

Environmental and Social Monitoring Report

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Lao PDR: Nam Ngiep 1 Hydropower Project

Prepared by Nam Ngiep 1 Power Company Limited for Asian Development Bank.

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**Report Number 16
of the Independent Advisory Panel
on the Nam Ngiep 1 Hydropower Project
Lao PDR
16th site visit, 22-26 November 2021**

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Table of Contents

	Page no.
List of acronyms and abbreviations	3
Introduction and Summary	4
Part 1: Independent Advisory Panel Actions	6
Part 2: Summary of IAP issues and recommendations	8
• Summary of Resettlement Issues	8
• Summary of No Net Loss Biodiversity Issues of Current Concern	15
• No Net Loss Biodiversity Issues Closed or subject to Continued Monitoring	23
List of Annexes	
Annex 1: Resettlement Issues	26
Annex 2: No Net Loss to Biodiversity Issues	30
Annex 3: Agenda for the Joint ADB-LTA-IAP Virtual Mission, 22-26 November 2021	35

List of acronyms and abbreviations

ADB	Asian Development Bank	LR	Lower Reservoir
AIP	Annual implementation plan	LTA	Lenders' Technical Advisors
BAC	Biodiversity Offset Advisory Committee	MAF	Ministry of Agriculture and Forestry
BIMOF	Biodiversity Impact Mitigation & Offset Framework	m.a.s.l.	meters above sea level
BKX	Bolikhamxay Province	MEM	Ministry of Energy and Mines
BOMP	Biodiversity Offset Management Plan	MONRE	Ministry of Natural Resources & Environment
BOMU	Biodiversity Offset Management Unit	MRC	Mekong River Commission
BSP	Biodiversity Service Provider	msl	mean sea level
CA	Concession agreement	NAFRI	National Agriculture & Forestry Research Institute
CCA	Community conservation agreements	NBCA	National biodiversity conservation area/conservation forest
CDP	Community Development Plan	MAF	Ministry of Agriculture and Forestry
CIA	Cumulative impact assessment	NC-NX	Nam Chouan-Nam Xang biodiversity offset area
COD	Commercial Operating Date	NNL	No net loss to biodiversity
CUZ	controlled use zone	NNP	Nam Ngiep river
DCC	District Coordinating Committee	NNP1	Nam Ngiep 1 hydropower project
DEB	Department of Energy Business	NNP2	Nam Ngiep 2 hydropower project
DEQP	Department of Environmental Quality Promotion	NNP1PC	Nam Ngiep 1 Power Company
DFO	District Forestry Office	NPA	National Protected Area
DFRM	Department of Forest Resources Management	NRM	natural resources management
DG	director-general	NT4	Nam Theun 4 hydropower project
DoF	Department of Forestry	NTFPs	non-timber forest products
DONRE	District Office of Natural Resources & Environment	OP	Operational Phase
E&S	environment and social	PA	Protected Area
e-flow	environmental flow	PAP	project affected people
EGATi	Electric Generating Authority of Thailand International Company	PAH	project affected household
EIA	Environmental Impacts Assessment	PFA	National Protection Forest Area
EMP	Environmental Management Plan	PHXRA	Phouhomxay Resettlement Area (formerly Houay Soup Resettlement Area)
ESMMP-CP	Environmental and Social Management and Monitoring Plan-Construction Period	PLUP	participatory land use planning
EMO	Environmental Management Office	PMO/PO	Prime Minister's Office
EMU	Environmental Management Unit	PONRE	Provincial Office of Natural Resources and Environment
EPF	Environmental Protection Fund	PPA	Provincial Protected Area
ESD	Environment and Social Division	PRMLCRC or	Provincial Resettlement Management and Living Condition Restoration Committee
ESIA	Environmental and Social Impact Assessment	PRLRC	Private Sector Operations Department, ADB
FA	Facility Agreement	PSOD	roller compacted concrete
FCZ	Fish conservation zone	RCC	Resettlement and Ethnic Minority Development Plan
FMM	Financial Management Manual	REMDP/REDP	Reservoir Fishery Co-Management Plan
FMP	Fisheries Management Plan	RFCMP	Reservoir Impoundment Plan
GOL	Government of Lao PDR	RIP	Reservoir Management Plan
GRM	Grievance Redress Mechanism	RPM	Resettlement Management Unit
ha	hectare	RMU	right-of-way
HCCEMMP	Head Construction Contractor's Environmental Management and Monitoring Plan	ROW	strategic environmental assessment
hh	household	SEA	Social Management Office
HSK	Hatsaykham hamlet	SMO	Safeguard Policy Statement
IAP	Independent Advisory Panel	SPS	Technical Division
IAS	Invasive alien species	TD	totally protected zone
ICDP	Integrated conservation and development project	TPZ	Upper reservoir
IEE	Initial environmental examination	UR	United States dollar
IFC	International Finance Corporation	US\$	unexploded ordinance
IP	indigenous people	UXO	Village Development Committee
ISP	integrated spatial planning or invasive species program	VDC	Wildlife Conservation Society
IUCN	International Union for Conservation of Nature	WCS	Watershed Management Office
IWMP	Integrated watershed management plan	WMO	Watershed Management Plan
		WMP	Watershed and Reservoir Protection Committee
		WRPC	Watershed and Reservoir Protection Office
		WRPO	wastewater treatment plant
		WWTP	Xaysomboun Province
		XSB	

Report Number 16 of the Independent Advisory Panel on the Nam Ngiep 1 Hydropower Project Lao PDR 16th site visit, 22-26 November 2021

Introduction and Summary

1. The 16th field visit of the Independent Advisory Panel (IAP) to the Nam Ngiep 1 (NNP1) hydropower project was a virtual site visit conducted on 22-26 November 2021. This is the second virtual site visit. The reason that an in-person physical site visit was not possible and was replaced by a virtual site visit is because of strict international travel restrictions related to the global Corona Virus Disease (COVID-19 pandemic). As it was a virtual visit, the IAP met with Nam Ngiep 1 Power Company (NNP1PC) staff and key Project stakeholders using the Microsoft Teams teleconferencing platform that allowed discussions regarding project-related issues. On two days of the virtual site visit, the IAP had live, two-way audio-visual communication with project affected people (PAP), village authorities, and provincial officials serving on the Resettlement Management Units (RMU) in Bolikhamxay and Xaysomboun provinces; and, including a Thathom District representative when meeting with the representative of the Xaysomboun RMU. The IAP had discussions with concerned NNP1PC staff each day of the virtual site visit. The audio-visual access was well organized by NNP1PC staff.
2. The IAP was comprised of Mr. Anthony M. Zola, an Involuntary Resettlement Specialist and Chairman of the IAP; and, Mr. Will Duckworth, a Biodiversity and No Net Loss Specialist. The IAP was pleased to work with representatives of the Asian Development Bank (ADB) and ADB consultants, as well as with the Lenders' Technical Advisors (LTA) during the visit.
3. As the IAP pointed out to participants at the wrap-up meeting on 26 November 2021, a virtual site visit can only provide impressions, appearances, and indications. Confirmations to the IAP are those provided by the project owner. The IAP requires that verifications be made only after physical site visits are undertaken in the field. Thus, the IAP was given the impression during the visit that **progress** has been achieved on several issues, namely:
 - IAP recommendations continue to be implemented generally effectively.
 - NNP1PC continues to have good relations with key agencies of the Government of Lao PDR (GOL). Bolikhamxay (BKX) and Xaysomboun (XSB) provincial officials indicated satisfaction with the degree of cooperation and coordination with NNP1PC.
 - Based on presentations by NNP1PC staff and discussions with village authorities and a small number of PAP, the lives and livelihood of resettler, self-resettler, and other project affected people and households continue to stabilize. NNP1PC income and livelihood restoration and social development activities are (i) consistent with GOL national development plans and sector strategies;¹ (ii) expected to be sustainable; (iii) sufficiently diversified and commercially oriented; (iv) contribute to food and nutrition security; and, (v) well-accepted by PAP.
 - Significant progress continues in resolving PAP grievances.

¹ The 9th National Social and Economic Development Plan, 2021-2025; and, the Ministry of Agriculture and Forestry's revised Agricultural Development Strategy to 2025 and Vision to 2030.

- An emergency evacuation drill was begun in Phouhomxay Village (Zones 3) but was suspended and not completed due to restrictions imposed by the GOL related to containing the COVID-19 virus.
 - The Wildlife Conservation Society (WCS), providing services as the Biodiversity Service Provider (BSP), has been active and helpful in providing technical input to the No Net Loss to biodiversity (NNL) programme, working in close partnership with NNP1PC to support the Government of Lao PDR (GOL) manage the two areas important for achieving NNL.
 - The management plan for one of these two areas, the Nam Chouan – Nam Xang offset area (NC/NX), is under implementation to the extent possible during COVID-19; some wildlife monitoring (complementing the remote habitats monitoring already underway) has begun, allowing feedback to refine activities.
 - The spatial distribution of patrolling was intensified into the highest priority patrolling area in 2021, having previously been widely spread. Agreement was made to improve the quality of patrols in terms of detection and reduction of threats, although COVID-induced restrictions on movement have withheld the necessary activity. The wildlife monitoring showed that law enforcement to date has prevented a drastic collapse of snaring-sensitive wildlife populations and there are good grounds for optimism that these recent and planned enhancements in patrolling may allow population rebound, as required under the NC/NX management plan (the 'BOMP').
 - In the NNP1 Sub-catchment, one of the two provinces has begun land-based patrolling, and both provinces have undertaken some reservoir-based patrolling.
 - Although the IAP Watershed and Biodiversity Management Expert's role was scheduled to end during 2021, but in recognition of the ongoing challenges of implementation the role is extended to late 2022.
4. The IAP is concerned about the following **challenges** that NNP1PC is managing:
- Continuing delays in repairing or improving agricultural infrastructure at PHXRA and Zone 2UR continue, namely: (i) seven resettler households at PHXRA receiving insufficient or no water for irrigation – which is a Concession Agreement (CA) non-compliance issue; (ii) the defective suspension bridge in Zone 2UR remains unfinished more than two years after failing; and, (iii) the unfinished new water supply system to replace the previously built system in Ban Pou, Zone 2UR. NNP1PC management recognizes the difficulties with these issues and has set up a team of local and international experts to supervise and advise both local Contractors. Although NNP1PC and GOL officials collaborated to begin conducting an emergency evacuation drill in downstream areas, the drill was halted due to restrictions on unnecessary movement related to efforts to contain the COVID-19 virus. The IAP notes once again that a full evacuation drill has not been conducted even though the project has been fully operational since 5 September 2019, the commercial operating date (COD).
 - The IAP is concerned that only the activities proposed for support by NNP1PC's Community Development Fund (CDF) are infrastructure projects (i.e., paving of roads at the PHXRA; primary school classrooms in Thathom and Hom districts, Xaysomboun Province; and, construction of water wells in two downstream host villages). However, requests made to the IAP by resettlers in PHXRA and PAP in zone 2UR included support for non-infrastructure community development activities. In addition, human development needs seemingly are overlooked by administrators of the CDF, specifically: continuing support for two medical staff at the PHXRA Health Center, where NNP1PC's support is scheduled to terminate soon; low enrolment levels of school-age children in primary school; and, high drop-out rates from secondary school and from the NNP1PC scholarship program. The IAP is concerned that the current use of the CDF may reflect district and

provincial infrastructure priorities rather than critical human resource and community development needs that contribute to improving the human resources required for long-term human development and more sustainable communities.

- The IAP biodiversity specialist is concerned about the following challenges that NNP1PC's No Net Loss programme is facing, so that, in sum and reflecting the situation as of the IAP's 14th visit for NNL aspects (February 2020), the No Net Loss programme is now severely behind schedule:
 - The foundation of NNL is reduction of illegal offtake to negligible levels within the Nam Ngiep 1 Sub-catchment, which lies mostly within Xaysomboun province. Yet, enforcement to reduce threats has barely started there. Considerable habitat encroachment took place in the Xaysomboun part of the Sub-catchment during the 2019-2020 dry season as, presumably, did illegal harvest of wild biota. A near-absence of law enforcement during that period presumably emboldened people to undertake in 2020–2021 even higher levels of cultivation, grazing and offtake. The situation is likely to worsen yet further in the coming year, unless effective law enforcement activities are in place.
 - There is an entrenched disagreement between the NNP1PC and WRPO concerning the interpretation of GoL payment levels for activities involving overnight stay in forest. This has prevented the submission of an Annual Implementation Plan (AIP) by the province's WRPO for 2021 and the implementation there of any activities involving such overnight stay. Implementation of NNL activities in the Sub-catchment is now way behind the area's management plan (the WMP).
 - COVID-19 has had a devastating effect on many aspects of planning and implementation given the need for face-to-face team-work involving people working for multiple bodies and based in various places.
5. This report consists of two parts: Part 1 presents the activities and actions of the two participating members of the IAP; and, Part 2 presents a summary of the Involuntary Resettlement and No Net Loss to Biodiversity Issues related to CA commitments of NNP1PC in matrix format. Two annexes present additional comments of individual members of the participating IAP.
 6. This report was edited by Mr. Anthony M. Zola, the Involuntary Resettlement Specialist and Chairman of the IAP. The annexes were written by individual members of the IAP.

Part 1: Independent Advisory Panel Actions

7. The Independent Advisory Panel (IAP) for the Nam Ngiep 1 hydropower project (NNP1) in Lao PDR undertook the 16th visit to NNP1 on 22-26 November 2021. The IAP members participating in the 16th visit included the following:
 - Mr. Anthony M. Zola, Resettlement Specialist, Chairman (part of the Social Team)
 - Mr. Will Duckworth, No Net Loss Specialist (part of the Environmental Team)
8. NNP1PC has extended the contracts of the IAP Involuntary Resettlement Specialist until September 2023; and, the Watershed and Biodiversity Management Expert until late 2022.
9. If travel restrictions related to the global COVID-19 pandemic are lifted, the IAP proposed to NNP1PC that the 17th IAP site visit be undertaken in person during the last quarter of 2022.

10. This IAP report to NNP1PC and the ADB covers the following topics: (i) issues of concern to the IAP; and, (ii) IAP recommendations for actions to NNP1PC based on the Concession Agreement, official / legal documents of the Government of Lao PDR (GOL), ADB Safeguard Policy Statement (2009), Equator Principles, and international best practices. Actions recommended by the IAP are time-based; meaning that NNP1PC is either legally obligated to or is recommended to undertake and/or complete these actions within a specific period. The IAP categories of concern are as follows:
- **High/Very High/Urgent** category of concern: The Project should act **immediately**;
 - **Medium** category of concern: The Project should act within **1-2 months**; and,
 - **Low** category of concern: action should be taken **before the next IAP visit**.

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

11. Copies of this IAP report will be submitted to the following individuals:
- (i) Mr. Masahiko Umesaki, Managing Director, NNP1PC
 - (ii) Ms. Khamlar Phonsavat, Deputy Managing Director, Environmental and Social Division
 - (iii) Mr. Karan Raj Gulshan, ADB, Private Sector Operations
 - (iv) Ms. Jocelyn Erlinda S. Munsayac, ADB, Principal Safeguards Specialist
 - (v) Ms. Aida Khalil Gomez, ADB, Safeguards Specialist (Environment), PSOD
12. The 16th IAP virtual site visit was undertaken over a five-day period; from Monday, 22 November to Friday, 26 November 2021. The agenda for the virtual site visit is presented as Annex 3.
13. The 17th IAP site visit is proposed for the last quarter of 2022, subject to lifting of international travel restrictions related to COVID-19.
14. The remainder of this report consists of the following:
- (i) Part 2: Summary of resettlement and No Net Loss to Biodiversity issues, including the IAP's level of concern and recommendations; and,
 - (ii) Additional comments of the IAP presented in individual technical annexes, namely:
 - Annex 1: Resettlement Issues
 - Annex 2: No Net Loss to Biodiversity Issues
 - (iii) Annex 3: Agenda for the Joint ADB-LTA-IAP Virtual Mission, 22-26 November 2021

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*
R4	<p>Site visits: 7-14 December 2014 3-10 May 2015 6-13 December 2015 11-18 December 2016 4-11 June 2017 12-19 November 2017 20-27 May 2018 9-16 December 2018 2-9 June 2019 8-14 December 2019 Virtual site visit: 7-11 December 2020 22-26 November 2021</p> <p>Facility Agreement (FA) Schedule 14, Social Milestones, Item 2</p> <p>Concession Agreement</p> <ul style="list-style-type: none"> Annex C, Appendix 3, Table 1-1, b Annex C, Appendix 7, Entitlement Matrix, p. C-15, item 4, Entitlement Policy <p>REDP</p> <ul style="list-style-type: none"> Chapter 14, Section 14.4.5.1 Chapter 14, Section 14.4.6 <p>Livelihood Master Plan</p> <ul style="list-style-type: none"> Section 4.3, para. 3 Section 4.6.5, para. 1 	<p>PHXRA</p> <ul style="list-style-type: none"> CA requirement: Livelihoods of all displaced persons of Hatsaykham will be enhanced on net income test of CA, i.e., 120% of average baseline net income within two (2) years after commencement of physical relocation. Irrigation system is not yet fully operational. 	<ul style="list-style-type: none"> This milestone has not been met. The Operations Manual for the Re-Regulation Dam does not include release of water for the irrigation system as part of operations. The poor performance of the irrigation system has been outstanding for more than three years. NNP1PC reports that they continue to repair and adjust the irrigation system. Installation of a fully operational irrigation system was to have been completed by 2016. 	<p>The IAP is disappointed with the quality of rural infrastructure at PHXRA:</p> <ul style="list-style-type: none"> The CA requires a functioning irrigation system including pumps, gates, gauges, and distribution systems for all replacement paddy agricultural lands based on MAF standards. The REDP calls for the re-regulation reservoir to supply water for irrigation for about 8 months during the dry season. The irrigation system for the paddy rice fields was to have been installed by the end of 2016. The Livelihood Master Plan commits NNP1PC to provide irrigation for dry season crops including watermelon. <p>Recommendations</p> <ul style="list-style-type: none"> IAP recommends NNP1PC management give the highest priority to completing construction of and demonstrating effectiveness of the irrigation system at PHXRA to ensure of PAPs achieve income restoration and rehabilitation and to build confidence in the PHXRA community. 	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: 7-14 December 2014 3-10 May 2015 6-13 December 2015 11-18 December 2016 4-11 June 2017 12-19 November 2017 20-27 May 2018 9-16 December 2018 2-9 June 2019 8-14 December 2019 Virtual site visits: 7-11 December 2020 22-26 November 2021 Concession Agreement, Annex C, Appendix 7	PHXRA <ul style="list-style-type: none"> • Some resettler households had reported confrontation with previous land occupants at PHXRA • Outsiders (self-resettlers) continue to graze large livestock at PHXRA • Enforcement of PLUP at PHXRA 	<ul style="list-style-type: none"> • PAP house certificates and land titles for home plots have been issued but not handed over to landowners. • PLUP completed and paddy land conflicts have been resolved. • Fisheries Co-Management Plan has not yet been approved by XSB RMU and provincial authorities. 	<ul style="list-style-type: none"> • BKX RMU committed to IAP to follow up on issuing of house certificates and land documents to resettlers. • BKX RMU confirmed to IAP that land conflicts have been resolved. RMU and district officials agree that self-resettlers (i.e., outsiders) should be able to graze their large livestock at PHXRA. The IAP has yet to verify that this arrangement is acceptable to PHXRA resettlers. • The Watershed Management Plan and Fisheries Co-management Plan have not yet been approved by XSB provincial officials. <p>Recommendation</p> <ul style="list-style-type: none"> • The IAP recommends that NNP1PC continues to (i) follow-up on the unresolved management plans; and, (ii) encourage a consensus among GOL officials to approve the two plans. 	Medium Continue monitoring
<p>*Level of concern</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended 					

Summary of Resettlement Issues

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
R7	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 3-10 May 2015 6-13 December 2015 15-22 May 2016 11-18 December 2016 4-11 June 2017 12-19 November 2017 20-27 May 2018 9-16 December 2018 8-14 December 2019 Virtual site visits: 7-11 December 2020 22-26 November 2021	Zone 2UR <ul style="list-style-type: none"> Livelihood restoration of PAP in three villages in Zone 2UR requires continued support. Management of the Nam Ngiep 1 reservoir and fisheries remains unclear. Water supply for Ban Pou remains under construction. Pegging of FSL of NNP1 reservoir at 321 masl was inaccurate resulting in 172 grievances being filed by PAP. Unanticipated Impacts of FSL on National Road No. 1D. 	<ul style="list-style-type: none"> NNP1PC reports that agricultural land access tracks are complete and will be handed-over to village authorities in the 4th quarter of 2021. Failed suspension bridge has not been usable since April 2018. NNP1PC reports that the bridge contractor requested a second extension to complete the work from 01 November 2021 to 31 January 2022. The current progress of the work is 49.38%. NNP1PC continues to provide a barge to facilitate PAP crossings to agricultural lands. Hom District authorities have pre-empted NNP1PC and XSB RMU by granting a fish purchase concession at the 2LR fish landing, creating a monopsony. In December 2020 NNP1PC reported that: <ul style="list-style-type: none"> Provincial approval of Reservoir Fishery Co-Management Plan (RFCMP) was received in Dec 2020; activities will be detailed in XSB WMP. Fishery regulations for XSB districts to be issued by district officials after RFCMP approval Implementation of the Fisheries Plan and the regulations has not begun. Unanticipated Impacts of FSL on National Road No. 1D: NNP1PC's obligation is to repair part of road affected by FSL. However, impacted landowners lack documentation to support their claims. The PRLRC is considering this matter. 	<ul style="list-style-type: none"> The suspension bridge has not functioned since April 2018, reportedly delaying PAP agricultural investments. Reservoir FSL markers were inaccurate resulting in payment of additional compensation to PAP. Compensation to owners of impacted land is being considered by the PRLRC. Compensation is outstanding for reservoir flooding due to technical difficulties with marking FSL on the NNP1 Reservoir. It seems likely that water levels at the main reservoir can reach 321m due to backwater effects at FSL (320m). Additional impacts will be considered on a case-by-case basis. <p>Recommendations</p> <ul style="list-style-type: none"> IAP recommends that NNP1PC give priority and urgent attention to replacing the suspension bridge. IAP recommends NNP1PC intensify follow up of the fisheries management rules with XSB provincial officials. (See recommendation in R5, above) 	High

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
* Level of Concern: <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended 					
R8	Site visits: 7-12 January 2013 17-24 November 2013 4-11 May 2014 7-14 December 2014 3-10 May 2015 6-13 December 2015 15-22 May 2016 11-18 December 2016 4-11 June 2017 12-19 November 2017 20-27 May 2018 9-16 December 2018 2-9 June 2019 8-14 December 2019 Virtual site visits: 7-11 December 2020 22-26 November 2021 Concession Agreement, Annex C, Appendix 7	Zone 2LR self-resettlers <ul style="list-style-type: none"> • Some self-resettlers in Hom District returning to use former lands in NNP1 watershed, including to graze livestock • Some self-resettlers in Thathom District, XSB are lagging in terms of livelihood restoration 	<ul style="list-style-type: none"> • 7 hold-out households originally from Namyouak Zone 2LR self-resettled in June 2018 are stable and integrated into their new communities. • NNP1PC has assigned livelihood development staff to assist with and monitor self-resettler livelihood restoration in the Project Area. • NNP1PC has implemented livelihood development programs in all zones that focus on the lagging, splitting, and vulnerable households with specific plans tailored for them. 	Recommendation <ul style="list-style-type: none"> • The IAP recommends that in 2022, NNP1PC continue to implement its livelihood restoration program for self-resettlers that will focus on lagging and vulnerable households in Thathom and Hom districts, XSB Province. 	Low
* Level of Concern: <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • High - immediate action recommended 					

Summary of Resettlement Issues

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*		
R11	<p>Site visits: 20-27 May 2018 9-16 December 2018 2-9 June 2019 8-14 December 2019 Virtual site visits: 7-11 December 2020 22-26 November 2021</p> <p>CA, Annex C, Environmental and Social Obligations, Clause 97</p>	<p>Community Development Fund (CDF) Use of the CDF has been only for infrastructure. The CDF has not been used for building social capital or for human resources development.</p> <p>Resettlers and PAP appear not understand the difference between NNP1PC obligations (under the CA and to the GOL) and community development activities that can be funded through the CDF.</p>	<p>NNP1PC reports the following infrastructure projects would be supported by the CDF:</p> <table border="1" data-bbox="801 395 1464 804"> <tr> <td data-bbox="801 395 1464 552"> <ul style="list-style-type: none"> ▪ <i>BKS provincial CDF Committee agreed to:</i> 1) Road pavement for PHX village include the access from Namngiep bridge to PHX village and the internal streets. 2) Drill 2 wells water for HGN and TH villages </td> <td data-bbox="801 552 1464 804"> <ul style="list-style-type: none"> ▪ <i>XSB provincial CDF Committee agreed to:</i> 1) Construction a primary school building (05 study rooms + 01 Office room + 4 rooms toilets + 1 water tower) at Houayxay-PhouNgou village, Hom district, XSB Province. 2) Construction a primary school building (05 study rooms + 01 Office room + 4 rooms toilets + 1 water tower) at Nonhinhae Cluster, Vanghai village, Thathom district, XSB Province. </td> </tr> </table>	<ul style="list-style-type: none"> ▪ <i>BKS provincial CDF Committee agreed to:</i> 1) Road pavement for PHX village include the access from Namngiep bridge to PHX village and the internal streets. 2) Drill 2 wells water for HGN and TH villages 	<ul style="list-style-type: none"> ▪ <i>XSB provincial CDF Committee agreed to:</i> 1) Construction a primary school building (05 study rooms + 01 Office room + 4 rooms toilets + 1 water tower) at Houayxay-PhouNgou village, Hom district, XSB Province. 2) Construction a primary school building (05 study rooms + 01 Office room + 4 rooms toilets + 1 water tower) at Nonhinhae Cluster, Vanghai village, Thathom district, XSB Province. 	<p>The requests made to the IAP by resettlers in PHXRA and PAP in 2UR during the virtual site visit included points that are beyond the obligations of NNP1PC. The requests can however be funded through the CDF.</p> <ul style="list-style-type: none"> • PXRA: Requests included: a fund from which resettlers can borrow for trading; a fund from which resettlers who have been provided with skills training can borrow to start up a business. • Zone 2UR: Requests included only infrastructure items, namely: paving village roads; improving a village access road; water supply meters; improving the highway in front of the 2UR market; an improved village loudspeaker system; and, rubber tree seedlings. • In addition, at PHXRA: (i) NNP1PC will soon end support for 2 of 4 medical Health Center staff; and, (ii) enrolment of school-age children in primary school is below average; and, drop-out rates of secondary school students and the NNP1PC scholarship program are high. <p>Recommendations</p> <ul style="list-style-type: none"> • The IAP recommends that NNP1PC work with CDF provincial committees to emphasize use of the CDF for human resources development and PAP quality of life issues at all locations, while de-emphasizing infrastructure. 	Medium
<ul style="list-style-type: none"> ▪ <i>BKS provincial CDF Committee agreed to:</i> 1) Road pavement for PHX village include the access from Namngiep bridge to PHX village and the internal streets. 2) Drill 2 wells water for HGN and TH villages 	<ul style="list-style-type: none"> ▪ <i>XSB provincial CDF Committee agreed to:</i> 1) Construction a primary school building (05 study rooms + 01 Office room + 4 rooms toilets + 1 water tower) at Houayxay-PhouNgou village, Hom district, XSB Province. 2) Construction a primary school building (05 study rooms + 01 Office room + 4 rooms toilets + 1 water tower) at Nonhinhae Cluster, Vanghai village, Thathom district, XSB Province. 						
<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*
R12	<p>Site visits: 12-19 November 2017 20-27 May 2018 9-16 December 2018 2-9 June 2019 8-14 December 2019 Virtual site visits: 7-11 December 2020 22-26 November 2021</p> <p>Concession Agreement, Annex C, Appendix 7, Entitlement Matrix, Item 5, Item 10</p> <p>Concession Agreement, Annex C, Environmental and Social Obligations, Environmental Management System</p> <p>ADB, Social Safeguards Policy 2009, SR 1 requirement</p> <p>ESMMP-OP Vol III Section 7</p> <p>EIA, Section 7.2.1.9, p. 7-30</p> <p>EAP (DRAFT), October 2020</p>	<p>Downstream (Zone 4) villages During previous IAP visits to Zone 4 villages, downstream villagers had reported the following:</p> <ul style="list-style-type: none"> • Periodic high & low water levels in Nam Ngiep river • No assessment of potential impacts from release of sediment into the Nam Ngiep river was undertaken before flushing sediment from NNP1 re-regulating dam resulting in loss of common resources by Zone 4 & 5 villages • No IEE is planned if the remaining sediment is to be released • Emergency evacuation drills had not been conducted in downstream villages since COD in September 2019. 	<ul style="list-style-type: none"> • An emergency evacuation drill was conducted at PHXRA in September 2021. • Emergency evacuation drills were planned for other downstream villages throughout September and October 2021 but were postponed due to GOL travel restrictions related to COVID-19. • IAP continues to monitor NNP1PC discharges from the Powerhouse into the Nam Ngiep river based on hydrological data reported by communication@namngiep1.com. No unusual variations in discharge have been reported. • The Nam Ao earthen dam located in the Nam Nam Ngiep basin collapsed on 11 September 2017, endangering downstream villages, fish habitats, and key NNP1PC assets; and, requiring NNP1PC to release sediment that accumulated behind the NNP1 dam. NNP1PC recently reported to the IAP that no additional sediment would need to be released into the Nam Ngiep river. • NNP1PC reports that: <ul style="list-style-type: none"> - GOL provided emergency evacuation training during October/November 2020 to 13 downstream villages including secondary/vocational schools and banana plantations. - Loudspeakers were checked and replaced to better reach people in all downstream villages; and, - Safety zones in these villages were improved; access tracks were cleared for easy access in case of emergency. 	<p>Recommendations</p> <ul style="list-style-type: none"> • IAP recommends that an IEE be conducted to identify potential negative impacts on Zones 3, 4, and 5 prior to any additional flushing of sediment from NNP1 re-regulating dam. • IAP recommends that NNP1PC and concerned GOL agencies collaborate to reschedule and conduct an emergency evacuation drill simultaneously in all downstream villages as soon as the GOL relaxes travel and movement restrictions related to the COVID-19 pandemic. • IAP recommends that in future the LTA's Environmental Expert follow up and report on the issues raised by the IAP in item R12; at which time the IAP will terminate monitoring of this issue. 	High

* Level of Concern:

- 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*
R13	<p>Site visits: 12-19 November 2017 20-27 May 2018 9-16 December 2018 2-9 June 2019 8-14 December 2019 Virtual site visits: 7-11 December 2020 22-26 November 2021</p> <p>Concession Agreement, Part II, Clause 53, item g., i, ii; and, items h-p</p> <p>Concession Agreement, Annex C, Appendix 7, Category 4 PAP, pp. 130-131; and, Entitlement Matrix, Item 10</p> <p>REDP, Annex B, Section 6.1, General Description</p>	<p>Zones 3 and 5</p> <ul style="list-style-type: none"> During IAP site visits prior to 2020, NNP1PC reported that grievances from Hatsaykham (HSK) (Zone 3) self-resettlers and Hat Gniun (Zone 5) host villagers have been resolved but solutions are not accepted by PAP resulting in tension and conflict between PHXRA resettlers and host villagers Some HSK self-resettlers who arrived in HSK after the cut-off-date have moved to Hat Gniun to reclaim land previously used, for which others have been compensated 	<ul style="list-style-type: none"> The BKX RMU reports that host villagers have agreed to comply with provincial and district officials' instructions to respect the results of the PLUP conducted at PHXRA and host villages. Resettlers at PHXRA have been granted title to their residences and agricultural lands. The RMU added that any encroachment on titled land by host villagers in the future would be illegal and result in legal action being taken against them. PHXRA village authorities confirmed to the IAP during the November 2021 virtual site visit that (i) host villagers agreed to respect the PLUP; and, (ii) HSK self-resettlers continued to graze their cattle on grazing lands allocated to PHXRA. The BKX RMU reported to the IAP that RMU and district officials investigated the issue of HSK self-resettlers grazing their cattle on designated grazing lands allocated to PHXRA resettlers. Their conclusion was that (i) the HSK self-resettlers did not have access to other nearby grazing lands for their cattle; (ii) the area designated as grazing land at PHXRA (400 ha) was sufficient to accommodate cattle belonging to both PHXRA resettlers and HSK resettlers; and, (iii) resettlers and self-resettlers should share the grazing land by working together to improve management of the grazing land by using fencing to designate areas for grazing by different groups, thus benefitting both groups. 	<ul style="list-style-type: none"> The BKX RMU and district officials have taken the necessary actions to resolve these issues. IAP did not inter-act with villagers in Zones 3 and 5 during the virtual site visits in December 2020 and November 2021 so could not verify that host villagers agreed to respect the PLUP. The IAP will follow up with host villagers to verify their intention to respect the PLUP, before closing this issue. 	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/Very high - immediate action recommended 					

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
B4	Site visits: 7-12 Jan 2013 17-24 Nov 2013 4-11 May 2014 3-10 May 2015 20-27 May 2018 9-16 Dec 2018 2-9 June 2019 23-29 Feb 2020	Introduction of potentially invasive species as part of construction, revegetation, agriculture, and fisheries schemes. <ul style="list-style-type: none"> Not assessed in November 2021. 	As Report 14a. No new assessment.	Recommendations <ul style="list-style-type: none"> As Report 14a. No new recommendations. 	Medium
B5	Site visits: 7-12 Jan 2013 17-24 Nov 2013 3-10 May 2015 11-18 Dec 2016 20-27 May 2018 2-9 June 2019 23-29 Feb 2020 Virtual Dec 2020 Virtual Nov 2021	Information base for biodiversity in Sub-catchment and NC/NX is weak, and existing capacity for monitoring (both general biodiversity, and specific No Net Loss [NNL] targets) is weak.	Biodiversity values are currently monitored insufficiently to inform adaptive management for NNL. Much of the monitoring programme has been finalised and implementation has started (e.g. NC/NX camera-trapping), but progress has been set seriously back by COVID and Xaysomboun per diem dispute (B51).	Recommendations <ul style="list-style-type: none"> Biodiversity Service Provider to finalise the monitoring protocols, making where apt even major changes from the monitoring proposal it inherited, provided clear explanation is given why these will improve the ability to monitor progress to NNL. Identify and contract external specialists. Proceed with monitoring, as COVID permits. Resolve the Xaysomboun per diem dispute (B51) and implement first-round camera-trapping in Sub-catchment. 	High
B11	Site visits: 3-10 May 2015 11-18 Nov 2017 9-16 Dec 2018 2-9 June 2019	Collaboration with Nam Ngiep 2 (NNP2) on biodiversity management. Breach of Nam Ao dam showing need for cross-collaboration and information sharing. <ul style="list-style-type: none"> Not assessed in November 2021. 	<ul style="list-style-type: none"> Developments at NNP2 impact on habitats and biota, including water quality and aquatic biodiversity. Limited recent contact with NNP2. Report 14a recommended assessment "on next IAP visit", intending the next physical visit. 	Recommendations <ul style="list-style-type: none"> Continue contact with NNP2 to facilitate collaboration and complementarity of biodiversity management particularly in respect of NNP1's NNL obligations. Any NNP1 party with concerns should alert the IAP. IAP to assess on next IAP physical visit. 	Not assessed
<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/Very high - immediate action recommended 					

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
B34	Site visits: 11-18 Nov 2017 20-27 May 2018 2-9 June 2019	Road upgrade from Viengthong district, Bolikhamxay province to Vietnam border. Not assessed in November 2021.	<ul style="list-style-type: none"> Road upgrading has started. This eases access for a variety of wildlife and forest lawbreakers unless adequate law enforcement is in place, which it can safely be assumed not to be at present. 	<p>Recommendations</p> <ul style="list-style-type: none"> Recommendations of the IAP's 13th visit stand unless situation has changed. IAP to assess on next physical IAP visit. 	Not assessed
B36	Site visits: 11-18 Nov 2017 20-27 May 2018 9-16 Dec 2018 2-9 June 2019 23-29 Feb 2020 Virtual Dec 2020 Virtual Nov 2021	<p>Integrity of the Sub-catchment's Totally Protected Zones (TPZs), which include a large part of the reservoir:</p> <ul style="list-style-type: none"> Access for forest and wildlife lawbreakers via the reservoir and roads requires effective deterrence. Minimal incursion into TPZs 1 and 2 of Sub-catchment is the foundation of NNL; in particular, access across the river (now reservoir) to the western part of TPZ 1 has to be well below that of pre-project levels. 	<ul style="list-style-type: none"> Situation in February 2020 was profiled in IAP report 14a. Situation as of Nov. 2021 stated by all on-ground parties (NNP1PC, BSP, WRPOs) to be greatly deteriorated with, in Xaysomboun, widespread settlement (with buildings being constructed, evidently for longer expected life), clearance, cropping and livestock, as well as poaching of timber and other wild plants and animals. WMP prescribes 'Develop and implement a comprehensive law enforcement and patrolling strategy' (Table 1-1, sect. 4) but COVID has prevented the intensity of face-to-face contact necessary for a truly participatory (and thus useful) process and the strategy remains under development. Of the interim strategy in place, the reservoir remains under-protected, with boundary checkpoints not yet operational and patrolling well below anticipated levels; land patrolling 	<p>Recommendations</p> <ul style="list-style-type: none"> Conclude the development of the enforcement strategy as per WMP, ensuring resources are not spread too thin (see also B48). Continue with the interim law enforcement approach (as COVID and Xaysomboun per diem dispute allow), with particular priority to the reservoir (patrols and checkpoints). Identify and involve all relevant government and other bodies to tackle the issue of illegal settlement, clearance, and agriculture; this cannot be solved by ranger patrolling or the WRPOs alone. 	Urgent

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
			in Xaysomboun is almost non-existent (reflecting per diem dispute, B51); and land patrolling in Bolikhamxay is being implemented where not in conflict with COVID.		
B38	Site visits: 20-27 May 2018 2-9 June 2019 23-29 Feb 2020 Virtual Dec 2020 Virtual Nov 2021	The Sub-catchment's proposed TPZ 1 overlaps with pre-designated national production forest.	<ul style="list-style-type: none"> • So far, the production forest categorisation has not apparently led to obvious implementation problems. • Re-designation of production forest is a desirable aim but may be a lengthy process and is not a priority at this stage. 	Recommendations <ul style="list-style-type: none"> • Pause input into this point while the issues holding up NNL implementation in the Sub-catchment are addressed satisfactorily, or the production forest designation causes direct implementation problems. • In the interim, ensure no extractive forestry occurs within the TPZs. 	Medium
B40	Site Visits: 9-16 Dec 2018 2-9 June 2019 23-29 Feb 2020	Fishing in the reservoir within TPZ1. <ul style="list-style-type: none"> • Not assessed in November 2021. 	In terms of achieving NNL, controlling fishing on the reservoir is of lower importance than preventing illegal offtake in the land habitats of the TPZs. But the presence of any non-project or security people on the reservoir's TPZ complicates all enforcement.	Recommendation <ul style="list-style-type: none"> • IAP to assess on next physical IAP visit. 	High
B43	Site Visits: 9-16 Dec 2018 2-9 June 2019 23-29 Feb 2020 Virtual Dec 2020 Virtual Nov 2021	Oversight on Biodiversity issues.	<ul style="list-style-type: none"> • Originally envisaged that IAP visits conclude in Dec 2018, but IAP was extended to 2021, and then to late 2022. • Periodic independent auditing of progress of NNL is required. • The erratic start (notably BSP deployed only in 2020) and challenges in 2020 and 2021 by COVID-19 means that post-2022 oversight additional to the independent auditing is required. The IAP is not the only option: the 	Recommendation Before the last IAP assessment under the current contract (late 2022), NNP1PC and ADB agree on a mechanism of subsequent external NNL oversight with a periodicity comparable to IAP (in non-COVID circumstances). Another option NNP1PC should consider is for the LTA to absorb this role since it is a standing body throughout the concession period and may be a suitable body to absorb this role.	Low

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
			LTA is a standing body throughout the concession period and may be a suitable body to absorb this role.		
B45	Site Visit: 23-29 Feb 2020 Virtual Dec 2020 Virtual Nov 2021	<ul style="list-style-type: none"> • AIP preparation, approval, and consequent funds disbursement. 	<ul style="list-style-type: none"> • The process of AIP agreement has been slower and more complicated than for other area-focused conservation projects in the BSP's considerable Lao experience. Some streamlining was introduced this year and followed where COVID considerations allowed and was beneficial. • Project partners are concerned by the great delays in AIP submission and approval. • Delays with the AIP retard implementation, posing a direct risk to NNL, most notably by reduced, delayed and/or suspended law enforcement activities. • The Xaysomboun per diem dispute (B51) has prevented a full AIP for that WRPO being submitted in 2021. • Flexibility was shown in the release of funds to Xaysomboun WRPO for activities not affected by the dispute. • Both WRPOs and BOMU said that NNP1PC gave insufficient discussion or even statement of reasons for changing the submitted AIPs and for providing a smaller budget than requested. 	<p>Recommendations</p> <ul style="list-style-type: none"> • Resolve the Xaysomboun per diem dispute (B51). In the interim continue with release of funds for agreed activities that are not affected by the per diem dispute. • Ensure that all feedback from GoL bodies into the draft FMM is considered fully and that any points of contention are resolved. • In the interim, DOF/MAF has agreed to issue an official notification on the deadlines for AIP2022 preparation; all parties should follow this, and the lead of Bolikhamxay WRPO, which submitted its first draft AIP2022 on 9 Nov 2021. • Particularly during COVID-induced restrictions on face-to-face meetings, take particular care to discuss and explain the reasons underlying any changes necessary to a submitted AIP and associated budget. 	Urgent

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
			<ul style="list-style-type: none"> The face-to-face process ideal for participatory AIP draft generation, discussion and agreement has been seriously challenged by COVID. NNP1PC is preparing a Financial Management Manual (FMM), based on GoL's own policies, which includes specific roles, process, and timeline for AIP generation. On 22 Nov 2021 the draft was sent to DOF/MAF, the WRPOs and BOMU for review. 		
B47	Site Visit: Virtual Dec 2020 Virtual Nov 2021	Patrolling routes in NC/NX.	<ul style="list-style-type: none"> The BOMP specifies patrolling should be started in the highest priority part of the TPZ and expanded outside, even to the 'high' priority parts, only when the highest part is secured from snaring and other major threats. Patrolling before 2021 was spread widely in the TPZ with no particular concentration in the highest-priority part. Thus, in 2021 patrolling was highly focused on the highest-priority part. Too many threats remain in the highest-priority protection area for substantial effort to be apt elsewhere in NC/NX. Camera-trapping indicates that law enforcement in NC/NX to date has prevented a major collapse in snare-sensitive 	<p>Recommendations</p> <ul style="list-style-type: none"> Continue the 2021 approach, recognising that the BOMP's intent is that, until the highest priority area is secured from threats, almost all patrol effort should relate to securing it. This includes activity outside the highest priority area, such as in 'pathways' to it. The need to maintain this approach is supported by the ongoing prevalence of threats in the highest priority area of the TPZ, and camera-trapping results across NC/NX. Consider intensifying the 2021 approach, by focussing on the highest priority area even more tightly, as indicated by the BOMP. If current information and insight indicates that intensifying the 2021 approach is not the best route to achieve NNL, then a superior approach should be followed. Change from the BOMP is acceptable, indeed needed, when a clear justification 	Urgent

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
			<p>species' populations but has been insufficient to allow population to rebuild. It is too early to tell whether the changed spatial strategy of 2021 will be sufficient.</p> <ul style="list-style-type: none"> Habitat conversion is not yet a major problem in the TPZ. 	<p>is made as to why it increases the chance to meet NNL, but not otherwise.</p> <ul style="list-style-type: none"> On the information available to the IAP, intensification of the 2021 approach may be appropriate, but even higher priority is to increase patrol quality (B49) and to maximise the effectiveness of community-based patrols. 	
B48	Site Visit: Virtual Dec 2020 Virtual Nov 2021	Patrolling in the Sub-catchment.	<ul style="list-style-type: none"> Reducing illegal offtake to negligible levels in the TPZs of the Sub-catchment is foundational to NNL, as is preventing habitat loss. Enforcement patrolling has not seriously started yet in Xaysomboun away from the reservoir and had a late start and COVID-induced interruptions even in Bolikhamxay. Delays pose high risk to NNL. Development of the Sub-catchment's law enforcement strategy is slowed considerably by COVID. Its value depends on genuine ownership by the WRPOs that will implement it and this ownership requires a series on face-to-face meetings in a co-development process with BSP. The provincial boundary potentially complicates law enforcement. The necessity for patrols of one province to pursue and accost suspects even if they cross to the other province, has 	<p>Recommendations</p> <ul style="list-style-type: none"> Resolve the Xaysomboun per diem dispute (see B51). Learn from NC/NX experience and ensure that from the start Sub-catchment patrolling is focussed in small enough areas of the TPZs to secure them from snaring, and then expands cautiously outwards. Unlike NC/NX, the Sub-catchment suffers active habitat conversion; to let this run unrestrained anywhere within the TPZs would build major future problems. So, ensure the Sub-catchment's law enforcement strategy has a more complex spatial approach. Finalise the Sub-catchment's law enforcement strategy as soon as practicable but without compromising on a truly participatory process to generate it. In the interim, and when COVID allows, continue with routine patrolling and law enforcement throughout the TPZs (reservoir and land) to the extent feasible under COVID and the Xaysomboun per diem dispute. 	Urgent

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
			been raised as an important, urgent, top for inter-province agreement.	<ul style="list-style-type: none"> Negotiate and secure the regulatory basis for each province to accept patrols of the other province to retain authority to follow and act if a suspect crosses the boundary. Justify major departures from the WMP (if any: the WMP allows high flexibility in its instruction to “Develop and implement a comprehensive law enforcement and patrolling strategy” – Table 1-1, sect. 4). 	
B49	Site Visit: Virtual Dec 2020 Virtual Nov 2021	Detection, removal, recording and analysis of threats information.	<ul style="list-style-type: none"> Snaring and habitat clearance are predicted to be the biggest current risks to NNL. Habitat is monitored remotely but snaring status is understood largely via information from patrols. After an uneven start, NC/NX patrols’ recorded threat information is now analysed and communicated in detail allowing maximum insight into the effects of patrolling. However, a multi-agency visit to NC/NX early in 2021 found that many threats were being overlooked by the patrols. This is normal in the early stages of such programmes, and it is reasonable to expect rapid improvement with the BSP aboard, provided COVID does not add complications. 	<p>Recommendations</p> <ul style="list-style-type: none"> Include BSP and/or NNP1PC personnel on as many patrols as practicable to share complementary experience and drive up rates of threat detection, and thus resolution and recording. For NC/NX, this has been welcomed in principle by BOMU, but COVID has hindered implementation. Give this aspect as high priority for NNL considerations as the spatial prioritisation (B47 & B48). Continue to monitor remotely for habitat conversation in NC/NX, to minimise substantial incidence of it, and consequent requirement for a change to the BOMP law enforcement approach to prevent a Sub-catchment-like situation developing (see B36). 	Urgent
B50	Site Visit: Virtual Dec 2020 Virtual Nov 2021	Proposed boundary changes in the Sub-catchment.	<ul style="list-style-type: none"> Consultation has led to two changes to the WMP proposed TPZ boundaries. One will not damage NNL chances (it is an expansion) but the other would 	<p>Recommendations</p> <ul style="list-style-type: none"> BSP prepare an analysis of likely effects on feasibility of meeting NNL if these boundary changes are followed. 	High

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
			remove a substantial part of TPZ 2.	<ul style="list-style-type: none"> Accept or negotiate them as appropriate. 	
B51	Site Visit: Virtual Nov 2021	Disagreement between Xaysomboun and the Company on appropriate per diem level when nights are spent in the forest.	<ul style="list-style-type: none"> Xaysomboun WRPO and the Company disagree on the intent of national-level GoL guidance on per diem levels for government staff when nights are spent in the forest. Both sides expressed confidence to the IAP that their interpretation is correct. Multiple attempts to resolve this dispute, involving other bodies such as the Provincial Governor's office, have not worked. COVID considerations slowed the process. No land-based patrolling involving overnight stay in the forest has occurred in Xaysomboun in 2021: threats continue unabated in the land area most critical for the attainment of NNL. Much of the 2020 AIP for Xaysomboun WRPO remains unimplemented. No AIP for 2021 has been submitted by Xaysomboun WRPO. NNP1PC has proposed a sequence of steps, increasing in gravity, to resolve this issue. ADB has offered to assist the process. 	<p>Recommendations</p> <ul style="list-style-type: none"> All partners collaborate to implement the multi-step process proposed by NNP1PC, which recognises that this is a matter of national GoL policy and thus has due involvement of the relevant GoL bodies. Wherever possible use face-to-face meetings of the stakeholders, using virtual meetings only as a last resort. Involve the ADB in all steps where it will be constructive to do so, building on the ADB's suggestion for the Company to indicate where and specifically what input is sought. 	Urgent

Summary of No Net Loss Biodiversity Issues of Current Concern

No.	Reference / Document	Issue	Status	IAP comments and recommendations	Level of concern*
			<ul style="list-style-type: none"> The grave negative effects of this issue on the Sub-catchment's conservation status and thus the likelihood of reaching NNL make this the highest priority issue for NNP1PC to address in the interests of NNL: without its resolution, many other issues cannot be closed off. 		
* Level of Concern: <ul style="list-style-type: none"> Low - action recommended within 6 months Medium - action recommended within 1-2 months Urgent/Very High/High - immediate action recommended 					

No Net Loss Biodiversity Issues Closed or subject to Continued Monitoring

No.	Reference / Document	Issue	Status	IAP comments and recommendations
B2	Site visits: 7-12 Jan 2013 17-24 Nov 2013 4-11 May 2014 3-10 May 2015 6-13 Dec 2015 14-21 May 2016 4-11 June 2017 2-9 June 2019	Activities along the dam access road and in dam construction zone need to be managed to reduce impacts. <ul style="list-style-type: none"> Not assessed in November 2021. 	Degradation, logging, and forest clearance for agriculture along access roads. Ongoing risk for the life of the project.	Recommendations In the context of current implementation challenges, this issue is not central to achievement of NNL. For comparison, multiple other localised risks to biodiversity exist for the lifetime of the project that are neither central to NNL nor mentioned in IAP reports. Continue to monitor unless a drastic, NNL-relevant, upsurge should occur.
B9	Site visits: 4-11 May 2014 9-16 Dec 2018 2-9 June 2019 23-29 Feb 2020	Government capacity to implement conservation activities in the Sub-catchment.	Bolikhamxay has considerable experience in conservation activities, Xaysomboun very little; yet most NNL-related activities in the Sub-catchment are in Xaysomboun. Neither province	Recommendations <ul style="list-style-type: none"> With the appointment of the BSP, consider closed for now. Reopen for careful review 12-18 months before the envisaged exit of the BSP.

No Net Loss Biodiversity Issues Closed or subject to Continued Monitoring

No.	Reference / Document	Issue	Status	IAP comments and recommendations
	Virtual site visit: 7-11 December 2020	<ul style="list-style-type: none"> Not assessed in November 2021. 	has previous experience in NNL projects. Considerable capacity building and exposure to global best practice is needed. Hence the deployment of the BSP.	
B35	Site visits: 11-18 Nov 2017 20-27 May 2018 2-9 June 2019 23-29 Feb 2020 Virtual Dec 2020	Provincial regulation of Bolikhamxay for NC/NX. <ul style="list-style-type: none"> Not assessed in November 2021. 	<ul style="list-style-type: none"> Approved and under implementation. No issues have been raised during 2020. 	Recommendation All parties remain alert for needs to update the regulation otherwise consider dormant for now.
B39	Site visits: 20-27 May 2018 2-9 June 2019 23-29 Feb 2020 Virtual Dec 2020	Proposed Nam Theun 4 (NT4) dam inundates part of NC/NX. Possibilities exist for four other dams in NC/NX. <ul style="list-style-type: none"> Not assessed in November 2021. 	Nam Theun 4 has reportedly been pending indefinitely.	Recommendations <ul style="list-style-type: none"> Remain vigilant in case NT4 be resuscitated, or any of the other four are put into serious consideration. If so, develop (with the proponent) appropriate plans to minimise impact on NC/NX and on NNP1's ability to meet NNL.
B41	Site Visits: 9-16 Dec 2018 2-9 June 2019 23-29 Feb 2020 Virtual Dec 2020 Virtual Nov 2021	Clear roles and authority are needed for implementing in the Sub-catchment and NC/NX to achieve NNL.	<ul style="list-style-type: none"> BOMP and WMP lay out roles for each party including BSP. BSP is fully operational on the project but faces, as other partners, COVID-related challenges. A three-way agreement signed on 26 January 2021 spells out roles and responsibilities of the three non-government parties in collaborating to assist GoL in implementation of the NNL programme. Meetings have been held in April and September 2021 and are considered to be constructive and valuable. 	Recommendation Close this topic from IAP oversight.
B42	Site Visits: 9-16 Dec 2018 2-9 June 2019 Virtual Dec 2020	Indigenous people in NC/NX: ADB safeguard triggered.	<ul style="list-style-type: none"> A Community Development Plan (CDP) for Phong and Hmong villages in NC/NX is formally accepted by all parties. 	Recommendation <ul style="list-style-type: none"> Close this topic from IAP oversight.

No Net Loss Biodiversity Issues Closed or subject to Continued Monitoring

No.	Reference / Document	Issue	Status	IAP comments and recommendations
	Virtual Nov 2021		<ul style="list-style-type: none"> • COVID has complicated implementation, by delaying the land-use planning that necessarily precedes the signing of Community Conservation Agreements (CCAs), to the holders of which benefits under the CDP should be restricted. • The BSP is using the delay to review comparable CCA schemes from elsewhere, to inform an optimal process in NC/NX. • Local government proposed to proceed with the land-use planning using its standard process and personnel, but this has been decided against. It is not apt given the special considerations needed in a biodiversity conservation area, especially with the NNL demands. The extra capacity support needed (via BSP) for a modified process has been delayed by COVID considerations. • No major non-COVID-induced concerns were identified. 	
B46	Site Visit: 23-29 Feb 2020 Virtual Dec 2020 Virtual Nov 2021	Zone boundaries within NC/NX. NC/NX Total Protection Zone boundaries as shown in the BOMP have been revised.	<ul style="list-style-type: none"> • The BSP produced a report confirming that the boundary realignment does not prevent the ability to reach NNL, although it complicates the practicality of enforcement. • The revision has been accepted officially by all parties. 	<p>Recommendation</p> <ul style="list-style-type: none"> • Close this topic from IAP oversight.
<p>* Level of Concern:</p> <ul style="list-style-type: none"> • Low - action recommended within 6 months • Medium - action recommended within 1-2 months • Urgent/Very High/High - immediate action recommended 				

Annex 1: Resettlement Issues

Background

1. The reservoir of the Nam Ngiep 1 hydropower project (NNP1) has inundated the houses and agricultural lands of five villages and impacted an additional three villages and one hamlet as follows:
 - Four villages in the Lower Section of the Reservoir (Zone 2LR), Xaysomboun Province;
 - Three villages in the Upper Section of the Reservoir (Zone 2UR) in Xaysomboun Province; and,
 - One hamlet (Hatsaykham) in the former Construction Area in Bolikhamxay Province (Zone 3).
2. The resettlement site designated by the GOL and the Concession Agreement (CA) covers an area of approximately 2,393 ha called the Ban Phouhomxay (formerly Houay Soup) Resettlement Area (PHXRA) (Zone 5); along with some 3,715 ha in an adjacent protection forest area that will be managed through an integrated Watershed Management Plan. PHXRA is located on the right bank of the Nam Ngiep river and previously was under the administrative jurisdiction of the Ban Hat Gniun host village, Bolikhan District, Bolikhamxay Province. Ban Phouhomxay is now an officially registered village, independent from Ban Hat Gniun, comprised of all legal village administrative functions.
3. Resettlement was the responsibility of NNP1PC's Environment and Social Division (ESD), specifically the Social Management Office (SMO). A succession of ESD directors have interacted well with the Provincial Resettlement Management and Living Condition Restoration Committee (PRLRC) (i.e., *Resettlement Committee*), as well as provincial level Resettlement Management Units (RMUs) and District Coordinating Committees (DCCs) throughout the resettlement process. ESD and SMO personnel have collaborated with GOL officials in Xaysomboun and Bolikhamxay provinces to organize and facilitate resettlement and self-resettlement consistent with ADB safeguards and other international standards.
4. From villages in Zone 2LR, NNP1PC reports that 479 households were resettled; and, from Zone 3, 38 households were resettled; plus, eight split households from both zones. Seven hold-out households from Zone 2LR have self-resettled successfully in Anouvong and Hom districts, Xaysomboun Province.
5. Resettlement at PHXRA was undertaken for 82 households in 2018 and completed in 2019 as follows:
 - From Zone 3 (Hatsaykham hamlet): 31 households, including split households;
 - From Zone 2LR, four villages: 51 households + 7 split households, 58 total; and,
 - Splitting households: NNP1PC reports that an additional 19 households from outside PHXRA had come to live in the village. NNP1PC defines them as "under (in the process of) splitting household situation"; understood by the IAP to mean that they may not be PAP but families from other splitting households who had come to live in PHXRA for various reasons.
6. Relocation was undertaken in 2018 of eight households in Zone 2UR because of impounding of the NNP1 Reservoir.

Supplementary Comments on Selected Resettlement Issues

Progress

7. The IAP notes progress in the following areas:
 - i) NNP1PC continues to negotiate and resolve outstanding grievances with efficiency and transparency.
 - ii) Social development and livelihood restoration programs appear to be operating well and continue to be popular among PAP.
 - iii) At PHXRA:
 - Land conflict issues appear to have been resolved by provincial and district officials, although the IAP still needs to verify acceptance by host villagers.
 - Provincial RMU officials continue to collaborate with NNP1PC to resolve difficult land conflict issues including the issuing of house certificates and land titles in BKX and the consideration and approval of watershed and fisheries management plans in XSB.
 - iv) NNP1PC reports that PAP in Zones 3 and 5 (Hat Gniun, Thaheua, and Somseun host villages) continue to participate actively in livelihood restoration and development activities.

Challenges

8. Issues about which the IAP is concerned are discussed below.

Defective and deficient infrastructure

9. The IAP notes that infrastructure that NNP1PC reported as incomplete in December 2019 at PHXRA and in Zone 2UR was incomplete in December 2020 and remains incomplete in November 2021.
10. The IAP is unable to offer professional (detailed) recommendations related to resolving infrastructure issues without an on-site visit to the project area.
11. Although NNP1PC had reported earlier to the IAP that all resettlement infrastructure had been completed, several components have failed apparently because of the poor quality of construction and technical supervision by NNP1PC technical staff, specifically:
 - **PHXRA:** Several critical issues related to the irrigation system at PHXRA remain unresolved. Without an on-site visit to better understand the unresolved issues, the IAP is not able to comment on the situation with any accuracy or to make credible recommendations for resolving the issues. The IAP has stated frequently that the failure to provide a fully operational irrigation scheme to PHXRA resettlers is unacceptable some four years after resettlement and more than two years after COD. NNP1PC is obligated by the CA to provide water for irrigation to resettlers. (**Issue R4**)²
 - **Zone 2UR:** The suspension bridge at upper reaches of the Nam Ngiep 1 reservoir, over the former Nam Ngiep River, failed in 2018. A replacement bridge has not been constructed more than two years since that break down. The purpose of the bridge is to provide access for PAP to their agriculture lands. Based on IAP interviews with PAP in Zone 2UR (who are defined in the CA as Category 2 PAP or partially impacted persons) in December 2019, PAP have delayed expansion and intensification of on-farm production and income generating activities because of difficulties transporting construction materials and farm inputs using a barge provided by NNP1PC. The expansion of income-generating on-farm activities would contribute to livelihood restoration and meeting income targets designated in Annex C of the CA. (**Issue R7**)

² 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.

- **Zone 2UR:** NNP1PC reported that access tracks to PAP agriculture lands would be completed in the last quarter of 2021. (**Issue R7**)
- **Zone 2UR:** The water supply at Ban Pou reportedly has not yet been upgraded as planned in December 2019; and reviewed and found incomplete in December 2020; and reviewed and found incomplete again in November 2021. NNP1PC reports that the progress of the work was 32 percent at the end of contract period on 31 October 2021. (**Issue R7**)
- **Recommendations**
 - i) The IAP recommends that NNP1PC senior management give high priority to completing construction of and demonstrating effectiveness of the PHXRA irrigation system to ensure that PAPs can achieve income restoration targets.
 - ii) The IAP recommends that NNP1PC senior management give high priority to completing all infrastructure activities at Zone 2UR without any further delays.

Supplementary comments related to PHXRA

12. Without an on-site visit to PHXRA, the IAP cannot verify the status of the development of social capital at the resettlement village. Social capital can be developed through the fostering of institutions and mechanisms whereby residents relate to and interact with each other to solve problems for the common good. Village-based charitable and voluntary activities could be used to promote village collaboration and inter-action that would serve to strengthen social networks within PHXRA. A village walk-about and interviews of residents would provide verification that social capital was (or was not) being created at PHXRA. (**Issue R11**)
 13. The IAP supports the findings of the LTA Social Expert that the enrolment of school-age children is unusually low at PHXRA. At the same time, the drop-out rate from secondary school and from NNP1PC's scholarship program is unusually high. Once again, only physical contact with residents of the village on an individual basis can provide insights to and confirmation of possible reasons for this situation. Other comments would be speculative. (**Issue R11**)
 14. The IAP understands that principally GOL provincial and district officials are responsible for both issues. NNP1PC has no obligation to take any action to build social capital or to remedy the low rate of enrolment and high drop-out rates at PHXRA. However, NNP1PC can influence the use of financial resources available through the CDF during meetings with the CDF committees in both BKX and XSB. (**Issue R11**)
- **Recommendations**
 - i) With the understanding that development takes time, the IAP recommends that NNP1PC collaborate with district officials and village authorities to build and strengthen networks within the community through "civic engagement" activities such as neighborhood associations, community service activities, and charitable group activities, and volunteerism. CDF funds can be used for this purpose.
 - ii) The IAP recommends that NNP1PC uses its influence to make the case in favor of using CDF funds to promote "software" (i.e., human resources, quality of life, and village development) in addition to traditional "hardware" (i.e., infrastructure); to further promote the creation of social capital and to address fundamental human resource development problems of low enrolment of school-age children and the high drop-out rates of students in PHXRA. NNP1PC also should point out that CDF funds can be used to support additional medical staff at the PHXRA health center – if needed.

Watershed and Fisheries management plans

15. The Watershed Management Plan is one of the fundamental elements that will determine the success – the profitability – of the Nam Ngiep 1 hydropower project. An encroached and degraded watershed will impact on both the quantity and quality of water in the Nam Ngiep1 Reservoir. Sedimentation can affect hydropower production due to loss of reservoir storage and/or damage to the facility's mechanical components. Sediments deposited in reservoirs may affect the safety of dams and, without proper management, negatively impact the environment.³ The NNP1 project has already experienced one serious catastrophe with the collapse of the Nam Ao Dam in 2017. The lack of an updated cumulative impacts assessment (CIA) and a comprehensive understanding of the condition of and situation in the NNP1 watershed leaves the NNP1 hydropower infrastructure susceptible to similar such disasters in the future. **(Issues R5 and R7)**
16. The Fisheries Co-management Plan also continues to be under review and consideration of XSB provincial officials. The long delay in issuing and disseminating regulations for use of the reservoir and for fisheries management provide opportunities for mismanagement and degradation of the fisheries resources in the NNP1 Reservoir. **(Issues R5 and R7)**
- **Recommendation**
 - i) The IAP recommends that NNP1PC should play an active role in promoting and lobbying senior provincial officials for quick consideration and approval of both the Fisheries Co-management Plan and Watershed Management Plan by concerned XSB provincial officials. Most important is for suitable, experienced, and knowledgeable **SENIOR LAO NATIONAL STAFF** of NNP1PC to facilitate the creation of a consensus among provincial officials to adopt and implement the plan. If necessary, advice and intervention of relevant senior officials at MAF should be sought and mobilized to advise the responsible provincial officials. Implementation of the plan is long overdue. Continued lack of robust management of the NNP1 reservoir and watershed endangers the feasibility of the project.
 - ii) The IAP recommends that the LTA Environmental Expert should become familiar with and take responsibility for monitoring, evaluating, and reporting on potential issues emerging from the NNP1 watershed area that could be detrimental to the NNP1 hydropower project.

³ Hydrovision International. (2017, 22 February). "Dealing with Sediment: Effects on Dams and Hydropower Generation". *Hydro Review*. Retrieved on 7 December 2021 from <https://www.hydroreview.com/world-regions/dealing-with-sediment-effects-on-dams-and-hydropower-generation/#gref>

Annex 2: No Net Loss to Biodiversity Issues

Supplementary Comments on Selected Biodiversity Issues

General situation

1. The tabulated *Summary of Biodiversity Issues* in the main report gives a summary overview of 13 points that have been raised by previous IAP's reports in relation to No Net Loss to biodiversity and which have not yet been closed off (signified by points B4–B50, the missing B numbers indicating points that have been closed or assigned to continued monitoring) and one that is newly raised here (B51). Many of these 14 points are, in their essentials, challenges shared by many locality-based conservation projects in the world and are complex and difficult to solve. Because this was a 'virtual' assessment, there is a substantially higher likelihood than with a standard IAP assessment of additional important implementation issues being overlooked. However, three points from the last IAP report have now been closed, having made satisfactory resolution. A further four are classed as subject to continued monitoring, in that they are closed for the present but involve topics that could resurge in the future, and which could, for all but one of them, become critical threats to NNL.
2. Important progress since the last IAP visit has been made with the consolidation of involvement of the Biodiversity Service Provider (BSP), the Wildlife Conservation Society. The BSP's value to the NNL programme was commented on by various parties. The BSP is providing good advice and is continually evaluating progress to date and considering options for evolving its inputs to match the changing on-ground realities. The team-work of the BSP and NNP1PC that was evident last year has been consolidated and expanded. The management plan for NC/NX (the 'BOMP') is under implementation to the extent COVID-19 (see below) allows.
3. COVID-19, specifically the regulations on people's interaction and movement necessary to minimise its negative effects, has had a massive negative effect on progress in both NC/NX and the Sub-catchment. A lot of the routine work in both areas involves human contact. The role of the BSP and NNP1PC in the NNL programme requires repeated direct face-to-face interaction with the WRPOs in the Sub-catchment and, in NC/NX, its equivalent body, the BOMU, and with villages. Such interaction is particularly challenged by various personnel residing away from the two NNL implementation areas, and so affected by frequent bans on travel to the two areas relevant to the NNL programme. This is severely problematic given the BSP's role in introducing and adapting regional best-practice to the NNL programme. Participatory processes such as the drafting and discussion of the Annual Implementation Plan are much less efficient and effective when that participation is only through electronic means. So much more could be being achieved had there been no COVID-19. It is very important to remember this 'nobody's fault' factor when considering the pace of progress towards NNL. It is equally important to look beyond the 'COVID-factor' for underlying issues independent of COVID that need attention and can be tackled even during the COVID-era.

The Nam Ngiep 1 Sub-catchment

4. The most important points in relation to NNL in need of attention relate to threats reduction in the Sub-catchment, and the several underlying factors that mean this is well behind schedule. The backbone of threats reduction is law enforcement through patrolling and, on the reservoir, checkpoints. Most of the Sub-catchment lies in

Xaysomboun province, but a dispute between the province and Company over the appropriate level of per diem payment for activities that require an overnight stay in the forest (B51) has prevented such activities occurring (B48). This dispute has been running for well over a year and has the potential to prevent the achievement of NNL, given that Xaysomboun's forests and streams bear a disproportionately high part of the responsibility (compared with Bolikhamxay's in the Sub-catchment and in NC/NX) for NNL. Both the Xaysomboun WRPO and the Company expressed confidence in their opposing interpretations of the government guidelines on which pay rates are based. In the interim, people are making free with the Sub-catchment's resources, not just poaching of plant and wildlife species, but substantial-scale conversion of natural habitat to cropland and livestock husbandry, involving the establishment of ever more durable buildings and lengthy stays by families including children (B36). Xaysomboun WRPO and the BSP agree that reversing this situation is now beyond the routine ranger patrols envisaged in the WMP and must involve careful consideration by all relevant GoL departments to produce and implement a realistic cohesive strategy to deal with these (at least intermittent) settlers. The longer that the current situation is allowed to progress, the more difficulty will be its resolution and the further below the NNL baseline will the Sub-catchment sink. Resolution of the per diem dispute is essential to this. This lack of agreement prevented the submission of a 2021 AIP by Xaysomboun WRPO entirely. In its absence, all parties deserve credit for showing flexibility in agreeing activities that did not involve overnight stays in forest. In the event, COVID prevented some of these occurring. Even Bolikhamxay WRPO, which does not dispute per diem levels, undertook only a small proportion of the activities envisaged under the (pre-COVID) expectations, because largely of COVID. It is imperative that agreement is reached promptly on the per diem issue so that as soon as COVID-induced restrictions allow, activities can expand in earnest in the Xaysomboun part of the Sub-catchment.

Nam Chouan – Nam Xang

5. In implementation terms, NC/NX is several years ahead of the Sub-catchment and experiences there can inform planning and execution within the Sub-catchment. The year 2021 saw the first extensive camera-trapping in NC/NX since an exploratory survey there in 2015–2016 to consider the area's suitability as part of NNP1's NNL programme. This is the first outcomes-based indication of progress of any part of the NNL programme. Interpretation needs to be cautious because the two camera-trap surveys differed in several aspects, but they had fairly similar effort in terms of numbers of stations and of camera-trap nights. The status of hunting-sensitive species, especially those susceptible to snaring, is a key part of the NNL targets in NC/NX. Comparing the two results indicates that there has not been a catastrophic collapse in snaring-sensitive animals in the five-year period. Without the NNL programme's law enforcement that happened in the interim, such a collapse probably would have occurred. Indeed, the 2021 session found a few snaring-sensitive species not found in 2016, but this is to be expected given that the camera-traps were much more widely spread in 2021 and all these species were found only very rarely (mostly once). Looking at species found only once or twice per session is not very informative because whether or not they are found at all is essentially random.
6. Two prime indicator species, Large Indian Civet *Viverra zibetha* and Coral-billed Ground Cuckoo *Carpococcyx renauldi*, have been selected for camera-trapping. When threats are reduced, they will be recorded sufficiently frequently to track population status in the camera-trap monitoring area. Their status has probably worsened over the five years: the civet was less prevalent in the 2021 survey than previously, and the ground cuckoo was not found at all in 2021. This is not surprising because before 2021 patrolling effort was undertaken widely across NC/NX, at risk of being spread too thinly

to reduce threats sufficiently to allow the population recovery which is necessary for NNL. A dramatic change was made in 2021 so that three of the four teams focused on the BOMP-identified highest priority patrolling area. This change is too recent for its effects to be detectable in camera-trapped wildlife. The time lag between bringing an area into favourable management condition and seeing the positive effects on wildlife depends on numerous factors such as the reproductive rate of the species in question (slow breeders like Asian Elephant *Elephas maximus* take much longer to respond than fast breeders like most small birds) and the precision of the monitoring programme (which itself depends largely upon the intensity of effort).

7. It is a safe prediction that the recent intensification of patrolling effort into the highest priority patrolling area increases the chance of reaching NNL. The BOMP takes this approach because if threats are not reduced below a certain threshold (which varies between species) in an area, the populations cannot recover. The IAP was informed that the implementing parties discuss frequently the merits of this approach, because it requires leaving many threats ignored elsewhere in NC/NX. Surprising though this is, it is necessary, at least in relation to snaring. A thought-experiment may help clarify this. Imagine an area of 400 km². In Scenario A, patrolling keeps 100 km² with no snares and accepts that the other 300 km² has 100,000 snares spread across it. In Scenario B, the patrols work across the whole area and bring the total number of snares down to 25,000, but these are spread across it. The loss of snare-sensitive species is faster in Scenario B, even though there are fewer snares left in the forest, because there is no 'safe zone'. Of course, the ideal would be no snares anywhere, but the labour inputs to achieve this are outside NNP1's financial capability for NC/NX. So, there is a conflict between the two scenarios. At the snare densities typical nowadays in Lao PDR and Vietnam, the compilers of the BOMP selected an approach similar to Scenario A, and the IAP agrees with this approach.
8. The BOMP's intent is that all patrolling effort in NC/NX is focused in the highest priority patrolling area of the TPZ, or if outside, is in the interests of this part of the TPZ (such as access routes) until all threats across the highest priority patrolling area are reduced to negligible levels. Only then should effort occur elsewhere, next in hierarchy being the two high-priority patrolling areas. The current approach is not following the BOMP's approach exactly. The IAP heard arguments that if the whole of the rest of NC/NX is ignored until the highest priority patrolling area is secured, illicit activity might well balloon there. This is valid consideration: the Sub-catchment (see above) gives a real-life example of this risk in action.
9. The IAP recommends serious consideration is given to a further intensification of focus on the highest priority patrolling area. This could be through having all four patrols within it in half the months, randomly sequenced with respect to the other half of months where one patrol will be outside the highest priority patrolling area, so people do not know when it is safe to go where. Without the IAP's having made its own visit to NC/NX, it is not in a position to make a firm recommendation for further intensification of spatial focus but urges the on-ground parties to keep this option in mind.
10. There are two obvious and higher priorities for improving progress to NNL in relation to threat reduction in NC/NX. First is to drive up the quality of patrols. It always takes some time for patrolling systems to develop excellent threat detection skills which, particularly for snares, involve a level of fieldcraft; part of the BSP's role is to speed up this process. A joint visit during a rare COVID interlude found that (as would be expected) there is great scope for improvement. BOMU has agreed to BSP and/or NNP1PC personnel joining as many patrols as possible to share experiences and insight, although COVID-induced movement restrictions have meant this had occurred

only once as of early December. Second, the community snare patrols from Ban Vangphiang have an exclusive focus on the highest priority patrolling area and have recently started. COVID considerations have similarly prevented BSP training and mentoring, and it is obvious from incoming reports of the community programme that as soon as this can occur it will have major benefits on snare encounter and removal rates.

11. Thus, when COVID complications cease, there are good grounds to expect a major increase in law enforcement effectiveness within NC/NX. If this is soon, the next round of camera-trapping will help indicate how effective the programme is.

Overall outlook in respect of NNL

12. The 13th report of the IAP highlighted that the NNL ‘clock’ started ticking several years beforehand, and therefore delay in beginning full implementation is materially prejudicing the chance of reaching NNL. That report wrote that “...the start of full implementation, which can now reasonably be expected to be well within 2019...”: it is unfortunate that further delays (no matter how external the cause of some, such as COVID-19) mean that at the end of 2021, the all-important Xaysomboun component is still at the inception stage. Further delays could potentially soon rule out a realistic chance of meeting NNL, and indeed it is possible this may already have happened. When the Xaysomboun per diem dispute is resolved and activities can begin in earnest, it will be very important to review the information coming in from the patrols on threats in the Sub-catchment and, as soon as possible, implement the delayed first round of camera-trap monitoring there. This insight will allow a rational evaluation of what is needed within the Sub-catchment to meet NNL under current plans, and whether it is still feasible (with several essentially lost years, the intensity and efficiency of implementing must now be even more demanding than envisaged in NNP1’s *Biodiversity Impact Mitigation and Offset Framework* [BIMOF]), or whether realistic consideration will be needed of the only two other alternatives: the abandonment of the NNL aim (which is presumably illegal, at least for the ADB) or the injection of substantial additional resources into the NNL programme.
13. The IAP’s 13th and 14th reports discussed the importance of the assumptions underlying the BIMOF (repeated here as Table 1). Given the constraints of the remote meeting, these were not discussed widely or deeply in December 2020 or in November 2021. The importance of their continuous review by the implementing parties remains, together with swift thinking and action if the validity of any assumption is clearly open to doubt.

Table 1: Assumptions required to hold for the Nam Ngiep 1 project to meet No Net Loss	
Assumption	Content
BIMOF a	The level of wildlife protection required to achieve No Net Loss/Net Gain of biodiversity will exceed, by a substantial margin, anything previously reached in Lao PDR
BIMOF b	Influential people, institutions and other actors in the Sub-catchment will respect the legal framework for biodiversity management in the Sub-catchment
BIMOF c	No new development that potentially could jeopardize the achievement of no net loss of biodiversity will be allowed in the Sub-catchment
BIMOF d	NNP1PC and an independent organisation dedicated to conservation will maintain a significant role as the implementation partner with the GOL

Assumption	Content
BIMOF e	In the event the budgets for implementation become a limiting factor to achieving success for the identified targets, NNL/Net Gain budgets will be altered to ensure that adequate funds are made available to make every reasonable attempt at achieving NNL/Net Gain as defined herein
BIMOF f	A fully supportive implementation environment will be provided and maintained by GOL such that all relevant national and provincial bodies recognise NNP1's attainment of No Net Loss/Net Gain to be a national priority
BIMOF g	Security issues will not prevent effective patrolling of any significant area of the currently-defined TPZs
IAP h	The community livelihood work of NNP1 in and around the Sub-catchment is viewed positively by the local people, and any non-NNP1 community work in and around NC/NX is supportive of, or at least neutral to, NNP1's programme

Note: Assumptions a–g are taken from Nam Ngiep 1's Biodiversity Impact Mitigation and Offset Framework, dated 23 April 2018 (Document number NNP1-C-J1206-RP-002-A). Assumption h was added in IAP report 13. And, although not specified in the BIMOF, assumptions b and c apply to NC/NX as well as the Sub-catchment.

Annex 3:

Agenda for the Joint ADB-LTA-IAP Virtual Mission, 22-26 November 2021

MISSION MEMBERS

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Mission Programme

Day	ID	MISSION MEMBERS	TIME	ACTIVITY	NNP1PC STAFF	LOGISTIC SUPPORT
Sunday 21 Nov 2021		Dr. Will Duckworth, Watershed and Biodiversity Management Expert (WD)		- Document and correspondence review (solo)		
Monday Day 1		WD	Morning	- Discussion with BSP		
	1.	ADB, LTA and IAP	13:00 – 13:10	- Welcome note from MD - Mission introduction	MU All	VTE main meeting room, OSOV 1 meeting room (TD staff), OSOV 2 meeting room (ESD staff)
	2.	ADB, LTA and IAP	13:10 – 13:30	- NNP1 employee and contractor (Lao VS foreign labour as per CA requirement), COVID-19 impacts on operation, prevention, and key interventions - Overall ESD Organisation Structure and TD (OHS)	SP KP, MK	
3.	ADB, LTA and IAP	13:30 – 14:15	- SMO overall progress presentation (grievances, CAP progresses, BSES #4 results, Livelihood Development)	PC, SY, VM, PP, AS, KI		
22 Nov 2021						

Day	ID	MISSION MEMBERS	TIME	ACTIVITY	NNP1PC STAFF	LOGISTIC SUPPORT
	4.	ADB, LTA and IAP	14:15 – 14:45	EMO overall progress presentation (environmental incidents if any, progresses on CAP as sent by ADB)	WR	
	5.	ADB, LTA and IAP	14:45 – 16:00	General discussion on the draft agenda and arrangement for group teleconference	All	
		WD	Evening	Evening: consolidation of information received and preparation for following days' discussions		
Tuesday Day 2 23 Nov 2021	6.	AG, AS, WD, KG, BG	09:00 – 10:30	EMO progress discussion – Watershed and Biodiversity - Pending issues for implementation activities - Results of patrolling effort in NC-NX offset site and NNP1 reservoir from SMART analysis - CDP implementation	WR, HW, BSP Team (SM, AR, KB, KY, PX)	OSOV 2 meeting room
		WD	Afternoon	Afternoon: sat in on PCD discussion		
		WS	Evening	Consolidation of information received and preparation for following days' discussions		

Day	ID	MISSION MEMBERS	TIME	ACTIVITY	NNP1PC STAFF	LOGISTIC SUPPORT
	7.	AG, AS, RZ, KG, BG	14:00 – 16:00	EMO and TD progress discussion – Compliance and Monitoring (continued from the first day) <ul style="list-style-type: none"> - Environmental monitoring results (DO, effluent discharges from the new WWTs) - Implementation of the ESMMP-OP sub-plans –hazardous material management, decommissioning and rehabilitation, waste management, etc. as per Env CAP 	WR, DX, HP, Spi, NT, KM	OSOV 2 meeting room
	8.	JM, RC, TZ, EM, KG, BG	14:00 – 17:00	SMO <ul style="list-style-type: none"> - Progress of key infrastructure activities: updated of Phouhomxay Irrigation system, 2UR Suspension Bridge and water supply at Pou Village, etc. (45 min) - BSES # 4 Income results for all Zones especially former Hatsaykham Villagers and key recommendations from D. FREDERIKS (30 min) - Grievances and compensation, Emergency Evacuation Plan progress (30 min) continued from the first day - Progress on Social Development (Scholarships Programs, Vulnerable household support Program, village cohesion, drug abuse, COVID-19 lockdown impacts on livelihood development activities and land selling issues (45 min) 	KP, PC, PP, YY, SY, GC, OK and KI, AS	

Day	ID	MISSION MEMBERS	TIME	ACTIVITY	NNP1PC STAFF	LOGISTIC SUPPORT
Wednesday Day 3 24 Nov 2021	9.	JM, RC, TZ, KG, BG	10:00 – 12:00	SMO - Overall progress of LLH, PHX LLH key progress, Host villages, Downstream and Self-Resettlement and Phouhomxay Villages (2 hours) with live video to see the PHX Village - PHX village head knowledge on agreements on O&M of PHX Community Infrastructure: school, health center, irrigation system, water supply, village roads, etc - Any continuing problems – petty theft, drug problems, influx of outsiders, encroachment in to PHX lands - update on the conflict between Phouhomxay resettlers, Hatsaykham self-resettlers, encroachers from Hat Gniun at the Phouhomxay Resettlement site – is issue still ongoing? Land renting issues? Any unpermitted opening of forestland by PHX villagers or outsiders	KP, PC, PP, YY, VM, KI, AS	Letter to PHX village authority
	10.	AG, AS, RZ, KG, BG	10:30 – 12:00	TD - Operation Manual - Dam Safety - E-flows and discharges downstream	SPI, NT, MK, KM, WR, DX	OSOV 1 meeting room

Day	ID	MISSION MEMBERS	TIME	ACTIVITY	NNP1PC STAFF	LOGISTIC SUPPORT
	11.	JM, RC, TZ, EM, KG, BG	14:00 – 15:30	SMO: <ul style="list-style-type: none"> • RMU: CDF progress for Bolikhamxay Province, pending issues related to selling lands, 5 households cases pending at National Assembly, other pending cases report; • Any update on the conflict between Phouhomxay resettlers, Hatsaykham self-resettlers, encroachers from Hat Gniun at the Phouhomxay Resettlement site – is issue still ongoing? 		NNP1PC car to go to meet with Bolikhamxay RMU
	12.	AG, AS, WD, RZ, KG, BG	14:00 – 15:30	EMO progress discussion – Watershed and Biodiversity <ul style="list-style-type: none"> - Results of Camera Trap survey - Biological monitoring vs NNL progress 	WR, HW, FC, BSP Team (SM, AR, KB, KY, PX)	OSOV2 meeting room
		WD	Later afternoon	Sat in on PCD discussion		

Day	ID	MISSION MEMBERS	TIME	ACTIVITY	NNP1PC STAFF	LOGISTIC SUPPORT
Friday Day 5 26 Nov 2021	16.	WD	09:00 – 12:00	Discussion with GOL key persons on the AIP implementations BLX WRPO, XSB WRPO <ul style="list-style-type: none"> status of self-resettlers returning to 2LR lands and reservoir, encroachment into TPZ, and fishing concessions in the reservoir --- are these still ongoing issues? Status of final FCMP and dissemination to communities’ regulations on watershed management actions being taken by GoL to address above issues issue - what is the law enforcement strategy and how enforcement can be improved. For BOMU <ul style="list-style-type: none"> Is there any issue with encroachment in TPZ CDP implementation 	BLX NC-NX BOMU BLX WRPO XSB WRPO	Private connection subject to confirmation from WRPOs and BOMU
	17.	JM, AG, AS, KG, BG, SK	13:00 – 14:00	Discussion on the Remaining Project Construction Period Safeguard Cost and PCD conditions. <ul style="list-style-type: none"> NNP1PC to present key issues of concerns in the CAP/PCD conditions proposed by ADB on 01 Oct 2021 require discussions prior to agreement on the next steps 	MU, YK, KP, NTa, TP, IM	Vientiane meeting room, OSOV 1 meeting room, OSOV 2 meeting room
	18.	ADB (JM, RC, AG, AS, KG, BG, SK)	14:00 – 14:45	ADB debriefing presentation	All	

Day	ID	MISSION MEMBERS	TIME	ACTIVITY	NNP1PC STAFF	LOGISTIC SUPPORT
	19.	ADB, LTA (RC, RZ)	14:45 – 15:30	LTA debriefing presentation	All	
	20.	ADB, LTA and IAP	15:30 – 16:15	IAP debriefing presentation	All	
	21.	ADB, LTA and IAP	16:15 – 17:00	General discussion and concluding remarks	All	