biomass in a productive and environmentally safe manner? (Issue E3)

**Recommendation:** The IAP anticipates that these questions will be addressed in documents now being prepared by the Developer.

4. **Issue:** Information on fisheries is minimal. There are conflicting reports of how important fisheries are to villager livelihood. Most district people interviewed reported that Hmong villages do not focus on fish as a major protein source and thus there are less fishing activities among the communities. The amount (quantity) and biodiversity of fisheries in the Nam Ngiep is not clear. There was a recent report of local fishermen using electricity to kill fish (an accident in late 2012 reportedly killed 3-4

persons) and thus the present fish population is abnormally low. During the site visit, there were very few signs of fish products for sale in any of the villages visited. (Issue E4)

**Recommendation:** The baseline studies should clarify what proportion of family income is derived from fishing; the proportion of local diet protein that is derived from fish; and, whether fish is an important seasonal source of income.

5. **Issue:** Non-timber forest products (NTFPs) do play a very important role in the livelihood of the villagers. Considerable time is spent collecting NTFPs and significant income is derived from selling NTFPs as reported by the village headman or community leaders in several of the villages visited. The village headmen indicated that NTFPs are contributing 8-9 million kip per year for many households in the communities to be resettled (minimum 1 million kip per household) as several NTFPs are harvested during the cool and hot season months (December to April). Village headmen indicated that this income is a significant part of family disposable income.

**Recommendation:** It is imperative that substitute NTFPs be developed (including the planting of appropriate NTFPs in community nurseries or in family gardens of resettled communities). The three main NTFPs being collected include (namely, palm fruit, bark for incense, and medicinal lianas) cannot be cultivated domestically. Therefore it is important that resettled PAP have access to substantial areas of natural forest to collect such products.

6. **Issue:** 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). What is causing this color? (Issue E5)

**Recommendation:** A physical and chemical analysis of the current water quality in the Nam Ngiep river would be useful to identify what are the pollutants, if any, coming from upstream activities. It is important to identify those pollutants so that the future construction activities of NNP1 are not blamed for the water quality impacts coming from upstream development projects.

7. **Issue:** There appears to be an urgent need for a Strategic Environmental Assessment of the Hydropower Sector in Lao PDR to include assessment of impacts on the NCBAs, protected forests, water resources, and other related environmental issues. Does the new EIA Decree or the new Environmental Protection Law require SEAs for the key development sectors? Has MONRE considered seeking funds to have this SEA carried out by MEM and to oversee and study the SEA for completeness prior to approval? Will it include transboundary issues and impacts? (Issue E6)

**Recommendation:** An SEA of the hydropower sector is reportedly underway by MEM. The Mekong River Commission (MRC) is reported to be financially supporting this SEA project.

8. **Issue:** The IAP Environment Specialist identified other issues of concern, primarily the problems of establishing clear guidelines for the Environmental Management Unit (EMU) and the role and responsibilities of district, provincial and central government staff assigned to the EMU. The IAP is concerned about the functioning of the EMU given that (i) the jurisdiction boundaries of the EMU cross into three provinces (because NNP1 facilities and activities extend to three provinces); (ii) the monitoring role of the EMU is now considerably expanded because MONRE now includes new departments of Land Planning, Forest Resource Management, and Water Resources

Management, and thus provincial and district staff assigned to these activities at their respective levels believe that they should be represented or involved in EMU monitoring and reporting tasks; and, (iii) the EMU has three hydropower projects in the same focus area (NNP1, NNP2 and Nam San III hydropower projects) that have some connecting or overlapping environmental impacts. How can they “best” handle the government’s commitments for monitoring and reporting on these development projects? Economic efficiency is a question of key concern, because budgets, manpower, and financial resources are limited. How can the EMU “best” handle three similar projects in the same river basin? (Issue R10)

**Recommendations:** Discussions with district and provincial officials during the week of 14-18 January 2013 indicated that EMU responsibilities need to include “monitoring and reporting” but it was not clear to the officials or to the environmental staff what and how they should be monitoring and to whom are they to report to. The new departments of MONRE all consider that they should be represented on the EMU, but they are not sure what are their duties or responsibilities. **Thus, the IAP recommends the following actions be undertaken by MONRE** (central government organized and sponsored) to include key provincial and district staffs assigned to natural resources and environmental tasks:

- EMU functions, duties, staff training, and tools should learn lessons from THPC and NTPC.
- Provincial and district staff assigned to serve on EMU. There are three hydropower projects in the same area, but the area is spread over three provinces and many districts. Identify who will manage the EMU and if one unit will be involved in all three hydropower development projects.
- Define the role of MONRE in managing, funding, training, and reviewing the work activities of the EMU.
- Define the work activities for the EMU. Everyone says “monitoring and reporting”. Identify what is the EMU to monitor specifically, and what tools, instruments, communication, transport or special equipment needs for necessary for these monitoring tasks; what training be needed; and, the duration and types of training.
- In the context of the three projects underway simultaneously, decide the expected frequency of monitoring at these three projects; numbers of staff anticipated as needed; specialized staff for certain types of monitoring; and, training and background education needs.
- Clarify EMU transport and communication needs.
- Identify the types of environmental issues to be monitored; during construction; during operations.
- Clarify the relationship between the EMU and the PP regarding actual physical, biological, social, or economic monitoring; including the frequency of monitoring reports to the EMU from the PP.
- Clarify if the EMU will need to submit a monitoring report of their own to MONRE, PONRE, DONRE, or other GOL agencies; the language (Lao and English or only Lao) and frequency of EMU reports; and, if international monitoring units will receive the EMU monitoring reports.
- Identify responsibility for the planning and management of the EMU, specifically: developing detailed budgets; incorporating inputs from districts and provinces; level of financing of the EMU budgets by the PP; and, anticipated activities and costs to manage the EMU and whether their costs will be shared by other hydropower projects in the same basin.
- Organize a planning workshop: MONRE should convene a workshop for the EMU(s) to review the integrated work plan and list of activities for the NNP1 and other hydropower projects. Activities should include development of an

*“integrated land use plan”* for each area; development of an integrated land development map showing all key environmental features in the land areas (such as NBCA, Provincial Protected Areas, District Conservation Areas, Production Forest Areas), concession areas for development projects (mining, agricultural plantations, etc.); those currently planned or under construction; and, future plans. Determine if funds are available for development of an integrated land use plan for the NNP1 basin; and, if not, include the plan in the contributions from the PP to the Environment Fund.

- A second topic for the workshop should review and discuss *“the work plan and activities of the EMU”* so that a comprehensive work plan can be developed together with a detailed budget. Lessons learned from the EMUs at THPC and NPTC should be studied and applied. Representatives from the NTPC and THPC EMUs should be invited to attend and present their views. Funding of the workshop will need to be decided; costs could be covered by future contributions from the PP as part of their capacity-building contributions to MONRE.

# Annex 4: Biodiversity Issues

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Based on visits by the Environment Team (environment and biodiversity specialists) to the dam and resettlement sites for the Nam Ngiep1 Hydropower Project, interviews with district and provincial officials in Bolikhamxay and Xieng Khouang provinces, and with village headmen and villagers in affected villages, as well as a preliminary review of project documents during the period 14-18 January 2013, some preliminary biodiversity issues were identified. The IAP is responsible for reviewing project documents, work in progress, and future plans, and to give advice to the Developer to improve environment and social activities.

During the initial visit to site, the Biodiversity Specialist identified the issues discussed below.

1. **Issue:** Background forest loss due to the project. Approximately 3,900 ha of forest will be lost due to construction of the dam and preparation of resettlement areas for communities. Much of the forest in the project area is already disturbed and degraded or secondary forest after shifting cultivation. Villagers have cleared valley land and lower slopes for paddy fields and grazing lands and collect NTFPs and hunt wildlife in hill forest. Without detailed biological surveys it is hard to know the biodiversity value of forests in the project area but it seems as though fauna (wildlife, including birds) have been impoverished by hunting. (Issue B1)

Nevertheless close to the project area and resettlement site at Houay Soup, there are two important conservation areas, namely: Houy Ngoua Provincial Protected Area and Phou Khao Khouei NBCA; with reported populations of threatened and endangered wildlife. Both conservation areas already report threats from illegal logging, wildlife poaching, and agricultural encroachment and are likely to be further impacted unless protection can be improved.

2. **Issue:** Reclassification of forests in Lao PDR and plans for reforestation. According to the Director of the Department of Forest Resources Management (DFRM) at MONRE, there is a plan to reclassify all remaining forests into three categories: production (for logging), protection (to protect steep slopes and watersheds), and conservation forests. Currently forest cover in Lao is estimated at 51 percent but the plan is to increase it to 70 percent by 2020; this implies a major reforestation program, probably involving major plantation development. Remaining lowland forests are likely to be classified as production forest.

### *Preparation Phase*

3. **Issue:** Options for biodiversity offsets. Biodiversity offsets are activities that are specifically designed to compensate for biodiversity loss and can have measurable impacts. Currently there seems to be an assumption that another area of forest (equivalent to area lost to the project) will be protected, perhaps at Nam San (from ADB comments on ERM proposed scope of work). In fact the forests at Nam San, behind the Thong Nam Pha resettlement site, seem to have been allocated for production and logging that is currently underway. Given the allocation of accessible lowland and lower hill forests for production, as well as villager reliance on NTFP collection in the project area, it may be difficult to identify a sizeable forest area as a biodiversity offset, without restricting villager use. Another point to consider before establishing a new protected area is lack of resources within MONRE and PONRE and at district level to manage existing conservation forests.

*Aquatic biodiversity.* With regard to offsets to compensate for impacts on aquatic biodiversity, it is important to recognize that aquatic systems are impacted by activities way beyond their immediate boundaries. Given HEP dams planned, ongoing logging and substantial cultivation along the Nam Ngiep, Nam San and other rivers, it would be extremely difficult to protect/manage any offset aquatic ecosystem. Rather than focus on "like for like" options, it may therefore be more realistic to look at other biodiversity options for offsets and to consider a broad suite of offset options.

**Recommendation:** The ERM team should review all the following biodiversity offset options:

- Establishment of a new conservation area in natural forest that is adjacent or connected to secure protected natural forest;
- Expansion of existing conservation areas and/or establishment or protection or reforestation of forest corridors between conservation areas and standing forest to allow wildlife movement;
- Options to strengthen protection and management of existing conservation areas that currently lack staff, capacity, and resources. Houy Ngoua already has a management plan with proposed activities that was prepared in 2011. Phou Khao Khouei is managed by the Ministry of Defense.
- Contributions to a conservation fund to support management of existing conservation areas (DFRM-MONRE are already considering a sinking fund for this purpose).

**Required:** Additional studies, namely:

- (i) Currently little known about fish populations and the likely impact of the NNP1 dam. Further studies on fish species and populations, including data on migratory fish and downstream fisheries are required.
  - (ii) Data on species of NTFPs collected and importance to villager livelihoods. Surveys of proposed NTFP areas at the resettlement sites to determine whether those species occur and are already being harvested by host village residents. The three main NTFPs being collected palm fruit, incense wood, and medicinal lianas, cannot be cultivated domestically. Therefore it is important that resettled villages either have access to substantial areas of natural forest to collect such products or need alternative forest products to be developed as part of the resettlement package.
4. **Issue:** Quantities of NTFPs to be collected that are controlled annually by the district where "quotas" are issued to the villages. The village quotas are checked by the district at the factory, where NTFPs are sold and the district collects a "resource tax" from the factory based on quantity (usually measured by kilograms per village). (Issue B2)

**Recommendation:** Trial the 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.

#### *Construction Phase*

5. **Issue:** Wildlife capture and translocation proposed during construction phase (two activities planned as part of the mitigation package). Capturing wildlife for translocation is extremely difficult and expensive, especially in a forest environment. (Issue B3)

**Recommendation:** Look at lessons learned from Nam Theun 2 and adapt plans as needed.

6. **Issue:** Workers and Construction traffic removing forest resources, illegal logs and wildlife. (Issue B4)

**Recommendation:** Project developer to operate check-points and spot-checks. If wildlife or remains of wildlife are found in workers' dormitories or in workers' possession, workers are automatically dismissed from work force and will not be rehired. Guns or traps owned by workers should be confiscated by the Head Contractor and sub-contractors and not returned until contracts are completed. Exercise zero tolerance policy. Note that the District already has a policy of no quotas for wildlife capture or sale among the villagers.

#### *Operational Phase*

7. **Issue:** Avoid introducing potential invasive species as part of reforestation, agriculture schemes. It is understood that frogs to be raised by PAP are likely to be native species. (Issue B5)

**Recommendation:** Check whether proposed species are known to be potentially invasive.

8. **Issue:** NTFPs used by PAP for food security and cash income. (Issue B6)

**Recommendations:** Protect sufficient natural forest within and adjacent to the resettlement sites for villagers to harvest NTFPs or provide alternative sources of income; otherwise, pressure on nearby conservation areas will be increased and biodiversity harmed. ERM should check whether villagers from Ban Hatsaykham and Ban Hat Gniun villages are already harvesting NTFPs in the resettlement area at Houay Soup.

9. **Issue:** Awareness of the importance of natural forests to the quality of life of PAP.(Issue B7)

**Recommendation:** Raise awareness among resettled villagers of the value of natural forests for protecting water quality and other ecosystem services. In particular, the Developer should provide local language materials for schools and to enable villagers to participate in monitoring (see below) and any potential ecotourism enterprises.

10. **Issue:** Monitoring of biodiversity. (Issue B8)

**Recommendation:** Engage villagers in monitoring biodiversity values within the resettlement areas and surrounding forests. Villagers are very familiar with forests and wildlife and could easily be trained to collect simple data on bird and other fauna, as well as NTFPs, useful for long-term project monitoring.

#### *Other environmental and social issues*

11. **Issue:** Construction phase. For dam construction project developer will upgrade 20 km access road from provincial road to dam site, including a road running through Ban Hat Gniun and Ban Nonsomboun villages. These villages are likely to suffer severe disruption due to construction traffic.

12. **Issue:** Villages from 2LR site to be moved to resettlement area in 2015. The question is whether that is to allow logging in reservoir area. Otherwise what is value of

moving villages at that time (rather than later) if soils and NTFPs are currently better at their home site.

13. **Issue:** At 2LR site the school will move but some pupils come from a non-resettlement village and pupils will have to move to the district centre to go to school. Compensation? Similar for employment of teachers. Project Proponent should ensure future employment and encourage teachers to move to new resettlement schools. We were informed that some villagers in Thathom district want to sell land but cannot as it will be flooded. At Nam Pha local villagers have been using land in proposed resettlement site on a “temporary” basis with permission of district (status is production forest). They seem to have been given access to other land for cultivation as “compensation” for loss of access. (Issue B9)

**Recommendations:** Clarify how Thong Nam Pha occupants will be affected by the allocation of those “temporary” lands to the new resettlement villagers. The impact of the transfer of these “temporary” lands should be studied and a plan developed to offset or compensate affected villagers.

14. **Issue:** Quality of translation for the environment team. (Issue B10)

**Recommendation:** The IAP requests that the Developer provide a professional translator with knowledge of environmental terms for future IAP visits by the environment team.

# Photos

<p><b>NNP1 public information at the Ban Houay Youak community hall; one of the four villages in area 2LR to be resettled to Houay Soup</b></p>	<p><b>The importance of timber and NTFPs to PAP at Ban Sop Youak; one of the four villages in area 2LR to be resettled to Houay Soup</b></p>
<p><b>Fallow forest and agroforestry with pineapple; and, conditions at the Houay Soup resettlement site on the Nam Ngiep river, Ban Hat Gniun, Bolikhan District, Bolikhamxay Province</b></p>	<p><b>View of Ban Hatsaykham, 33 Hmong households, a sub-village of Ban Hat Gniun, Bolikhan District, Bolikhamxay Province; location of the Developer's camp for about 200 employees</b></p>
<p><b>Harvesting of timber from abundant forests around Ban Hat Gniun host resettlement village is commonly practiced by farmers; supplementing income from crops, livestock, and fishing</b></p>	<p><b>Views of the Thong Nam Pha resettlement site, Thathom District, Xieng Khouang Province; and, the Nam Pha river that forms one boundary of the site, with water the year-round</b></p>