

Independent Advisory Panel Report

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

Report Number 4 on the Fourth Site Visit, 7-14 December 2014

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**Report Number 4
of the Independent Advisory Panel
on the Nam Ngiep 1 Hydropower Project,
Lao PDR
Fourth Site Visit, 7-14 December 2014**

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List of acronyms and abbreviations

ADB	Asian Development Bank
CA	Concession agreement
CIA	Cumulative impacts assessment
DEQP	Department of Environmental Quality Promotion
DFO	District forestry office
DFRM	Department of Forest Resources Management
DG	Director-general
DONRE	District office of natural resources and environment
E&S	Environment and social
EGAT <i>i</i>	Electric Generating Authority of Thailand International Company
EIA	Environmental impacts assessment
EMP	Environmental management plan
ESMMP-CP	Environmental and social management and monitoring plan construction period
EMO	Environmental Management Office
EMU	Environmental Management Unit
EPF	Environmental Protection Fund
ERM	Environmental Resources Management (consulting company)
ESD	Environment and Social Division
ESIA	Environmental and social impacts assessment
GOL	Government of Lao PDR
ha	hectare
IAP	Independent Advisory Panel
IFC	International Finance Corporation, World Bank Group
ISP	Integrated spatial planning
<i>Kum baan</i>	Group of focal development villages
LR	Lower reservoir
MEM	Ministry of Energy and Mines
MONRE	Ministry of Natural Resources and Environment
MRC	Mekong River Commission
NAFRI	National Agriculture and Forestry Research Institute
NBCA	National biodiversity conservation area / conservation forest
NNP1	Nam Ngiep 1 hydropower project
NNP2	Nam Ngiep 2 hydropower project
NNP1PC	Nam Ngiep 1 Power Company
NPA	National protected area
NTFP	Non-timber forest product
NTPC	Nam Theun Power Company
PAP	Project affected people
PONRE	Provincial office of natural resources and environment
PP	Project proponent
PPA	Provincial protected area
PRMLCRC	Provincial Resettlement Management and Living Condition Restoration Committee
REMDP/REDP	Resettlement and Ethnic Minority Development Plan
RMU	Resettlement Management Unit
ROW	Right-of-way
SEA	Strategic environmental assessment
SMO	Social Management Office
THPC	Theun-Hinboun Power Company
UR	Upper reservoir
USEPA	United States Environmental Protection Agency
XSB	Xaysomboun Province

Report Number 4 of the Independent Advisory Panel on the Nam Ngiep 1 Hydropower Project, Lao PDR

Fourth Site Visit, 7-14 December 2014

Introduction

1. The Independent Advisory Panel was pleased to be working with representatives of the Asian Development Bank (ADB) and the Lenders' Technical Advisors (LTA) during the Independent Advisory Panel's (IAP's) site visit in December 2014. The ADB representatives consisted of the following specialists: Ms Joyce Munsayac, Mr Seiji Noda, and Ms Elisabeth Mann. The LTA social safeguards specialist, Ms Karen Jacobs, also participated in the IAP site visit.
2. The IAP notes the following **positive** developments:
 - The IAP notes that a significant number of experienced professional staff have been engaged by NNP1PC. These planners and development practitioners will contribute to an improvement in the implementation of pre-resettlement preparation activities that are critical to a smooth and effective resettlement program.
 - Several foreign project managers have been engaged who have demonstrated strong leadership at other hydropower projects and who have important experience in operating in Lao PDR --- all critical to success of the environmental and social programs.
 - The IAP notes that important pre-resettlement systems are being put in place, including a grievance process and mechanism; program baseline surveys and monitoring and evaluation procedures; social management activities; health monitoring systems; and, asset surveys. PAP grievances are being processed.
 - The IAP notes that NNP1PC is maintaining good relations with the RMU in Bolikhamxay and Xaysomboun provinces.
3. The IAP also notes the following **challenges** that NNP1PC confronts:
 - The unwarranted delay in publically announcing the cut-off-date for PAP throughout the project area and in immediately undertaking assets surveys in all project areas will result in significantly higher costs for the NNP1PC in compensating PAP for their assets. During the most recent site visit, the IAP observed many PAP constructing new structures and installing other fixed structures.
 - Several NNP1PC managers mentioned serious constraints with the internal flow of funds and weak financial management. This obstruction is having serious impacts on undertaking field work during the dry season; meeting construction deadlines; and, meeting ADB deadlines.
 - Several NNP1PC employees mentioned to the IAP that their contracts had expired and some would be without contracts for as long as three months.
 - The NNP1PC company spirit has been impacted by the recent departure of one highly effective social manager. Senior NNP1PC managers will need to find ways to improve company spirit from time to time.
 - The IAP notes the need for better communications among managers and team leaders for better cost control and staff effectiveness.

- The IAP notes the strong requirement for an integrated program, with a closer working relationship between the environment and social teams.
 - The IAP once again needs to highlight the need for a budget line-item to meet any unanticipated impacts, if one has not already been established.
4. This report consists of two parts: Part 1 presents the activities and actions of the Independent Advisory Panel on the Nam Ngiep 1 Hydropower Project in Lao PDR; and, Part 2 presents a summary of the resettlement, social, environmental, and biodiversity issues related to the construction of the Nam Ngiep 1 Hydropower Project in a matrix format. Four separate annexes present the detailed findings of the individual members of the IAP.
 5. The report was edited by Mr. Anthony M. Zola, the Resettlement Specialist and Chairman of the IAP. The annexes were prepared by individual members of the Independent Advisory Panel.

Part 1: Independent Advisory Panel Actions

6. The Independent Advisory Panel (IAP) on the Nam Ngiep 1 hydropower project (NNP1) in Lao PDR undertook a fourth visit to NNP1 during on 7-14 December 2014. The IAP members participating in the fourth visit included the following:
 - Dr. Songwit Chuamsakul, Social Specialist
 - Dr. Richard Frankel, Environment Specialist
 - Dr. Kathy MacKinnon, Biodiversity Specialist
 - Mr. Anthony M. Zola, Resettlement Specialist
7. The IAP proposed to the Nam Ngiep 1 Power Company (NNP1PC) and NNP1PC (the Developer) agreed that the fifth site visit would be on 3-10 May 2015. Subsequent site visits are proposed as follows:
 - Visits in 2015: August/September and December
 - Visits in 2016: April/May, August/September, and December
8. This IAP report to NNP1PC and the ADB covers the following topics: (i) issues of concern to the IAP; (ii) actions by NNP1PC 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 NNP1PC should undertake. Actions required and recommended by the IAP are time-based; meaning that NNP1PC is obligated to or should undertake and/or complete these actions by a specific date.
9. The IAP categories of concern are as follows:
 - High category of concern requires the Developer to act immediately;
 - Medium category of concern requires that the Developer act within 1-2 months; and,
 - Low category of concern requires action before the next visit of the IAP.

The categories of concern are consistent with those applied at other international standard hydropower projects in Lao PDR.
10. Copies of this IAP report will be submitted to the following individuals:
 - (i) Mr Yoshihiro Yamabayashi, Managing Director, NNP1PC
 - (ii) Ms Kurumi Fukaya, Asian Development Bank, Private Sector Operations
 - (iii) Mr Seiji Noda, Senior Safeguards Specialist, Asian Development Bank

11. The fourth IAP site visit was undertaken over an eight day period; from Saturday, 6 December to Sunday, 14 December 2014. The IAP travel schedule was as follows:
- **Saturday, 6 December**
 - Arrivals in Vientiane: Mr Zola, Dr Songwit, Dr MacKinnon. Overnight in Vientiane
 - **Sunday, 7 December**
 - Arrival in Vientiane: Dr Frankel
 - IAP initiating meeting at Hotel Khamvongsa
 - IAP meeting with ADB representatives and the LTA social safeguards specialist at Hotel Khamvongsa
 - IAP meeting with World Bank representative (Dr. Jean-Michel Pavy, senior environment specialist) to discuss optional biodiversity offset mechanisms operating in Lao PDR
 - Overnight in Vientiane
 - **Monday, 8 December**
 - Briefing by NNP1PC managers and staff at the Nam Ngiep 1 Hydropower Project office in Vientiane on (i) measures taken related to actions required and recommended by the IAP during the 3rd IAP site visit in May 2014; and, (ii) overall progress on NNP1 project implementation and issues of concern.
 - The resettlement and social specialists traveled to Lone Xang District, Xaysomboun Province: overnight in Lone Xang District.
 - Environment Team continued with EMO presentation and meeting regarding Biodiversity Offset and Watershed Program. Overnight in Vientiane.
 - **Tuesday, 9 December**
 - The IAP resettlement and social specialists visit impacted villages in the Zone 2LR area, along with ADB and LTA representatives, to interview PAP.
 - The IAP resettlement specialist and an ADB consultant met with the district governor of Hom District in Palavek village to discuss resettlement issues related to PAP in the Zone 2LR.
 - Overnight in Lone Xang District.
 - Environment Team: Resume EMP presentation and meeting regarding Biodiversity Offset and Watershed Program (Teleconference with William Robichaud, Washington, D.C.). Meeting with World Bank, Jean-Michel Pavy; travel to MONRE for meetings with Mr. Soukata Vichit, Executive Director, GOL Environment Protection Fund; and, with Peter Jensen, Manager EMSP, and Mr. Lonkham Atsanavong, Director-General, Department of Environment Quality Promotion, to discuss stalled ISP training and mapping program for Xaysomboun Province. Travel to Paksan and overnight in Paksan.
 - Dr MacKinnon travel to Lone Xang District; overnight in Lone Xang.
 - **Wednesday, 10 December**
 - The IAP resettlement and social specialists and ADB and LTA representatives traveled to Anouvong District, Xaysomboun Province to meet with members of the Xaysomboun Resettlement Management Unit (RMU); to discuss resettlement issues related to PAP in Zone 2LR and Zone 2UR.
 - Travel to Paksan; overnight at Paksan.
 - Environment Team: Meeting at NNP1PC Paksan Office with EMO team (Inspection /Monitoring, Document/Support, and Survey (WQ, dust, waste management). Tour of dam site and engineering activities, including future site of sanitary landfill. Return to Paksan for overnight in Guest House (1 night).
 - Dr. Kathy MacKinnon, Biodiversity Specialist surveyed Zone 2LR for wildlife and visited Zone 2LR villages (Sopphouane, Sopyouak, and Namyouak) with NNP1PC Watershed and Biodiversity Team. Travel to Paksan.
 - IAP environment and biodiversity specialists overnight in Paksan.
 - **Thursday, 11 December**
 - The IAP resettlement and social specialists met with PAP in Ban Thaheua, Ban Had Gniun, and Ban Hatsaykham villages in Zone 3, located on the access road to the NNP1 powerhouse and dam; to discuss project impact issues.
 - Met with the newly appointed Bolikhan District governor to discuss the district government's role in monitoring social and environmental impacts from the NNP1 construction project.
 - Travel to Paksan; overnight at Paksan.

- Environment Team: Meet with General Manager and environment staff of Obayashi. Jointly visited future site of the Main Contractor's camp and current sub-contractor's camp to check on all waste management facilities. Return to Paksan office for additional meetings with EMO staff to discuss water quality and waste management issues and project monitoring. Overnight at Paksan.
- Dr. MacKinnon visited the Houay Soup resettlement area to assess the status of clearing in the protection forest area. Overnight at Paksan.
- **Friday, 12 December**
 - The social and resettlement specialists met with selected members of the Bolikhamxay Provincial RMU at the Bolikhamxay Provincial Office of Natural Resources and Environment); to discuss resettlement issues related to PAP in Zone 3.
 - The IAP social and resettlement specialists traveled to Vientiane
 - Environment Team: Dr. Kathy MacKinnon continued biodiversity survey exploration in provincial protected area and watershed; traveled to Vientiane for afternoon meeting with ADB. Dr. Richard Frankel met with EMO team to review waste management plans, including design of solid waste landfill and hazardous materials storage area) and together with Waste Management Team Leader visited recycle factories in Paksan, the landfill used for solid wastes disposal in Paksan, and additional recycle factory enroute to Vientiane.
 - Dr MacKinnon explored the status of forest cover in eastern lower NNP1 watershed catchment. Travel to Vientiane.
 - IAP team overnight in Vientiane.
- **Saturday, 13 December**
 - Morning: Internal IAP meeting and meeting with ADB and LTA representatives at the Hotel Khamvongsa
 - IAP prepared individual debriefing presentations for NNP1PC staff.
 - Afternoon: IAP debriefing for NNP1PC management and staff at Nam Ngiep 1 Hydropower Project office in Vientiane.
 - Overnight in Vientiane.
- **Sunday, 14 December**
 - Morning: IAP wrap-up meeting at the Hotel Khamvongsa.
 - Afternoon: Follow-up technical discussions by individual specialists.
 - Evening: Return travel to home bases.

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

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

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

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R1	Site visits: 4-11 May 2014 7-14 December 2014 Houay Soup Resettlement Area Initial Environmental Examination	Depleted and degraded soil at the Houay Soup resettlement site is the single most important issue for PAP to be resettled Need to redesign land use in the Houay Soup resettlement area	<ul style="list-style-type: none"> The Developer's Pilot Plan farm continues to demonstrate that rice and cash crops can be cultivated successfully at Houay Soup without using chemical fertilizers. Many PAP in Zone 2LR have visited the Pilot Plan farm and are familiar with farm activities, but most are not convinced that the area is adequate to meet food security needs. 	<ul style="list-style-type: none"> The IAP notes that the ADB considers the recently completed IEE for Houay Soup to be "irrelevant." This indicates to the IAP that the IEE will need to be either significantly revised or totally repeated; after completion of a revised land use plan for the Houay Soup area, which was delivered to the Technical Department at end November 2014. <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that NNP1PC continue to conduct overnight visits to the Pilot Plan farm at Houay Soup. These visits should be organized with a focus on women, widows, young men and women, and vulnerable, especially poor, families. The IAP recommends that NNP1PC either revise or re-do the IEE for the Houay Soup area following final settlement of the area available for resettlement. 	High
R2	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Need to upgrade an estimated 500 ha of land designated for grazing of large livestock; prior to arrival of PAP with their cattle and buffalo	<ul style="list-style-type: none"> The IAP was informed that soils designated for grazing of PAP large livestock (approx. 500 ha) will be upgraded and planted with pasture grasses and legumes before the resettlement of PAP. New experienced staff has been engaged from other hydropower projects in Lao PDR with previous experience in animal husbandry and pasture development. 	<ul style="list-style-type: none"> The IAP has recommended that the Developer contact NAFRI to obtain recommendations for appropriate tropical grasses and legumes to establish in the grassland/ grazing areas at least one year prior to resettlement. The IAP is confident that NNP1PC will undertake this task prior to PAP resettlement. The IAP recommends that NNP1PC should continue working on this task. 	Low
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R3	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> Designation of the Houay Soup area as a resettlement site by provincial and district authorities Current occupants and land users at Houay Soup resettlement area Results of the IEE undertaken for the Houay Soup resettlement area 	<ul style="list-style-type: none"> A GOL certificate has been granted for 30% of the Houay Soup resettlement area. Asset registration has been completed in the Houay Soup resettlement area. The IEE for Houay Soup has been completed and revealed several important points, including: <ul style="list-style-type: none"> A National Protection Forest overlaps with an estimated 70% of the resettlement area Electricity transmission lines cross the area Five small dams will be built on the two streams that drain the area In principle, the cut-off-date for the entire project area has been set at 11 April 2014. This date has not yet been made public by key GOL officials in some project areas. The Xaysomboun RMU has not yet approved the unit rates of compensation for assets in the project area (separate from the rates used for the access road) 	<p>Recommendations</p> <ul style="list-style-type: none"> The IAP observed during a meeting with the director-general of the Department of Land Administration Department that mentioning that Houay Soup was included in the NNP1 Concession Agreement had a visible effect on him. Thus, the IAP recommends that NNP1PC lawyers should clarify the legal status of the Houay Soup resettlement area in the Concession Agreement. Clarification should be discussed with appropriate GOL land authorities and an agreement reached on how to manage the 70% of the Houay Soup area that is protection forest. SMO should review the land use plan prepared for Houay Soup resettlement area and revise the IEE to reflect the new plan. The cut-off-date for establishment of new assets should be disseminated publically throughout the project area immediately. The unit rates of compensation for PAP assets should be finalized and approved / authorized by GOL authorities immediately. 	High
R4	Site visit: 7-14 December 2014	A large number of PAP in Zone 2LR have stated repeatedly that they prefer not to resettle at the Houay Soup resettlement area.	<ul style="list-style-type: none"> Self-resettlement options include: <ul style="list-style-type: none"> Moving to urban areas to live with family Moving up hillsides as the NNP1 reservoir water rises Returning to live at locations occupied prior to moving to 2LR, including: Saam Liam, Phou Saam Sao, Saan Phou Toey, Gnot Houay Nam Tong Xaysomboun provincial and Hom district officials and the RMU have approved of self-resettlement as an option 	<p>Recommendations</p> <ul style="list-style-type: none"> NNP1PC should work with provincial, district, and RMU officials to urgently undertake the scoping of alternative sites in Muang Hom district The RMU should either rule out or include the self-resettlement sites by end January 2015 NNP1PC should conduct a Choice Survey of PAP in Zone 2LR to allow PAP to choose self-resettlement or resettlement to Houay Soup (Choice Survey) Prior to the Choice Survey, NNP1PC social staff should provide PAP in Zone 2LR with a comparison between cash compensation and a resettlement package (for Houay Soup) 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R5	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Impacts and disturbance of PAP in Ban Hatsaykham from construction of the Developer's base camp and construction of the dam access road.	<ul style="list-style-type: none"> • The Developer is preparing a site-specific REDP for Ban Hatsaykham PAP prior to their move to Houay Soup. • PAP have not been informed why they are not resettling during the 2014-2015 dry season. • NNP1PC reports that SMO staff are visiting Ban Hatsaykham weekly. • A health baseline survey has been undertaken and health training has been provided. • The village water supply has been upgraded. • Although the cut-off-date has been announced, village households have increased from 37 to 41. • Ban Hatsaykham PAP have been compensated for assets located at the Houay Soup resettlement site. PAP therefore do not know if they can cultivate crops on their old lands at Houay Soup during the 2015 growing season. • More than one case of attempted rape has been reported by Ban Hatsaykham PAP by construction workers. 	<ul style="list-style-type: none"> • The dam access road is located some distance from the hamlet and was observed as having a less significant direct impact on the hamlet than originally expected. • District officials and the RMU are aware of harassment and attempted rapes of Ban Hatsaykham women by construction workers and have assigned additional police (including women officers) to the area. • The IAP was informed that Ban Hatsaykham cannot be moved to the Houay Soup resettlement site until late 2015 / early 2016. The IAP is very disappointed that a temporary relocation was not undertaken to remove the village from direct impacts of the construction camp and the dam access road as the IAP recommended in 2013. <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP requires that NNP1PC makes every effort --- and documents every effort --- to ensure social protection of Ban Hatsaykham PAP until resettlement of the PAP has been achieved. This includes intensifying visits by SMO staff, including meeting frequently with PAP women to determine how NNP1PC can be more effective at social management. • The RMU and NNP1PC should explain to Ban Hatsaykham PAP why they are not moving during the 2014-2015 dry season. • PAP should be allowed to cultivate short duration crops on their old lands at Houay Soup, but should be informed that they are not eligible for additional compensation. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R6	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Commercial development by camp followers around the Developer's base camp and other labor camps (for construction of roads and other project facilities) will have a significant negative impact on PAP in host villages located near those construction camps.	<ul style="list-style-type: none"> • The IAP was informed that a code of conduct has been formulated by the Developer and has been included in the REMDP. • NNP1PC staff and contractor and sub-contractor staff are being given an orientation to the code of conduct in several languages. • The number of restaurants and beer bars continues to increase along the dam access road that runs through Ban Hat Gniun and Ban Hatsaykham. Some bars continue to sell alcohol immediately adjacent to the primary school. • NNP1PC SMO staff is implementing social awareness activities among impacted communities. 	<ul style="list-style-type: none"> • The IAP discussed the issue of unethical and immoral social behavior by camp followers and laborers with the RMU and the newly appointed district governor of Bolikhan District. <p>Recommendations</p> <ul style="list-style-type: none"> • Required: The IAP requires that the Developer work to implement a zero tolerance policy toward unethical and immoral social behavior by all employees of the Developer (including consultants and advisors), the Head Contractor, and all sub-contractors. • The experienced staff mobilized by SMO should implement a Social Management Action Program (SMAP) (modeled on a similar program at THXP) to protect vulnerable groups and all impacted villages. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R7	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014	Relocation of PAP in three villages in Zone 2UR	<ul style="list-style-type: none"> The PAP at 2UR had earlier reported to the IAP that they would relocate within their villages and diversify livelihood activities with support from the Developer. Some households have completed self-relocation of their residences. NNP1PC has agreed to support land development and alternative livelihood activities beginning in January 2015. Issues related to use of drawdown zones (DDZ) need to be addressed. 	<ul style="list-style-type: none"> The IAP did not visit this area during the site visit in December 2014. The previous recommendation is repeated. <p>Recommendation</p> <ul style="list-style-type: none"> The IAP recommends that a mini-RAP (relocation action plan) be formulated in a participatory matter with PAP and district and <i>kum baan</i> officials; ensuring participation by women and youth. 	Low
R8	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> Organizational and institutional issues related to both NNP1PC and the GOL PAP report that construction is having significant impacts on PAP and villages along the access road to the NNP1 dam site. 	<ul style="list-style-type: none"> A RMU coordination office is needed at Anouvong District, Xaysomboun Province to improve coordination and follow up to resettlement issues at Zone 2LR NNP1PC has field offices in Ban Sopyouak, Zone 2LR, and in Thathom District, Zone 2UR that can be shared with RMU staff Per diem for village headmen working on project activities has been reduced. 	<ul style="list-style-type: none"> The project is well underway and progress is being made in many areas. <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that the RMU has a stronger presence in the field, particularly in Zones 2LR and 2UR. This can best be achieved by providing the RMU with an office at Anouvong to improve coordination with NNP1PC and sharing of NNP1PC field offices with RMU staff at Ban Sopyouak, Zone 2LR and at Thathom District, Zone 2UR. PAP consultations and village visits by NNP1PC staff and the RMU should be better organized and scheduled. Since cooperation and assistance from village headmen is critical to grassroots participation and success of NNP1PC programs, headman per diems should be restored to previous levels. 	Medium
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Resettlement Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R9	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> Internal institutional structures needed to organize, manage, and implement the resettlement program The flow of funds to support important and time-sensitive field operations is being obstructed by some financial staff 	<ul style="list-style-type: none"> Several experienced staff has been recruited -- and continues to be recruited -- to undertake tasks related to public consultation, resettlement, asset surveys, community health and safety, grievance management, infrastructure development, etc. Organization charts and terms of reference have been prepared and accepted by the ADB --- an important prerequisite for financial close. Some staff do not have contracts; some for as long as 3 months. 	<ul style="list-style-type: none"> The IAP is disappointed with the departure of Mr Francois Demoulin, Senior Social Manager, whose experience and leadership was exemplary and who was well-regarded by Lao staff, as well as by the IAP and senior ADB staff. His loss may result in lower SMO efficiency and productivity and staff morale. NNP1PC now has in place a significant number of Lao and ethnic Hmong personnel and professional staff of other nationalities that also require a high level of modern and professional management. A higher level of commitment is needed by management to ensure staff effectiveness and success of costly NNP1PC social and environmental programs. It is therefore important to maintain the morale of all staff. The Developer has an obligation to monitor the activities of all NNP1PC contractors and sub-contractors and impacts of construction activities at all NNP1 construction sites. <p>Recommendations</p> <ul style="list-style-type: none"> The IAP recommends that modern and professional management measures be used to supervise the talented NNP1PC staff. The IAP recommends that all staff be provided with contracts prior to beginning work; and, as contracts expire, extensions should be provided on a timely basis – without excessive delays. The IAP recommends that the organization chart and terms of reference for environment and social management staff submitted to ADB to achieve financial close be used to operate NNP1PC programs for at least 18-24 months before any significant modifications are made. This organization chart reflects NNP1PC's professional capacity to meet legal commitments to the ADB. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
R10	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	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.	This is not a resettlement issue but an environmental issue that is now covered by the IAP Environment Specialist.	Closed
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S1	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> Changing the Hmong lifestyle is not easy and will take time Agricultural produce market 	<ul style="list-style-type: none"> Many Hmong men and women are self-motivated and interested in operating small businesses No agricultural market in the area 	For sustainable development, the GOL and the Project should identify markets for PAP agricultural outputs. This is a strong recommendation from the Xaysomboun Governor, as well.	High
S2	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> Hmong culture and identity Hmong kinship or clan system Language Beliefs and spiritual ceremonies Marriage and family Funeral ceremonies Hmong clothing 	The Hmong in this area still practice Hmong traditional culture	The Hmong graveyards must be moved first, at least one year prior to moving PAP from the 4 villages of Zone 2LR	High
S3	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> The area for PAP resettlement at the Houay Soup resettlement area needs to be clarified 	The total land of Houay Soup Resettlement Site is 6,000 ha of which a significant portion is inside a protection forest. The land outside the protection forest is 1,745 ha, of which some 808 ha will be allocated to PAP; remaining 937 ha land will be used for livelihood restoration; of which 88 ha (5%) is unusable. PAP are aware of the amount of land available at Houay Soup.	<ul style="list-style-type: none"> The Xaysomboun Province Head of the Lao Front for National Construction and the Head of the RMU and the Director of the Department of Land Administration, and the Head of RMU of Bolikhamxay Province are all aware of this issue. The IAP recommends that usable land at the Houay Soup area available for livelihood restoration should be clarified to the PAP as soon as possible. 	High

* Level of Concern:

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

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S4	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> Food security is a major concern of the PAP Soils at Houay Soup need improvement Additional investigations are needed on the use of the whole resettlement site 	The Pilot Plan site / demonstration farm is managed by a Hmong manager who understands local customs and traditions; he can demonstrate how PAP can prosper at Houay Soup	<ul style="list-style-type: none"> The IAP recommends the Developer makes every effort to ensure that PAP will have enough food for their families. Methods include support for the following: vocational training, jobs, compensation payments, scholarships for youth education, credit for small business, and protecting PAP rights. 	High
S5	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<ul style="list-style-type: none"> There are more people moving in from outside both Hmong and Lao Loum A small shop was selling alcohol sold all day. Many young males and females both Hmong and Lao Loum drink and sing songs. Young men always ask young women to come drinking at the shops. 	The small shop in Ban Hatxaykham has been closed.		Closed
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S6	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	The social and vulnerability issues in Zone 3 include: <ul style="list-style-type: none"> • 15 bars in Zone 3 • About 30 prostitutes provide services near the main camp site • 3 attempts of rape in Ban Hatxaykham • PAP report an increase in the trading of drugs (amphetamines) in Ban Hat Gniun; an increase from 20 incidents in 2013 to 44 cases in 2014 • Dust and traffic result from camp site construction at Ban Hat Gniun • Fighting between sub-contractors' workers and youth of Ban Hat Gniun • Young Hmong girls dress in see-through skirts and trousers • A survey of vulnerable families is needed 	These factors will lead to sexual assault, sex abuse, crime, disputes, and conflicts among people	<ul style="list-style-type: none"> • The IAP recommends that the GOL enforce Lao law. A minimum requirement is to have a police presence in Ban Hat Gniun and near the main camp. • Workers from all companies should be registered with the police, relevant district offices, RMU, and village headmen. • The IAP recommends that vulnerable groups should be surveyed and plans be proposed on how to provide additional services to them as needed. 	High
S7	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Compensation and unit rates	Calculation and consideration of unit rates of compensation are ongoing, but the rates currently being considered are unacceptable to many PAP. PAP have complained that proposed unit rates are very low.	<ul style="list-style-type: none"> • The IAP recommends that additional negotiations and discussions among 4-5 parties are required: included should be the GOL, PAP, NNP1PC, ADB, and an independent, neutral organization. • The IAP recommends that negotiations be based on Lao law. • However, as circumstances change, all parties should be open to discussion and finalize the unit rates for compensation as soon as possible. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S8	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Around 80% of the Hmong PAP of Zone 2LR still insist on self-resettlement. Xaysomboun provincial officials now will allow PAP in Zone 2LR to freely self-relocate within the province.	Some PAP will self-resettle in old villages in the mountainous areas close to Ban Houaypamom and Ban Soppuane. The names of the old villages include: Houay Hin Daeng, Houay Pha Khaw, Yod Houay Nam Tong, Phu Sam Liam, and Phu Sam Tuey.	The IAP recommends that the Xaysomboun Provincial Governor and NNP1PC set up a committee to survey the PAP and inventory the self-resettlement sites. This is to ensure that PAP are allowed to inhabit the areas and they are able to survive and have access to social and economic development assistance.	High
S9	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Polluted water in Ban Hatsaykham (Zone 3)	NNP1PC has installed wells for use by PAP in Hatsaykham hamlet		Closed
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S10	Site visits: 17-24 November 2013 4-11 May 2014 7-14 December 2014	The project is required to work closely with the GOL at the national and local levels.	<ul style="list-style-type: none"> • Many Hmong officials serve at high levels at national and local levels of government. Working with them would benefit the project. • The Xaysomboun Provincial Governor (Dr.Sombut Yialeeher), the Deputy Governor (Mr. Lo Pao Xong) and the Chief of Lao National Front Construction of the province are Hmong ethnics. • The Xong Clan, the largest clan of the Hmong in Ban Namyouak (Zone 2LR), belongs to the Deputy Governor, Mr.Lo Pao Xiong's relatives. • This is a great opportunity to work with the PAP. These GOL officials are able to convince the PAP and the PAP will listen to them, as well as they are able to work with the Project. 	<ul style="list-style-type: none"> • NNP1PC should work with Hmong officials in the GOL to convince people to cooperate with the project. • If necessary, NNP1PC should seek a national or local government decree with implementing regulations to convince PAP to move to the Houay Soup resettlement site. • The IAP recommends that NNP1PC have periodic meetings with high-ranking GOL Hmong officials at all levels to seek support for the project. This may facilitate project implementation and reduce unnecessary payments. • The current Xaysomboun Province's Governor (Dr.Sombut Yialeeher) is interested and has strived to address PAP and Project issues. He is the chairman of the Resettlement Committee. He has visited the villages of Zone 2LR twice to meet villagers and observe and study the issues. The Hmong leaders in the 4 villages of Zone 2LR listen and respect him and his provincial officials. • The IAP recommends that the Project work closely with the Xaysomboun Governor and his officials to deal with critical PAP issues; and with the new Hom District governor (Mr.Khampong Khamseeda), who supports the Project. 	<p>Low</p> <p>High</p> <p>High</p>
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Social Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
S11	Site visits: 4-11 May 2014 7-14 December 2014	Poor collaboration with the Xaysomboun Province	NNP1PC has no office in the province. The Governor of Xaysomboun is the GOL Chairperson of the Resettlement Committee for the NNP1 project	The IAP recommends building an NNP1PC office in Xaysomboun province and sending staff to be stationed in the province. The office should be shared with the RMU.	High
S12	Site visits: 4-11 May 2014 7-14 December 2014	Hmong staff	Additional Hmong staff have been engaged by NNP1PC to work on the project.	The IAP is pleased that NNP1PC has made progress on this issue. Now (December 2014) there are 30 of Hmong staff in the social team. This is a good reputation for the project since most directly PAP are Hmong ethnic group.	Medium
S13	Site visits: 7-14 December 2014	Cut-off-date for PAP compensation	Many PAP are not aware of the cut	The IAP recommends that there should be an official announcement and dissemination of the cut-off-date to the PAP in the villages throughout the project area.	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of Concern
E1	ESIA of NNP1 Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	The multiple dams on the Nam Ngiep (NNP1 and upstream NNP2) and Nam Xan Rivers will impact on river and ecological flows, water quality, fisheries and other downstream aquatic life.	<ul style="list-style-type: none"> • A Cumulative Impact Assessment_(CIA) was undertaken by the ERM consulting company for all the hydropower projects in the Nam Ngiep River Basin and other developments that would impact on the same natural resources in the project area using a rapid assessment method. The CIA was submitted to NNP1PC and ADB for review in Jan 2014. • ADB sent comments to NNP1 and ERM in March 2014. The updated version, Revision 1, dated May 2014, includes responses to ADB comments. • ERM has stated that data from other hydropower projects in the basin were minimal due to inaccessible documents and lack of public awareness websites. 	<ul style="list-style-type: none"> • MONRE is not interested in a CIA for all hydropower projects in the Nam Ngiep River Basin and continues to prefer to work with each development project separately. • Management of the river basin should continue along established divisions of GOL responsibility, namely central, provincial and district agencies. • This issue now being followed up under E2 and E3 below. 	Closed
E2	National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR, No. 561/CPI, June 2005	There are four hydropower projects under construction that will affect water quality, water use and water availability along the Nam Ngiep river. An organizational arrangement is needed to manage watershed resources and enable communications and cooperation among hydropower companies.	MONRE prefers to manage natural resources based on established levels of government administration, namely, national, provincial and district levels. However, overlapping concessions, cumulative and trans-boundary impacts from the hydropower and other development projects necessitate GoL authorities to consider developing an integrated management plan and monitoring arrangement.	The IAP recommends that NNP1 continues its efforts to contact all project proponents of the four hydropower projects being developed along the Nam Ngiep and suggest an annual meeting be organized by NNP1 during the first quarter of each year to discuss sharing water flow and water quality data among the four projects; and, discuss other issues of concern.	Low
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of Concern
E3	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	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 due to (1) there are new departments and duties in MoNRE and (2) this project has impacts in three provinces and numerous districts.	<ul style="list-style-type: none"> • The IAP met with Peter Jensen and Mr Lonkham Atsanavong, Deputy DG of the Department of Environmental Quality Promotion (DEQP). It was agreed that MONRE would prioritize the proposed integrated spatial planning (ISP) for Xaysomboun Province as soon as a letter from the Governor to MONRE was received requesting ISP for his province. This letter was <i>still outstanding</i> 11 months after it was first discussed with NNP1PC and 6 months after NNP1PC had committed to financially support the training program to develop an ISP for the province. • Dr. Souane agreed to prepare a draft letter and meet personally with the Provincial Governor to convince him of the importance of the ISP and ensure that a letter would follow from Xaisomboun Province to MONRE. Indeed this occurred thanks to Dr. Souane's inputs, but the DEQP received a letter from the Head of Xaisomboun PONRE indicating that PONRE has misunderstood the role of MONRE in the ISP preparation, which is technical assistance, guidance and training, and not financial assistance which would come from NNP1PC. So the letter needs to be cleared-up, but DEQP should be able to set-up a meeting with DONRE, Xaisomboun Province, and NNP1PC, and agree to move forward. • The IAP recommends that NNP1PC continues to follow up on this issue to ensure that ISP moves forward quickly to enable DEQP to start the technical assistance, guidance, and training programs. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of Concern
E4	Site visits: 4-11 May 2014 7-14 December 2014 Annex C to the CA	Villagers of Hatsaykham have complained during this IAP site visit that "construction crews of the Dam Access Road Contractor have polluted their water supply by using the river for their toilet needs and disposal of trash". Their children are contracting diarrhea and dysentery from contaminated water. The CA Annex C Social and Environmental Commitments requires NNP1PC to provide safe water supply for all communities affected by Project activities.	Construction camps of the Dam Access Road Contractor have adequate toilet facilities for workers and temporary solid wastes collection and storage facilities. However work areas along the temporary road to the temporary bridge and across the river, which work areas are less than a kilometer from Ban Hatsaykham, do not have such facilities.	<ul style="list-style-type: none"> The IAP is satisfied with the new borehole water supply system provided to Hatsaykham village. The water quality results proved to be good and the water safe in terms of all key quality parameters. It is recommended that the results of water sample analyses are reported to villagers so that they understand about the quality and safeness of their water supply. 	Closed
E5	Site Specific ESMMP for T12 Road Site visits: 17-24 November 2013 4-11 May 2014 7-14 December 2014	Site- Environmental Social Monitoring & Management Plans are required of all Contractors for project construction works. The site specific ESMMP produced by Obayashi Corporation for the Dam Access Road construction works contain only general guidelines for managing environmental issues and do not contain site-specific details.	The ESMMP for the Access Road to the dam site produced by Obayashi Corporation does not contain the site-specific plans and details to describe the protective and corrective measures to be used by the Head Contractor to protect against environmental impacts along each section of the access road to the dam site. Instead the ESMMP contains only general guidelines which will be used for managing environmental issues, such as erosion, sediment control, waste management, and worker safety and awareness.	Considerable improvement was made to road drainage systems, embankment slopes, site specific vegetation restoration, and erosion control. No serious erosion problems occurred during the previous rainy season and the contractor continues to implement vegetation restoration along key sections of the access road where needed. Erosion control mitigation measures are being implemented to handle potential future points of concern all along the access road to the dam site.	Closed
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended 					

Summary of Environmental Issues

No.	Reference Document	Issue	Status	IAP Comments and Recommendations	Level of Concern
E6	Site visits: 7-14 December 2014	The management of wastes from construction sites and camps of sub-contractors are not in compliance with the guidelines of the ESMMP-CP	Two violations of the standards were evident: (1) Solid wastes (mixed with some hazardous wastes) were being sent to the Paksan landfill for disposal by sub-contractors. The Paksan Urban Development Administration Authority and Obayashi have agreed that all solid waste from the camps are to be disposed of at the Paksan provincial landfill site. This is unacceptable to the IAP as Paksan operates the provincial landfill site without formal supervision and environmental management. The Paksan landfill does not meet any Lao or international standards for solid waste disposal and the NNP1 should forbid any project wastes being sent to this site. (2) Septic tanks wastes from the subcontractor septic tanks are being collected and disposed of by outside contractors. This is not permissible until the disposal site(s) and disposal methods are documented and approved by NNP1 as meeting international standards.	<ul style="list-style-type: none"> • The IAP recommends that Obayashi appoints an Environmental Manager for the duration of the construction period. The Environmental Manager should be supported by a team of inspectors who are trained to follow up on the commitments of the ESMMP-CP. • Work needs to proceed quickly on the construction and operation of the sanitary landfill for the NNP1 project. • The IAP recommends that all sub-contractors must store all solid wastes on site at their construction camps and worksites in a safe and protected manner until the project sanitary landfill to be built and operated by Obayashi for the NNP1 project. Likewise NNP1PC must follow the same restrictions and move the construction and operation agreement for the project landfill forward as soon as possible. • Secondly, NNP1PC must not permit collection and disposal of septic tank wastes from the sub-contractors to be hauled away by outside contractors until the disposal site(s) and disposal methods are documented and approved by NNP1PC as meeting international standards. These wastes can be handled in the future on project lands when lime treatment is included according to USEPA or other international guidelines and when disposal is supervised by EMO. 	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended 					

Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B1	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Options for implementing a biodiversity offset	<ul style="list-style-type: none"> ERM offset option review Phou Khao Khouay NPA has high biodiversity value but weak management Ongoing ERM survey ERM study 	<ul style="list-style-type: none"> The ERM team should review a diversity of biodiversity offset options Additional studies are required as follows: <ul style="list-style-type: none"> Data on species of NTFPs The Developer should invest in strengthening protection and management in national protected areas (preferably multiple sites), specifically in the Phou Khao Khouay NPA, by supporting NGO work; and, explore options for cumulative biodiversity offset fund (with ADB and GoL and other donors). To implement the biodiversity offset, simple institutional mechanisms should be operated through MONRE or the Environment Protection Fund. Mechanisms should reflect lessons learned and criteria from other funds. Concerns remain over choice of biodiversity offset 	High
B2	Site visits: 7-12 January 2013 17-24 November 2013	Activities along the dam access road need to be managed to reduce impacts	<ul style="list-style-type: none"> Degradation and logging along access road due to EdL village electrification program 	<ul style="list-style-type: none"> NNP1PC to minimize environmental and social impacts by liaising with the district forest office to (i) limit clearing; and, (ii) reforest using native species. Check points and spot checks should be arranged for vehicles and workers to prevent illegal removal of logs, NTFPs, wildlife 	Medium
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B2 (continued)	Site visit: 4-11 May 2014	Activities along the dam access road need to be managed to reduce impacts	NNP1 supporting Provincial and District Forest Office with checkpoint and funding for patrols	<ul style="list-style-type: none"> Monitor effectiveness of Houay Ngoua checkpoint Work with provincial authorities to limit forest clearance along new dam access road 	High
B3	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	Poor knowledge of wildlife populations and distribution in project area	<p>Additional surveys required of wildlife in Nam Ngiep watershed</p> <p>Information on wildlife in watershed (ERM report) largely based on literature surveys</p> <p>Brief primate surveys conducted; gibbons at low density</p> <p>Information available suggests wildlife impoverished in watershed and threatened by future developments</p>	<p>Require more detailed surveys of wildlife in lower watershed as input to watershed management plan</p> <ul style="list-style-type: none"> Urgently require field surveys to provide better information on status and distribution of wildlife prior to any decisions on watershed as candidate area for biodiversity offset Urgent need for Rapid Biodiversity Assessment in NNP lower watershed during the current dry season. No decisions on Biodiversity Offset should be made until this survey completed 	Very high
B4	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014	<p>Data on NTFPs collected</p> <p>Quantities of NTFPs to be collected that are controlled annually by the district where “quotas” are issued to the villages</p>	<p>ERM and socio-economic survey to give more data on NTFP use</p> <p>Surveys ongoing in December 2014</p>	<p>The Developer should work with PAP to test the NTFP quota system among villages based on a “sustainable yield” study in the designated areas of natural forest used for to permit villages to continue earning disposable income from collection and sale of NTFPs.</p> <p>ERM and SMO to work together to survey NTFP use, especially in Houay Soup</p>	Medium
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B5	Site visits: 7-12 January 2013 17-24 November 2013	Workers and construction traffic removing forest resources, illegal logs and wildlife	Prohibition of illegal harvesting and trade is covered in the Developer's Code of Conduct	The Developer should enforce a zero tolerance policy on illegal logging, hunting and wildlife trade by the employees of the Developer, Contractor, and all sub-contractors	High
B6	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014	Introduction of potentially invasive species as part of reforestation, agriculture schemes	Frogs to be raised by PAP should NOT be exotic species Plans for aquaculture in reservoir to improve livelihoods	The Developer should check to make sure that the proposed species to be introduced are NOT potentially invasive Need careful review to ensure no introduction of exotic species with likely negative impact on native fish fauna.	Low
B7	Site visits: 7-12 January 2013 17-24 November 2013 7-14 December 2014	NTFPs used by PAP for food security and cash income	PAP at all impacted villages are highly dependent on NTFPs	Protect sufficient natural forest within and adjacent to the resettlement sites for villagers to harvest NTFPs or provide alternative sources of income Identify potential of Houay Soup forests for NTFPs and assess opportunities for domestication in agroforestry systems	High
B8	Site visits: 7-12 January 2013 17-24 November 2013	Awareness of 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
B9	Site visits: 7-12 January 2013 17-24 November 2013	<ul style="list-style-type: none"> Monitoring of biodiversity Capacity of provincial and district EMUs for monitoring Community engagement in monitoring 	<ul style="list-style-type: none"> Biodiversity values are not monitored by anyone EMUs in project provinces have limited capacity and resources Hmong villagers have good local knowledge 	Reservoir will give access to new areas above water line Recommendations: <ul style="list-style-type: none"> Additional wildlife surveys should be undertaken in the upper watershed during construction to define protection and monitoring needs Hmong villagers should be hired to assist with monitoring biodiversity within resettlement areas and nearby forests Strengthen capacity of provincial EMUs to monitor impacts on biodiversity and environment. 	Medium
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B10	Site visits: 4-11 May 2014 7-14 December 2014	Realistic baselines for biodiversity monitoring	Continued degradation of Huay Ngua and other watershed forests Out of date faunal information for watershed – need updating based on field surveys	Need accurate status of forest conditions at start of construction phase Get satellite imagery and map accurate remaining forest areas for Huay Ngua and other watershed forests Still Outstanding – should include Houay Soup protection forests	Very high
B11	Site visits: 4-11 May 2014 7-14 December 2014	Suitability of Watershed as Biodiversity Offset	Developer and MONRE propose to manage watershed for biodiversity offset but area has large number of conflicting developments. Current proposal unlikely to lead to credible offset with permanent biodiversity outcomes	Delay decision on Biodiversity Offset to await further field data from the watershed and continue to review alternative options Recommend separating commitments to MONRE for investment in watershed from need to establish credible biodiversity offset. No discussions to be held with villagers regarding offset activities until appropriate sites are selected	Very high
B12	Site visits: 4-11 May 2014 7-14 December 2014	Appropriate and integrated Watershed management activities Initiate development of ISP for XSB	The watershed now falls mainly within the boundaries of XSB Province which lacks an integrated spatial plan	Work with MONRE and environmental offices in XSB to develop ISP for province to guide development activities and watershed management investments Now urgent to gain better understanding of options for watershed and biodiversity management.	Very high
B13	Site visits: 4-11 May 2014 7-14 December 2014	Construction activities and increased access will lead to further habitat loss in watershed and along ROW for transmission lines	Villagers already clearing forests around dam site to expand agricultural activities	Develop guidelines and mitigation plans to minimise habitat loss due to construction activities and for restoration and rehabilitation of impacted areas. ROW route will avoid elephant habitat in Phou Khao Khouay national protected area	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Summary of Biodiversity Issues

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B14	Site visit 4-11 May 2014	Working with MONRE to manage watershed management activities	Current budget request from MONRE focuses mainly on vehicles and salary supplements, – need to refocus on actions	Budgets allocated to MONRE should be based on agreed, targeted and monitorable activities for watershed management.	High
B15	Site visit 4-11 May 2014	Capacity of environmental units at MONRE to manage watershed management activities	MONRE has very limited capacity at all levels (especially at province and district levels).	Developer's EMO to work with MONRE to seek capacity and mentoring opportunities (e.g., involvement of provincial officers in XSB ISP)	High
B16	Site visit 4-11 May 2014 7-14 Dec 2014	Alternative options for credible, realistic, and manageable biodiversity offsets	Watershed area not suitable for biodiversity offset because of conflicting development issues. Continue to review options other than watershed	Follow up with Environmental Protection Fund (EPF) to assess suitability for biodiversity offset window, targeting funds to proposals with monitorable biodiversity outcomes. Use EPF funds to test mechanism for delivering biodiversity offset outcomes	High
B17	Site visit 7-14 Dec 2014	Appoint Biodiversity Offset Committee of technical experts with appropriate expertise	<ul style="list-style-type: none"> Outstanding issue Required by 31 December 2014 according to financial agreement with ADB 	Essential to appoint credible committee as soon as possible. Biodiversity cannot be a subset under watershed management committees	Very high
B18	Site Visit 7-14 Dec 2014	Watershed Management Plan should include Houay Soup forests and be integrated with ISP for XSB	MONRE require 4,250 ha of protection forest in Houay Soup resettlement area to remain as forest	EMO and SMO to work together to identify options for forest management within Houay Soup	High
B19	Site Visit 7-14 Dec 2014	Collaboration with NNP2 on watershed management	Developments at NNP2 impact on watershed, including water quality and aquatic biodiversity	Initiate immediate contact with NNP2 to facilitate collaboration and complementarity of watershed management	High
B20	Site visit 7-14 Dec 2014	Maintain distinct Biodiversity Team in EMO	Biodiversity Offset cannot be subsumed under watershed management	Biodiversity team to be responsible for Biodiversity Offset process and biodiversity monitoring both within Watershed and Biodiversity Offset area	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months High - immediate action recommended. 					

No.	Reference Document	Issue	Status	IAP comments and recommendations	Level of concern*
B21	Site visit 7-14 Dec 2014	Improve communication and information sharing within EMO and with SMO	Currently lack of report sharing within team and with SMO	Essential that all members of teams share relevant information including IAP reports. Also need senior staff to make regular visits to field including with IAP	High
B22	Site visit 7-14 Dec 2014	Strengthen collaboration and information sharing between EMO and SMO	Overlap of information collection	Need better collaboration especially on surveys of NTFPs, fisheries, monitoring of water quality, and soil erosion	High
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended. 					

Annex 1: Resettlement Issues

Background

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

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

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

The resettlement site for the PAP is an area of approximately 6,000 ha called Houay Soup, located on the right bank of the Nam Ngiep river under the administrative jurisdiction of Ban Hat Gniun, Bolikhan District, Bolikhamxay Province. The IAP was informed that the GOL approved EIA for the NNP1 project mentions the Houay Soup resettlement area. As of December 2014, 1,745 ha has been allocated officially by the Government of Lao PDR (GOL) to the Nam Ngiep 1 Power Company (NNP1PC) for use to resettle impacted PAP. The remaining area of the Houay Soup resettlement area has been designated as protection forest and may not be available for use.

An as yet unspecified number of PAP in three villages in Thathom District, Xaysomboun Province will be required to undertake “internal relocation,” namely PAP from Ban Pou, Ban Hatsamkhone, and Ban Piengta (Zone 2UR). PAP from these villages originally were scheduled to be resettled to the Thong Nam Pha resettlement site close to the Thathom District market. However, since most villagers’ houses would not be impacted and mostly agricultural production land will be impacted, the PAP are seeking the following: (i) compensation from the Developer’s to relocate impacted houses within the village; (ii) compensation for the purchase of new agriculture land nearby; (iii) access to old agriculture lands that remain above the reservoir inundation level; and, (iv) change and diversification of livelihood, from agriculture to other occupations. Discussions on resettlement, relocation, and compensation entitlements continue. The IAP was unable to visit Zone 2UR during the most recent site visit due to the limited time available.

Resettlement is the responsibility of NNP1PC’s Environment and Social Department (ESD), specifically the Social Management Office (SMO). The ESD leadership is interacting with provincial and district resettlement management units (RMUs) established by the GOL in Xaysomboun and Bolikhamxay provinces, to prepare for and organize PAP resettlement and relocation. The Resettlement Working Group of the Provincial Resettlement Management and Living Condition Restoration Committee (PRMLCRC) and related GOL provincial authorities are actively participating in and facilitating this process.

Current Resettlement Issues and IAP Recommendations

Issues of concern to the IAP at the Houay Soup resettlement area include the following:¹

1. **Issue:** Until recently, the size of the Houay Soup resettlement area was estimated at 6,000 ha, of which an estimated 420 ha was to be designated as suitable for lowland rice production. The GOL has now officially allocated only 1,745 ha of the Houay Soup area for resettlement by PAP from Zones 2LR and 3. The reduced area available for resettlement now adds to NNP1PC's liability to demonstrate that the smaller area has the capacity to provide livelihood for resettlers. The completion of an IEE requested by the IAP in 2014 has concluded that based on the current design for land use, the PAP to be resettled will be competing for space and resources with a large area of protection forest, the right-of-way for transmission lines, reservoirs for water supply and irrigation, and five dams on the streams that drain the Houay Soup area. These factors are in addition to the generally poor quality soils at Houay Soup; as well as the long-term use of Houay Soup by residents of Ban Hat Gniun (including the Hatsaykham hamlet) that has resulted in generally depleted soils.

In this context, NNP1PC Technical Department has submitted (November 2014) a revised land use plan for the Houay Soup resettlement area. With the reduced area available for livelihood development, NNP1PC's efforts to show that livelihood restoration is possible need to be intensified at the demonstration center (Pilot Plan farm). **(Issue R1)**

Recommendation: The IAP is aware that NNP1PC has begun to improve soils at Houay Soup that are designated for rice production prior to resettlement. Similarly, NNP1PC has plans to establish improved pasture for livestock grazing on designated lands during the 2015 wet season. Given the continued doubt of many PAP about the viability of the Houay Soup site, NNP1PC should intensify its efforts at the Pilot Plan farm to demonstrate the livelihood restoration model for resettlers. In addition, NNP1PC should continue to conduct visits to Houay Soup for PAP from 2LR, focusing on women, widows, young men and women, and the vulnerable, especially poor families. Further, since significantly less land is available for resettlement, more attention should be given to preparing a viable land use plan.

2. **Issue:** PAP to be resettled from Zone 2LR and Zone 3 (Hatsaykham hamlet) are expected to have several hundred head of large livestock (cattle, buffalo) that will need to be resettled. These livestock require grazing areas and supplies of forage and fodder. They also will require vaccinations. In addition, livestock will be stressed as a result of the resettlement and will require good grazing areas upon arrival. Further, the reduced size available for livelihood restoration at Houay Soup likely will result in less land being available for livestock grazing. **(Issue R2)**

Recommendation: The SMO has assured the IAP that pasture areas will be developed prior to PAP and livestock resettlement. The IAP recommends that the pasture improvement program begin during the 2015 wet season throughout the Houay Soup resettlement area. In particular, improved tropical grasses and legumes recommended by the Livestock Research Center of the National Agriculture and Forestry Research Institute (NAFRI) should be used on designated grazing areas.

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

Resettlement by PAP from Hatsaykham is expected to begin in early 2016, when livestock will be resettled along with PAP.

3. **Issue:** As noted above, the IAP was informed that the GOL has now authorized use of 1,745 ha (of the original approximately 6,000 ha) of land for resettlement of NNP1 PAP. The IAP also was informed that the NNP1 Concession Agreement mentions 6,000 ha available at Houay Soup. The significantly reduced area available (from 6,000 ha to 1,745 ha) will require (i) careful land use planning by the Technical Department; (ii) negotiations with the director-general of the Department of Land Administration Department regarding access to the protection forest for construction of small dams (for irrigation and water supply) and for collection of non-timber forest products (NTFPs) by PAP to supplement food security; and, (iii) review of the original livelihood restoration model that would be promoted to PAP following resettlement. **(Issue R3)**

Recommendation: NNP1PC should carefully review the revised land use plan to take into consideration the viability of the post-resettlement livelihood model in light of the reduced area available for agricultural production and livelihood activities. NNP1PC should urgently follow up with the director-general of the Department of Land Administration Department to negotiate for use of the protection forest for the construction of dams for water supply and irrigation; and, for access by PAP for collecting NTFPs to supplement the normal food supply.

Recommendation: Related to resettlement at Houay Soup, the cut-off-date for establishment of new assets by PAP at 2UR and Zone 3 should be disseminated publically throughout the project area immediately. In addition, the unit rates of compensation for PAP assets should be finalized and approved / authorized by GOL authorities immediately.

4. **Issue:** Many PAP in Zone 2LR have stated repeatedly that they prefer not to resettle at the Houay Soup resettlement area for reasons mentioned above. As a result, many PAP plan to undertake self-resettlement by (i) remaining in the area to be inundated and moving up hillsides as the NNP1 reservoir water rises; (ii) moving to urban areas of Laos to live with other family members; and, (iii) returning to live at locations occupied prior to moving to 2LR, specifically: Saam Liam, Phou Saam Sao, Saan Phou Toey, and Gnot Houay Nam Tong. Xaysomboun provincial and Hom district officials and the RMU have approved of self-resettlement as an option. **(Issue R5)**

Recommendation: The IAP recommends that NNP1PC should work with provincial, district, and RMU officials to urgently undertake the scoping of alternative sites in Muang Hom district. The RMU should either formally (officially) rule out or include the self-resettlement sites by end January 2015. The IAP recommends that NNP1PC should conduct a "Choice Survey" of PAP in Zone 2LR to allow PAP to choose self-resettlement or resettlement to Houay Soup. However, prior to the Choice Survey, NNP1PC social staff should make presentations to PAP in Zone 2LR showing a comparison between cash compensation and a resettlement package that includes resettlement entitlements at Houay Soup.

5. **Issue:** Beginning with the first visit of the IAP in January 2013, the IAP was concerned that PAP at Hatsaykham hamlet would be impacted negatively by construction of the dam access road and Head Contractor's camp near the hamlet. In fact, the dam access road is located a reasonable distance from the underdeveloped hamlet and has only limited negative impact on daily life. However, a large number of workers for the Head Contractor and its sub-contractors have moved into the area and several incidents have occurred that have negatively impacted on the lives of people at Hatsaykham hamlet. Contrary to the high priority recommendation made by the IAP repeatedly since

January 2013, NNP1PC has failed to undertake early resettlement or temporary relocation of PAP at Hatsaykham hamlet prior to major construction activities. As a result, incidents impacting on the lives of Hatsaykham PAP have occurred. At the same time, PAP have not been informed why they are not resettling during the 2014-2015 dry season as previously promised, and must wait until the 2015-2016 dry season. **(Issue R6)**

Required: The IAP repeats its requirement that NNP1PC prepares a site-specific environmental and social action plan (E&S Action Plan or resettlement action plan -- RAP) for resettlement of PAP from Ban Hatsaykham, prior to resettlement. This Action Plan should be reviewed by the ADB. The E&S Action Plan is needed to promote and provide measures for engagement with affected communities on potentially negative issues and to ensure that relevant environmental information and social entitlements are disclosed and disseminated to them in a timely manner, consistent with IFC Performance Standard 1.

Recommendations:

- The IAP requires that NNP1PC makes every effort --- and records every effort --- to ensure the social protection of PAP at Ban Hatsaykham hamlet over the next 12 months or until resettlement of the PAP has been achieved.
 - The RMU and NNP1PC should explain to Hatsaykham PAP why they are not moving during the 2014-2015 dry season.
 - PAP should be allowed to cultivate short duration crops on their old lands at the Houay Soup resettlement area, but should be informed that they are not eligible for additional compensation.
6. **Issue:** Similar to commercial development around construction sites and contractors' camps at other hydropower projects in Lao PDR, the IAP has observed a continuous and significant expansion of restaurants and bars along the dam access road at Ban Hat Gniun. Some of the bars are located adjacent to the local primary school endangering the lives and morals of underage children. As the IAP has been pointed out in previous reports, these facilities serve as vectors for the sale and use of illegal drugs and other substances, prostitution, gambling, and human trafficking. Poor social habits and behavior by itinerant construction workers, increased vehicle traffic, poor corporate and public governance, and weak local administration provide openings for vice and social immorality. Such conditions impact on both the physical and mental health of PAP in host villages.

The IAP has insisted on zero tolerance of depraved social behavior by all employees of the Developer, Head Contractor, and all sub-contractors. The IAP holds the management and senior staff of NNP1PC, Obayashi, and all sub-contractors personally responsible for the illicit behavior of their employees.

The IAP was pleased to learn that an experienced person has been hired to implement a social management program with measures to minimize the impacts of camp followers according to the revised Social Development Program. **(Issue R6)**

Recommendations: The IAP repeats the recommendation that EDS introduces social awareness and management activities in potentially impacted communities through public involvement and educational enhancement programs focusing on host village schools and health education and outreach programs at public health centers throughout the project area.

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

1. **Issue:** Although the IAP was unable to visit the 2UR area during the site visit in December 2014, it is understood that the situation remains unchanged. That is, an estimated 170 households in Ban Pou, Ban Hatsamkhone, and Ban Piengta villages will be impacted by the project. PAP have decided to either undertake internal relocation (defined by the IAP in a previous report as follows: *PAP that remain in their current houses, but that relocate their agricultural production activities to (privately owned but) unused land nearby; within the boundaries of the impacted villages*); or, they would change their livelihood with support from the project. About 20 households are expected to lose all of their land as a result of reservoir inundation; for which they will be allocated new land by NNP1PC or for which they will be compensated and be eligible for project support for choosing a new livelihood. **(Issue R7)**

Recommendations: As a result, the IAP repeats the recommendation made in the June 2014 IAP report, namely: The Developer should clarify the relocation plans of each PAP household in the 2UR area through *good faith negotiations*. Agricultural land for internal relocation should be identified with the collaboration of the district RMU and community leaders, and procured for allocation to PAP choosing to remain in agriculture. The IAP recommends that the Developer prepare an internal relocation plan for each 2UR village in a participatory manner that (i) identifies the exact number of individuals (families, households) that will be impacted; (ii) clarifies agricultural activities that PAP wish to have promoted; (iii) proposes alternative livelihood development for interested PAP; (iv) clarifies how the reservoir drawdown zones will be used by PAP; and, (v) sets forth a fisheries management plan for reservoir fisheries and use by PAP.

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

1. **Issues:** The IAP is pleased to note that some of the organizational and institutional issues that troubled the project during the May 2014 IAP mission have been addressed. The IAP remains concerned about the following organizational issues related to resettlement **(Issue R8)**:
 - Delays in preparing for resettlement of the PAPs from Hatsaykham hamlet and 2LR and the danger of negative impacts from construction workers;
 - Failure to inform Hatsaykham PAP of the reasons for delaying resettlement to the Houay Soup area;
 - Failure to inform Hatsaykham PAP of where they can cultivate crops during the upcoming 2015 wet season --- this being a serious survival issue;
 - Lack of clarity on the area available for resettlement at Houay Soup;
 - Failure of officials to disseminate the cut-off-date for establishment of new assets widely throughout the project area;
 - Failure of officials to finalize and approve the unit rates of compensation for PAP assets;
 - Weak monitoring of community health and safety by designated employees of the Developer, the Head Contractor, and various sub-contractors; and,
 - The need for RMU officials to inter-act more closely and frequently with PAP in high impact areas --- Zones 2LR and 3.

Recommendations: The IAP recommends that the RMU maintains a stronger presence in the field, particularly in Zones 2LR and 2UR. This can best be achieved by providing the RMU with an office at Anouvong District to improve coordination with NNP1PC and sharing the NNP1PC field offices with RMU staff at Ban Sopyouak, Zone

2LR, and at Thathom District, Zone 2UR. The IAP also recommends that PAP consultations and village visits by NNP1PC staff and the RMU should be better organized and scheduled so as to minimize the number of times per week or month PAP are required to participate in consultations.

2. **Issue:** The ESD has hired additional professional staff. In particular, the SMO is now staffed with experienced and knowledgeable professionals who understand the resettlement process. SMO staff are competent and are able to anticipate potential problems, therefore preventing their arising or at least minimizing their impacts, thus helping the Developer to reduce wasteful expenditures. Staff organization charts and terms of reference are now available adequately clarifying environmental and social operations of NNP1PC's challenging resettlement program. Several issues remain, however, including:
- The IAP is very disappointed with the departure of Mr Francois Demoulin, Senior Social Manager, whose experience and leadership was exemplary and who was well-regarded by Lao personnel, as well as the IAP and senior ADB staff. His loss may result in lower SMO efficiency, productivity, and staff morale.
 - NNP1PC now has in place a significant number of Lao and ethnic Hmong personnel and professional staff of other nationalities that also require modern and professional management. A high level of commitment is needed by this staff to ensure the success of costly NNP1PC social and environmental programs. It is therefore important to maintain the morale of this professional staff.
 - The Developer has an obligation to monitor the activities of all NNP1PC contractors and sub-contractors and the impacts of construction activities at all NNP1 construction sites. **(Issue R9)**

Recommendations:

- The IAP recommends that modern and professional management techniques be used to supervise the talented and costly NNP1PC staff.
- The IAP recommends that all staff be provided with contracts prior to beginning work at NNP1PC; and, as contracts expire, written extensions should be provided on a timely basis – without excessive delays.
- The IAP recommends that the organization chart and terms of reference for environment and social management staff submitted to ADB to achieve financial close be used to operate NNP1PC programs for at least 18-24 months before any significant modifications are made. This organization chart demonstrates NNP1PC professional capacity to meet legal commitments to the ADB.

Resettlement and Social Photos



New houses continue to be constructed throughout Zone 2LR because the official cut-off-date has not been disseminated by local officials



Safety signs in Ban Thaheua. All signs should be in Lao as well as English. Currently some signs are only in English



Beer bar and drinking restaurant across the street from the primary school at Ban Hat Gniun, Bolikhan District, along the dam access road



PAP meeting in 2LR with IAP, ADB, and LTA representatives; discussing social safeguards and resettlement issues; in December 2014



A new bore hole at Hatsaykham hamlet has replaced the need for women to fetch water from the Nam Ngiep river for household use



A Hmong woman wearing risky clothing that attracts the attention of the construction workers leading to dangerous negative social incidents

Annex 2: Social Issues & Indigenous Peoples' Issues

Summary of Social Specialists Inputs

1. This is a progress report of the fourth site visit to the Nam Ngiep 1 Hydropower Project (NNP1) that took place during on 7-14 December 2014.
2. As the IAP Expert on Indigenous People (IP), I visited the five directly affected villages (four villages in Zone 2LR: Ban Namyouak, Ban Sopyouak, Ban Sopphouan, and Ban Houaypamom in Hom District, Xaysomboune Province; and one village in Zone 3: Ban Hatsaykham in Bolikhan District, Bolikhamxay Province); and, one indirectly affected, host village in Zone 3, Ban Hat Ngiun in Bolikhan District, Bolikhamxay Province.
3. The IAP met approximately 150 affected villagers in formal meetings that were focused on the directly affected people from the project in the five villages (four villages in Zone 2LR and one village in Zone 3). In addition, a meeting was held with one indirectly village in Hat Ngiun, where the dam access road has been under construction for about a year.
4. Three formal meetings were held with high level officials of the GOL as follows:
 - Head of the Lao Front for National Construction of Xaysomboune Province, Mr. Boonsung Biayathawbiasung, and Mr. Phonexay Tanovan Head of the RMU of Xaysomboune Province. The Lao Front for National Construction is responsible for resolving conflicts among people and between the people and government organizations;
 - Head of the RMU of Bolikhamxay Province, Mr. Khamsing Sayphouvong; and,
 - Director-General of the Department of Land Administration, Ministry of Natural Resources and Environment, Mr. Siphandone Sihavong.
5. During this IAP site visit, formal meetings were held with GOL officials and individual interviews were held with PAP in each village. Many cultural and social aspects were observed. The schedule of meetings with PAP and the GOL were as follows:
 - 7 December 2014 - Arrival Vientiane, Lao PDR and had a pre-meeting with IAPs and preparing for debriefing meeting and site visit
 - 8 December 2014 - Formal Debriefing meeting with NNP1PC Director and staff at NNP1PC Head Office in Vientiane Capital
 - 9 December 2014 – 3 formal meetings with Hmong headmen and elders and approximately 110 PAP in the 4 villages (Ban Houaypamom, Ban Sopphouane, Ban Sopyouak, and Ban Namyouak) of Zone 2LR in Hom District, Xaysomboune Province.
 - 10 December 2014 - Formal meeting with the Head of the Lao Front for National Construction of Xaysomboune Province (Mr. Boonsung Biayathawbiasung) and the Head of the RMU of Xaysomboune Province (Mr. Phonexay Tanovan) and their staff.
 - 11 December 2014 – 2 formal meetings with headmen and elders of Ban Hat Ngiun and Ban Hatxaykham, and approximately 40 PAP in Zone 3, Bolikhan District, Bolikhamxay Province.
 - 12 December 2014– 2 formal meetings:
 - Meeting with Head of RMU of Bolikhamxay Province (Mr. Khamsing Sayphouvong);
 - Meeting with Director-General, Department of Land Administration, Ministry of Natural Resources and Environment (Mr. Siphandone Sihavong), Vientiane Capital.
 - 13 December 2014 – Formal meeting with NNP1PC: Debriefing presentation of fact-finding and discussions
 - 14 December 2014 - returning to Bangkok, Thailand

Issues and Recommendations

1. A summary of the social Issues and IAP recommendations are presented above in the matrix.
2. Site visit in May 2015: During the next IAP site visit in May 2015, the Social Specialist would like to concentrate on 6 villages, namely: 4 villages in Zone 2LR: Ban Namyouak, Ban Soupyouak, Ban Soppouan, and Ban Houaypamom; and, 2 villages in Zone 3: Ban Hatxaykham and Ban Hat Ngiun, as well as the Houay Soup resettlement area.
3. Regarding the issues that the ADB requested the IAP Social Specialist to address, the following responses are provided:
4. Issue 1: Whether the project has obtained broad community support from PAP:
 - Yes, for two reasons: (i) Lao people support GOL's policies. This is a national principle / philosophy. The people of the Lao PDR are socialized to sacrifice, accept and listen to their government. This can be seen during discussions with them regarding the NNP1 project. PAP always say that the project is a good one and they agree with the GOL; and, (ii) the project is expected to bring prosperity and wealth to the Lao people, including the PAP. So, the PAP support the project. However, the PAP expect a good resettlement site and fair compensations.
5. Issue 2: Whether there are ethnic groups in adjacent villages that may be considered PAP who may be indirectly affected by the project in any way and who are not covered by the REDP and SDP:
 - Yes. Thus, the IAP Social Specialist would like to look into the adjacent villages.
 - One example is as follows: In Zone 2LR there are four villages directly affected by the NNP1, namely: Ban Namyouak, Ban Sopyouak, Ban Soppouan, and Ban Houaypamom. The nearest adjacent PAP village to these four villages is Ban Samsao Houaysai, located some 20 kilometers away from Ban Namyouak. The PAP in this village are Hmong and they have a good connection/relationship to the impacted villages in terms of marriage, kinships/clans, and neighbors for a long time. They know one another and earlier many families used to live in the same village. The PAP exchange information with one another and some move back and forth between the areas.
 - Therefore, when the project moves PAP from the four impacted villages in Zone 2LR to the Houay Soup resettlement area, several households – the exact number remains unknown – will choose not to move. Instead, they want to move to Ban Samsai Houaysai. However, Ban Samsao Houaysai currently is not scheduled to gain anything from the project. There are no SDP (Social Development Plan) and REDP (Resettlement and Ethnic Development Plan) for Ban Samsao Houaysai.

Annex 3: Environmental Issues

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

1. **Issue: The Developer is expected to contribute to capacity building of MONRE and to financially assist in establishing an Environmental Management Unit (EMU)**, which will be staffed by provincial and district officials from project affected areas. The role of the EMU is to monitor implementation of the EMP and to report on its adequacy and effectiveness to MONRE and the Developer. The EMU monitoring reports would include findings, deviations (if any) from the EMP and concession agreement (CA) commitments, and villager grievances. The duties of MONRE 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.

The IAP met with the EMU representatives of Boulikhamxay Province (Mr. Samleuang Vongsolaseune, Deputy Director, Department of Natural Resources and Environment, PoNRE, Boulikhamxay Province; and Mr. Thayvanh Saythummy, Head EMU, Boulikhamxay Province)². As noted in Annex C Social and Environmental Commitments of the CA, the EMU is required to monitor all environmental aspects of project development and operation except resettlement. Monitoring of the environmental situation is to ensure that the company complies with the Lao laws. During the construction phase, key monitoring issues include impacts from construction, biomass clearance, and safety for local communities (primarily impacts from transport and traffic control); and during the operation phase impacts from power generation and other company activities.

The EMU stated that they had not received the Quarterly Monitoring Reports (March, June, Sept. 2014), but they do have the Monthly Monitoring Reports. These reports are in both Lao and English languages. The EMU is interested to see that the Project Proponent has the capacity to manage all environmental issues including whether the wastewater treatment plants of the contractors will meet the Lao effluent (discharge) standards.

Recommendations: The IAP recommends that the company convenes a workshop combining the EMUs of both provinces and MONRE to review the duties of the EMU for the Nam Ngiep watershed. MONRE should be invited as Workshop organizer to review “lessons learned” from Nam Theun 2 and the Theun-Hinboun projects, and include the expanded mandate of MONRE to oversee *integrated environmental conservation interests* of water, forest, and biodiversity protection at the regional and district levels. The Meeting would be an appropriate time to discuss how best to make use of NNP1 funds to be contributed as per CA commitments (versus recent EMU and MONRE budget requests)³, how to monitor impacts on water and forest resources from other hydropower project developments, and how best to make use of future monitoring reports to inform project-affected-persons of monitoring results. These activities would be of interest to a future Nam Ngiep River Basin Committee comprising representatives of private and public sector development projects in the Nam Ngiep river basin.

² The EMU consists of 4 persons from PoNRE plus 3 in the “field” (DoNRE assigned persons) in Boulikhamxay Province. Probably the same number of persons would be expected from Xaysomboun Province.

³ The EMU stated that they receive a contribution to PoNRE and a contribution to the Environmental Protection Fund from the mining projects in the province, but no official payments to the EMU for compliance monitoring or capacity building as committed in the EMP of NNP1.

At the proposed meeting, the IAP recommends that NNP1 offers *compliance monitoring training* of the EMUs by inviting them to join with the IAP during the IAP auditing missions. The IAP agrees to take the time to review environmental issues of concern during the construction phase with the EMUs and to review what the CA and IFC Performance Standards say about mitigating these same issues. Then the field visits and actual field auditing of these environmental issues at the construction sites and at construction camps and workshop during the IAP site visit would serve as a “hands-on training” for the EMUs. The site visits should of course be led by appropriate EMO representatives. The NNP1 monitoring reports (covering environmental monitoring and adequacy of contractor mitigation measures to minimize or control pollution, etc.) go to PoNRE and MoNRE for their information and to NNP1 for their management actions to ensure that all contractors comply with Lao environmental standards and CA requirements. In the event that the EMU finds non-compliances to commitments, they are responsible to hold a meeting in the province to consider and solve the problem among stakeholders. Feedback from the EMU should then go to NNP1 for their response and clarification of what actions the company will take to correct the non-compliance. If the provincial meeting cannot solve the problem, the EMU will inform MONRE and ask for a meeting in the capital city.

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

2. Issue: Waste management in project impacted communities

The EMU discussed with the IAP the problem of solid waste collection and management in both impacted communities affected during the construction period by workers and camp followers, where both local residents and outsiders were investing in new buildings of shops, restaurants, bars, and services to satisfy workers and camp followers for their food and drinks, supplies, cleaning and service needs. Expansion of service facilities in these communities is becoming an environmental issue of considerable concern as solid wastes of all kinds were being accumulated at local shops and thrown along the roadsides of these expanding communities. The EMU requested technical and financial support for a landfill in the Thaheua, Hat Gniun and Hatsaykham area to establish a waste disposal system for these villages.

Recommendations: The EMO should assist the EMU to work with the Heads of each village and to set up a committee in each village to manage the collection system and operate the landfill. Fees should be established by the village committee and would be collected monthly from each establishment and household to pay for operating costs. The Company (NNP1PC) would be asked to provide technical assistance for developing a management plan with the committee, then to provide financial support to build the landfill and purchase a small truck for collection of solid wastes. Operating costs for collection, separation of recyclable materials, and disposal in the landfill would be the responsibility of the communities. This is a worthy environmental project for these project impacted communities and the lessons learned by both the EMU and the EMO can be carried over into the new resettlement villages of NNP1 in the future.

3. **Issue: The quality of the water supply for Ban Hatsaykham** is considered below the water quality standards prescribed in the CA (Annex C Social and Environmental Commitments). The IAP met with villagers who believe that “*the river is being contaminated by the workers of the contractor (of the temporary bridge across the river and the Dam Access Road) who use the river for their toilet and waste disposal needs*”. The villagers still believe that “*their children are coming down with more cases of diarrhea and dysentery this year due to the contaminated water supply*”. The EMO Monthly

Monitoring Reports (Oct, Dec. 2014) also reported that the water quality monitoring program indicated good water quality in the Nam Ngiep river, but an issue was found in the discharge water from the contractor's camp showing a very high level of fecal coliform organisms.

NNP1PC has drilled new wells for the Hatsaykham villagers and the water quality results proved to be good and the water safe in terms of all key parameters. Results of sample analyses should be reported to the villagers so that they understand about the quality and safeness of their water supply for food preparation and drinking purposes in seeking safe water supply options.

Recommendations: NNP1PC should continue to evaluate rural water supply options for developing a reliable and appropriate water supply system for all communities affected by construction works, construction workers and worker followers. The selected water supply option should be presented to community leaders to obtain their views and comments, and if agreed a rural water supply unit should be built and tested for use and operation by the villagers themselves. Comments should be received from the villagers with respect to their perception of water quality, taste and acceptance of the water for water supply, and the same water parameters scientifically tested for the treated water product to show a comparison with traditional water sources and to prove to the villagers that the water from the new rural water supply meets with the water quality standards of the CA and is safe for household water uses. Future surveys of diarrhea and dysentery in children in the village should be conducted to build baseline data on this important health issue.

4. Issue: The management of wastes from the construction sites and construction camps of sub-contractors are not in compliance with the guidelines of the ESMMP-CP.

The main contractor Obayashi Corporation must be made to understand that it is his responsibility to ensure that all sub-contractors meet the waste treatment and management standards agreed upon in the CA and EMP. Obayashi finally has some capable environmental staff but they need to appoint an Environmental Manager to head their Environmental Team. The IAP visited the work camps and construction sites of two sub-contractors along the Access Road to the dam site. The Contractors had built toilets, a temporary solid waste collection, separation and storage facility (separating hazardous from construction wastes), kitchen wastes collection, and a wastewater treatment pond system. Most of these facilities were being operated in a more or less satisfactory manner but monthly monitoring reports by the EMO indicate that many non-compliances have had to be corrected and a considerable problem is that the facilities are not being built to ESMMP-CP standards. Obayashi's Environmental Team needs to be enlarged and given more management support by the Construction Manager to enforce compliance to acceptable standards using the threat of withholding payments until proper facilities are installed and operated to meet safe and acceptable standards. Two violations were evident:

- 1) Solid wastes (mixed with some hazardous wastes) were being sent to the Paksan landfill for disposal by sub-contractors. The Paksan Urban Development Administration Authority and Obayashi have agreed that all solid waste from the camps are to be disposed of at the Paksan provincial landfill site. This is unacceptable to the IAP as Paksan operates the provincial landfill site without formal supervision and environmental management. The Paksan landfill does not meet any Lao or international standards for solid waste disposal and the NNP1PC should forbid any project wastes being sent to this site. The sub-contractors must store all of their solid wastes (construction wastes as well) on site at their construction camps and worksites in a safe and protected manner until the project sanitary landfill to be built and operated by Obayashi is completed and put into operation for the NNP1 project. Likewise

NNP1PC must follow the same restrictions and move the construction and operation agreement for the project landfill forward as soon as possible.

- 2) NNP1PC must not permit the collection (and disposal) of septic tanks wastes from the subcontractor septic tanks by outside contractors until the disposal site(s) and disposal methods are documented and approved by NNP1PC as meeting international standards. These wastes can be handled in the future on project lands when lime treatment is included according to USEPA or other international guidelines and when disposal is supervised by EMO.

Recommendations: NNP1PC needs to continue working with the main Contractor to insist that guidelines are followed and that recommendations are implemented as shown in the report *Access Road Rehabilitation – Environmental Audit and Corrective Action Plan Report, February 2014*, in the ESMMP-CP, and according to international standards.

Additional IAP recommendations include the following:

- (i) Obayashi Corporation be required to officially hire an Environmental Manager and designate a full time person for this position.
- (ii) The Environmental Unit of Obayashi should have a team of permanent inspectors to oversee their construction camps and sites and those of all the subcontractors as called for in the ESMMP-CP.

5. **Issue: The EMO needs to build and operate its own environmental laboratory** to monitor and enforce contract commitments. The staff of EMO are competent, well trained and able to carry out environmental monitoring work and do most environmental analyses on their own, including key water, wastewater, and other waste parameters (air quality, noise, vibration, and even future greenhouse gas monitoring requirements). There are currently four staff trained and well qualified. Analytical testing of parameters by the EMO staff would then reduce the need for Earth Systems Lao and other outside laboratories to audit, sample, and analyze the Contractor's (sub-contractors') work, ambient environmental conditions, and oversee daily supervision work. Parameters that are currently measured by NNP1PC Environmental Team include temperature, dissolved oxygen, pH, conductivity, turbidity, and total dissolved solids. Additional parameters that should be measured by the "future" laboratory include total suspended solids, BOD, and bacteria (total coliform, Ecoli, and Fecal coliform). All three bacteria parameters should be included as the Lao drinking water standards reference all three parameters. EMO staff are capable of doing environmental testing and analysis but these staff are only collecting and preserving samples for analysis by outside labs at this time.

The EMO has ordered equipment for dust (particulates PM10), noise and vibration monitoring. This equipment is due to arrive in early 2015.

Recommendation: The IAP advises that NNP1PC should build and operate their own environmental laboratory. In-house analysis benefits the company in two ways: (i) for supervising the contractors to ensure that they are meeting their contract requirements; and, (ii) saves money (payback in a few months to a few years to recover capital costs vs. paying for these analyses by outside laboratories).

In summary, the IAP also met with key EMO staff of the three divisions: (1) watershed biodiversity team, (2) compliance and environment team (environmental monitoring and compliance staff overseeing contractors), and (3) database and control staff, and reviewed several proposed plans (e.g., the sanitary landfill for the main contractor to build and operate) and discussed various environmental issues (e.g., biomass removal plan, water quality monitoring, auditing of contractor camps and work sites, solid wastes management in the villages, recycle opportunities for the sanitary landfill, etc.). The IAP believes that

the EMO is competent and that the combined Lao and Thai staff are experienced and capable of carrying out all their responsibilities in a professional manner that meets international “best practices”. It is recommended that a professional environmental engineer be consulted for future wastewater treatment plans and names of recommended suppliers of package wastewater treatment plants in the region that include backup training and maintenance services.

Environmental Photos



Re-vegetation of selected areas along permanent road during the current dry season to minimize future erosion control



Water quality monitoring in the Nam Ngiep River by the EMO Survey Team (Dec. 2014)



Less attention and investment in mitigation measures is being made by the Contractor to provide erosion control along temporary roads (i.e. lack of drainage and lack of revegetation for slope protection)



Addressing sewage treatment and waste management issues at camp sites is an important environmental issue of dispute between the EMO and the contractors. This sedimentation pond holds wastewater from the camp but provides inadequate treatment efficiency. Wastewater discharges do not meet Lao effluent standards.



Location of NNP1 landfill during the construction phase. Landfill designed by NNP1 to international standards and will be built and operated by Obayashi. All construction wastes will be collected, recyclable materials separated, and wastes disposed of at this site from all contractors and NNP1. Service fees will be calculated and agreed upon prior to start-up.



Disposal of solid wastes at the Paksan landfill is unacceptable. The landfill is not properly planned or managed and does not meet minimum environmental, health and safety standards. The landfill is operated by scavenging families who separate out recyclable plastics, glass, and metals for resale.



Waste disposal landfill at Paksan is operated by scavenging families, who have no protective gear for health and safety measures. The landfill is unacceptable to receive NNP1 project wastes.



There are recycle factories working in Paksan which can receive a wide variety of construction wastes and turn them into reusable raw materials for factories extruding plastic products. Such recycle factories can considerable reduce the size and cost of landfills.

Annex 4: Biodiversity Issues

Biodiversity Issues: Fourth IAP visit to NNP1 7-14 December 2014

This report is based on visits by the Biodiversity expert and other IAP members to the Dam and Resettlement sites for NNP1 in the Nam Ngiep watershed, discussions with the Project Developer, the NNP1 ERM and ADB teams, World Bank, Environmental Protection Fund and MONRE. Lack of progress on key issues such as the biodiversity assessment in the watershed and poor communication and sharing of information within EMO teams are a particular concern.

Executive Summary

Since the last IAP visit in May 2014 the project has signed the Financial Agreement in August 2014 and made good progress in recruiting an expanded and highly competent team of professionals to address watershed and biodiversity issues. Unfortunately, there has still been little or no progress in mobilizing wildlife surveys and a proper assessment of the biodiversity values remaining within the NNP1 watershed. This is particularly serious since NNP1PC and MONRE seem to have decided that the watershed should be the offset area and are already undertaking consultations with provincial agencies and villages. It is a matter of serious concern that these consultations are being made without any real understanding of biodiversity remaining in the watershed or the likely impacts of improved access on habitats and wildlife distributions due to project activities and planned provincial developments.

As stated in previous reports the IAP has serious concerns about both site selection and the decision process in regard to a biodiversity offset. ADB safeguards require the project proponents to avoid loss of critical habitats and to mitigate the impacts of the development. *In addition to mitigation to minimize environmental impacts caused by construction and operational activities, NNP1PC is required to establish a biodiversity offset to compensate for biodiversity losses attributable to the development.*

The Financial Agreement with ADB outlines certain commitments in regard to the Biodiversity Offset to be established by 31 December 2014. These include:

- Establishment of a Biodiversity Offset Advisory Committee;
- Formulation of a work plan on procedures for updating Biodiversity Offset Management Plan; and,
- A time bound action plan and updated budget.

Clearly NNP1PC must support appropriate management activities *for mitigation* within the watershed but current decisions on the watershed's biodiversity value are being made on inadequate information gleaned mainly from grey literature (ERM report) and made in haste to comply with ADB conditions.

There are three key priorities in relation to further progress on a *realistic* biodiversity offset.

- 1) A **rapid biodiversity assessment** should be initiated as soon as possible (and certainly within the current dry season) to determine remaining biodiversity values within the NNP1 watershed area and likely viability of functioning ecosystems there (habitats and wildlife populations).
- 2) Any further decisions re a biodiversity offset should be made **under guidance and in consultation with an independent Biodiversity Advisory Committee** with members appointed because of their expertise and independent of provincial agencies.

- 3) Until the suitability of the watershed has been determined for a biodiversity offset, NNP1PC needs to **separate discussions on biodiversity interventions into two categories** a) watershed management for mitigation; and, b) review of potential sites and options for a Biodiversity Offset.

A realistic biodiversity offset needs to be ecologically viable, manageable and cost effective.

Issue: Proposal of Nam Ngiep Watershed as Biodiversity Offset

As highlighted in May 2014 and subsequent discussions with NNP1PC and ADB, the IAP has serious concerns about the premature decision to identify the NNP1 watershed as the site for a biodiversity offset and to subsume decisions on offsets under the provincial watershed management committees.

Biodiversity offsets are activities that are specifically designed to compensate for biodiversity loss and can have measurable impacts and gains.

Biodiversity offsets are NOT the same as watershed management that is designed to mitigate the impacts of development; although any watershed management activities should be designed to be as biodiversity friendly as possible. Offsets should, wherever possible, ensure no net loss of biodiversity, be “like for like” and be **ADDITIONAL** to watershed management mitigation activities.

The current emphasis on the Nam Ngiep watershed as a biodiversity offset is premature, given the lack of information on biodiversity values within the watershed, likely threats, and new plans for community relocation and development within the new province of Xaysomboon (XSB). These issues were already flagged in earlier IAP reports but have been largely ignored.

1. Lack of biodiversity information

There is currently very little information available on biodiversity values and distribution and status of wildlife populations in the watershed area. The potential list of wildlife species is based mainly on literature surveys and estimates of likely occurrence based on habitat requirements rather than on field surveys (see ERM reports). Lower-lying more species rich habitats will be degraded and/or lost due to salvage logging operations and with flooding of the reservoir while new roads and inundation will provide access to higher altitude forests.

Before any final decisions are taken on an offset site it critical that a rapid biodiversity assessment is carried out within the watershed.

Any decision on biodiversity offset should be depend on whether areas of undisturbed and healthy habitats with viable wildlife populations remain within the watershed. Many Lao forests are already hunted out. It would be a nonsense to designate areas of watershed protection forests as a biodiversity offset if they are empty of native wildlife and no longer functioning ecosystems.

If areas of high biodiversity value do remain within the NNP1 watershed then decisions will need to be made on how they can be protected and maintained (e.g. provincial willingness to designate and support new conservation areas, and what mechanisms, capacity and resources will be available to sustain that protection). If there are no suitable offset options remaining within the watershed then NNP1 needs to review other options outside the watershed (i.e., other sites of known biodiversity value already designated for conservation, for example the Phou Khao Khouay NPA and/or other protected areas or financial

mechanisms to target offset resources for a likely biodiversity outcome, such as funding mechanisms such as Environmental Protection Fund).

While the suitability of the watershed as a biodiversity offset is being assessed, **NNP1PC needs to separate discussions on biodiversity offsets from watershed management interventions.** It is critical that NNP1 identifies and appoints members of an independent Biodiversity Offset Committee as soon as possible to guide the decision process. Members should be appointed based on their technical expertise. This Committee should be independent of, and separate from, the provincial watershed committees.

A biodiversity offset should be real, credible, realistic, implementable, permanent and measurable. Identifying an appropriate biodiversity mechanism with potential for a sustained biodiversity outcome is a critical issue for the project. This is a matter of reputational risk for both the company and ADB.

Recommendation NNP1PC needs to identify and appoint recognised technical experts as members of an independent Biodiversity Offset Committee (national or international) as soon as possible.

Recommendation It is critical that a rapid biodiversity assessment is undertaken within the watershed area during the current dry season and completed by May 2014. Members of the assessment team should be well qualified and experienced in rapid biodiversity assessments; the team could include experienced international consultants with previous experience in Lao PDR but there are also good conservation NGOs and universities in Lao PDR that could assist with surveys and monitoring.

Recommendation Any final decisions on a biodiversity offset should take into account the results of the watershed biodiversity assessments.

Recommendation Until the suitability of the watershed as a biodiversity offset has been verified, NNP1PC needs to de-link and deal separately with watershed management (for mitigation) and review of potential sites and options for a Biodiversity Offset.

Recommendation To avoid raised expectations and subsequent disappointment, no discussions should be held with communities about potential activities to be supported through offset funding until an appropriate offset is decided.

2. Avoid Conflicts with Development

Biodiversity offsets should also:

- i) Not conflict with existing communities' uses or access, in a manner which cannot be resolved by compensation by the Company; and
- (ii) Not conflict with any existing mining concessions or other major development activities likely to have negative impacts on terrestrial and aquatic biodiversity e.g. logging activities.

Much of the lower Nam Ngiep watershed (the project area) falls within the new province of Xaysomboun. Given the extent of current and planned developments in the province (see ERM maps for logging and mining concessions) and new discussions on agricultural development with Chinese investors, it will be important to ensure that any proposed offset areas are not likely to conflict with other government land use and development decisions (e.g., production forests, hydropower dams, large scale agricultural development, etc.). Also that proposed offset areas could be maintained as healthy forests even though the dam and reservoir will give increased access to forests on higher land. During the IAP mission many

Hmong households at Zone 2LR expressed their desire to remain close to their current homes and to relocate to old village lands; the governor of XSB intimated that this would be acceptable to the province. If this is allowed, the village would be resetting within the area proposed as a potential biodiversity offset site in the ERM report. Given these developments, it is critical to move ahead as quickly as possible with support for an integrated spatial plan in XSB (see below). Funding of \$50,000 from NNP1PC was already agreed in May 2014.

3. Integrated Spatial Plan for XSB

Since the boundaries of the newly established province of Xaysomboun overlap the Nam Ngiep watershed and most of the project area it would be extremely useful to support the provincial authorities and MONRE to prepare an Integrated Spatial Plan (ISP) to help direct future development planning in the province. The Governor would welcome such support. Project watershed management activities (reforestation, habitat protection, sedimentation control) in the lower watershed could then be aligned with the ISP.

A budget of \$50,000 was already approved by NNP1C for this ISP in May 2014 but there has been no follow up. During the IAP visit the Watershed Management team met with MONRE and will follow up with the relevant provincial authorities to submit a request to MONRE for help to prepare an ISP.

Recommendation

The IAP recommends that NNP1PC/EMO work with provincial authorities and MONRE to support an integrated spatial plan for XSB to determine XSB development priorities and avoid conflict with proposed offset sites.

4. Budget available for Biodiversity Offset

According to budget tables in the Concession Agreement there \$3.7 million is potentially available for biodiversity activities in addition to a designated payment to the Environmental Protection Fund (EPF) of \$990,000. This gives a potential total of \$4.69 million for biodiversity over 27 years, a very modest amount. Payments to EPF could be used to test how effective and efficient the EPF mechanism can be in achieving monitorable biodiversity outcomes; they should not be used to supplement resources to the watershed management committees as there is already a separate substantial watershed budget. It is interesting to note that the head of EPF. Mr Soukata Vichit suggested that the best way to achieve a biodiversity offset was to channel resources to an existing NPA.

Recommendation Follow up with the EPF as a potential mechanism to contribute to biodiversity offset. Use EPF payments to EPF as pilot to test efficiency and effectiveness of small grants to achieve measurable and attributable biodiversity outcomes, including support to existing NPAs outside watershed.

Issue: Watershed Management

Watershed management is very important but most of watershed management will be necessary mitigation activities and NOT a biodiversity offset as such; so it will be critical to differentiate between the two aspects (and have that understanding among the watershed committees and government agencies). Watershed management activities should be targeted to the lower Nam Ngiep watershed (the project area) as defined in the ERM report but even that area includes production forests and overlapping mining concessions.

According to the Concession Agreement, the Watershed Management Fund has an allocation of \$6.24 million over 27 years. NNP1PC should work with MONRE to determine appropriate watershed management activities, specifically: what is needed, where, when and how that activity would be delivered and by whom (MONRE, community, NGO, contractor, etc.). NNP1PC has already set up Watershed Management Committees within the provinces of XSB and Bolikhamxay and has begun discussions with affected villages to discuss potential watershed activities. At both MONRE and provincial and district levels (PONRE, DONRE) there will be a need for capacity building and mentoring, involving EMU staff in planning, implementation and monitoring activities as part of capacity building. (The Concession Agreement currently allocates \$165,000 for capacity building at MONRE).

Any budget and equipment should be linked to agreed activities with clear objectives and verifiable indicators, and within XSB be consistent with priorities agreed under the spatial plan. The Watershed Management Plan should also include the Houay Soup protection forests (see below).

Beside the NNP1, there are other hydropower projects in the Nam Ngiep River Basin, with likely impacts on soil erosion and water quality. The Watershed Management Team needs to collaborate with other companies for an integrated approach to watershed management in the catchment area. As a priority NNP1PC needs to establish contact and commitments to collaborate with NNP2.

Recommendation Watershed management plan should be integrated with the ISP of XSB.

Recommendation: Strengthen the capacity of provincial EMUs for spatial planning, monitoring forest management, biodiversity and other environmental impacts.

Recommendation Watershed Management Team to contact NNP2 with regard to collaboration on integrated and complementary watershed management plans.

Issue: Houay Soup Resettlement Site

Within the 6,000 ha assigned for resettlement, 4,250 ha is still designated as protection forest, even though some areas are completely cleared and other areas have extensive cultivation. The Department of Land Management requires plans for land use, watershed management, and forest management. EMO and SMO should work together to define how much of this land is required for resettled families and appropriate activities within these protection forests, including sustainable forest management, NTFP collection and agroforestry.

Recommendation Activities to be implemented in the protection forests within the Houay Soup resettlement area should be designed as part of the Watershed Management Plan.

Issue: Critical Habitat Loss along the Dam Access Road (outstanding issue from May)

The access road to the dam travels through the Houay Ngoua provincial forest reserve, a remnant area of forest disconnected from other forest blocks. Although ADB had expressed concern about whether this area was critical habitat, by May 2014 Houay Ngoua was already severely degraded, with all large trees removed and the area to the east of the road re-designated for agricultural clearance by the Governor. It is impossible to know whether this degradation was influenced in any way by planning for the NNP1 dam (underway since 2007). It is clear, however, that new access roads to the dam site and construction activities, including contractors' camps are leading to further loss of habitat and increased access to new areas of forest.

NNP1PC is now providing financial support to provincial authorities for manned checkpoints on the access road and for regular patrols. NNP1 should work with provincial authorities to increase protection and monitoring of remaining watershed forests as well as the degraded Houay Ngoua area. Given NNP1PC's responsibility to minimise the impacts along the access road it is important to establish the current baseline situation, including areas of forest remaining both within Houay Ngoua and other protected watershed forests.

Recommendation Establish accurate baseline data from remote sensing for current status of Houay Ngoua forest reserve (current size) and other protected forests in watershed. Work with PONRE and DFO to mark and protect new reserve boundaries for Houay Ngoua. Monitor status of fauna based on baseline data from the 2013 field surveys. (Still outstanding)

Recommendation Take appropriate action to minimize and mitigate environmental and social impacts along access route and new dam site, including working with PONRE to restrict new forest clearance in the watershed especially along new access routes. Purchase satellite imagery for the whole catchment project areas and Houay Ngoua as a basis for monitoring forest status. (Still outstanding)

Recommendation: Continue support to provincial authorities for check points and spot checks for vehicles and require contractors to implement a **zero tolerance** policy for illegal removal of logs, NTFPs, and wildlife. (Ongoing)

Staffing of EMO and Collaboration between EMO and SMO

During the IAP mission, Dr Prapard proposed a new staff structure for the EMO with no biodiversity position. Given the importance of the Biodiversity Offset this is not acceptable; the Watershed management team should be renamed as Watershed Management and Biodiversity, comprising a land use team (which includes forest management and reforestation) and a biodiversity team responsible for the offset activity and for biodiversity monitoring under the offset arrangements and within the watershed). It is also essential that senior staff make regular visits to the field, including with the IAP. There also needs to be better communication, sharing of information and collaboration within EMO and between EMO and the SMO on issues of joint concern (e.g., forest protection and management within the resettlement site, fisheries, and NTFP surveys and water quality and soil erosion studies). It will be necessary to upgrade equipment (boats and trail bikes) to facilitate these activities. .

Recommendation Within the Watershed Management (and Biodiversity) Team maintain a distinct Biodiversity team with responsibility for designing the Offset and for all biodiversity monitoring within the Watershed and Offset.

Recommendation Improve communications and information sharing within the EMO and between the EMO and SMO.

Recommendation Improve collaboration between EMO and SMO, including development and implementation of joint planning and monitoring of issues of common concern e.g. fisheries and NTFP surveys, with land use planning and forest protection in the Houay Soup resettlement site a priority.