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Trip Report

NAM THEUN 2 HYDROPOWER PROJECT - Laos

Site Visit:

September 26 – October 9, 2010

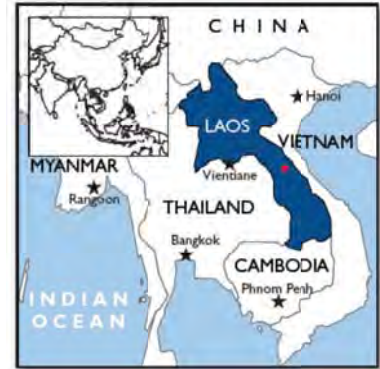
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LAOS –NT2 TRIP REPORT

September 26 – October 9, 2010

USAID, Vientiane and Bangkok Embassy staff conducted a site visit of the Nam Theun 2 (NT2) hydropower project that was financed by the World Bank (WB) and the Asian Development Bank (ADB). This site visit was carried out to fulfill USAID’s due diligence responsibilities under the International Financial Institutions Act, Title XIII, Section 1303(a)(3), which requires USAID to review multilateral development bank (MDB) projects with potential adverse environmental and social impacts.



The primary objective of the site visit was to determine whether the biodiversity commitments made by the MDBs, the Government of Laos (GoL), and the Nam Theun 2 Power Company (NTPC) as part of the financing for the NT2 project are being successfully met. The MDBs, GoL, and NTPC established these commitments as an explicit offset under the World Bank’s Natural Habitat Policy, and they are intended to help mitigate the negative environmental impacts of inundating a significant portion of the Nakai Plateau through the NT2 project.

This report summarizes information obtained from meetings with stakeholders in Vientiane, Lak Xao, and the Nakai Plateau and from documents in the public domain. The report does not reflect the views of USAID or of the United States Government (USG), and USAID has not substantiated all comments.

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SECTION 1. NT2 PROJECT BACKGROUND

The Nam Theun 2 Hydropower Project is a US\$1.45 billion, 1,070 megawatt, private-sector hydroelectric project in the Lao People's Democratic Republic (Lao PDR/GoL). The project's objective is to generate electricity, mainly for export to Thailand via the Electricity Generating Authority of Thailand (EGAT), with GoL revenues used for poverty reduction and environmental protection activities. NT2's 48-meter-high gravity dam forms part of a trans-basin diversion hydropower project, located on the Nam Theun River, a major tributary of the Mekong. The reservoir for NT2 (at its maximum capacity) floods approximately 40 percent of the Nakai Plateau, which has required the resettlement of more than 5,700 indigenous inhabitants and potentially impacted numerous rare and endangered species. Operation of the dam necessitates annually diverting approximately seven billion cubic meters of water (roughly 30 percent of the Nam Theun River's annual flow volume) to generating station turbines. The diverted water is released into the Xe Bang Fai River, and eventually into the Mekong River, through the Nam Phit River. NTPC has dredged and widened the Nam Phit River to convert it into NT2's outflow channel.

The GoL and various developers have been considering this project since the late 1980s. It finally came to fruition in 2005 with financing from ADB, WB, and other private banks. The Commercial Operations Date (COD) was reached on April 30, 2010, and NT2 has been generating power for export to Thailand since March 2010.

A. The World Bank's Natural Habitat Policy

Under the World Bank's Natural Habitat Policy, if an environmental impact assessment indicates that a project would significantly convert or degrade natural habitats, the project must include appropriate mitigation measures, such as minimizing habitat loss and establishing and maintaining an ecologically similar protected area. For the NT2 project, since at least 40% of the Nakai Plateau would be inundated, mitigation measures were required. Consequently, NT2's funders designated the Nakai Nam Theun National Protected Area (NNT-NPA), Phuo Hin Poun NPA corridor (65,056 ha), and the NNT-NPA – Hin Nam No NPA corridor (3,273 ha) as the natural habitat offset for habitat loss on the Nakai Plateau.

During the process of making this decision, some observers voiced concern about whether this offset truly represented the habitats that were being lost and consequently if this was adequate compensation for the Plateau's unique biota and for habitat destruction along the Nam Theun River, which is one of only two slow-flowing Mekong tributaries of its size in Laos. The Plateau's attributes of altitude, vegetation and its constituent fauna distinguish it from the forests of the NNT-NPA, most of which lie at higher altitude and steeper terrain. Sixty-one fish species are known from Nakai Plateau of

which several species are new to science. The Plateau is identified as one of the most significant sites in Laos for bird conservation nationally and internationally. Species of importance found on the Plateau include large-antlered muntjac, white-winged duck and Asian elephant. In fact, while the mitigation measures were being considered, a survey identified the Nakai Plateau as the most significant site for conservation of the large-antlered muntjac, the highest international animal conservation priority on the Nakai Plateau. Thus the Plateau is complementary to, not similar to, the majority of the adjacent NNT-NPA. In fact, the areas to be submerged are those that are most decreased already in Laos and not well represented in the NNT-NPA.

The NNT-NPA is a mountainous area extending from the northeast edge of the Nakai Plateau to the crest of the Annamite Mountains that form the border with Vietnam. The NNT-NPA is the largest protected area with contiguous forest in Laos and covers approximately 4,500 km². The NNT-NPA also includes the watershed of the NT2 reservoir. The NNT-NPA is one of the richest biodiversity areas in Southeast Asia. Three species (or genus) of mammals have been recently discovered (saola, large-antlered muntjac and striped rabbit) and two species were 'rediscovered' by science. There are at least 14 globally endangered large mammals, and over 400 species of birds (of which at least eight are globally endangered) that live within the NNT-NPA. The NNT-NPA is 86% forested and contains 917 nontimber forest product species, of which 511 are used for medicinal purposes or for food. Four percent of the NNT-NPA's land is designated for agriculture and 9% for unstocked (low-density) forest.

The NNT-NPA also contains rich cultural diversity. There are approximately 6,600 inhabitants (11 villages, 31 subvillages) in the lower portions of the main rivers, in addition to small groups of people living within the higher mountainous areas inside the NNT-NPA. At least 20 ethnic minorities are represented, of which three have been described only since the late 1960s.

The addition of the Northern Extension to the NNT-NPA was at one point considered a key component of the compensatory mitigation for habitat lost due to NT2. The Northern Extension consists of approximately 550 km² of the Sai Phou Louang Range which is mostly between 600-900 m and located along the Vietnamese border north of Route 8A. The Northern Extension is highly important because it provides additional contiguous habitat that forms an integral component of any conservation plan for the NNT-NPA. The critically endangered saola exists both in this area and in the NNT-NPA. The Northern Extension, however, was not included as part of NNT-NPA because during that period of time it was designated as a provincial protected area. At that time, it was strongly believed that future funding based on its provincial protected area designation would become available and, therefore, reliance on the financial resources it would have received if included as part of the NNT-NPA was not needed. That has not happened to date, as conservation funds for this area have not proven forthcoming. Recently, villagers captured a saola in this region, but it died, unfortunately.

B. The Watershed Management and Protection Authority

The management of the NNT-NPA, the NNT-NPA – Phuo Hin Poun NPA corridor, and the NNT-NPA – Hin Nam No NPA corridor falls to the Watershed Management and Protection Authority (WMPA), which was formally established five years ago by Prime Ministerial Decree 39 of 2005. This area is within the administrative jurisdiction of Khammouane and Bolikhamxay Provinces. The mandate of the WMPA is to conserve biodiversity in the NNT-NPA and in the two corridors; to ensure watershed protection;

and to encourage livelihood development for villagers in the NNT-NPA and in the Peripheral Impact Zones (PIZs).

The Social and Environmental Management Framework and Operational Plan (SEMFOP) is the management framework and operational plan that guides the WMPA. The elements of the SEMFOP are designed to “ensure the effective, long-term protection of the biodiversity and watershed values of the NT2 catchment while at the same time safeguarding the well-being, traditional livelihoods and culture of its human inhabitants.” The SEMFOP identified a number of biodiversity conservation commitments/activities for the 2005-2011 timeframe. These include the following:

- The transboundary Cooperative Action Plan between Laos and Vietnam will be maintained and intensified under the SEMFOP.
- The NNT-NPA access strategy to restrict access into the NPA will re-orient trade through Nakai town and to close the current border crossings into the NNT-NPA.
- The Biodiversity Conservation Division’s first tasks are to develop taxon-focused management strategies based on a number of clear needs that are already apparent, including:
 - Management strategies and priorities for birds, notably the Crested Argus and White Winged Duck
 - Strategic management priorities for mammals; surveys for Douc Langur, flying squirrels, and pangolins; a Saola Conservation Action Plan; a Pangolin Conservation and Management Plan; and an Elephant Conservation and Management Plan.

As a relatively new government institution, the WMPA is working hard to meet its mission of advancing both the conservation and development goals set out in the SEMFOP. Through the Concession Agreement, NTPC provides US\$1 million per year based on WMPA’s annual workplan, which is reviewed and approved by the Independent Monitoring Authority. The budget is divided into three main components: (1) administrative, (2) law enforcement/wildlife monitoring, and (3) rural development. The budget for 2010 is allocated approximately as follows: 25% administrative, 40% law enforcement/wildlife monitoring, and 35% rural development. NTPC approved the front-loading of an additional US\$300,000 for patrolling activities from 2010-2012.

There were several discussions of whether WMPA receives sufficient financial support for its patrolling and conservation mandates. One line of reasoning is that because WMPA’s budget is larger than any other NPA’s budget, it is, therefore, more than enough. The other line of reasoning is that comparing budgets across NPAs should not be a basis for determining whether WMPA is receiving adequate resources since Lao PDR’s other NPAs are clearly not receiving adequate resources.

Due to underlying structural issues, enumerated below, WMPA continues to experience difficulties in meeting its conservation mandate, which has resulted in the perception by many stakeholders that biodiversity conservation is a secondary goal behind developing livelihoods for the enclave villages. These structural issues can be grouped into the following two categories: WMPA oversight and biodiversity staffing capacity.

WMPA Oversight: The Concession Agreement designates the Independent Monitoring Agency (IMA) as the oversight entity that approves WMPA's budget and workplan before NTPC releases the funds. The current structure of this arrangement creates potential conflicts of interest, given that the IMA members are selected and contracted by WMPA. The previous two IMA consultants had expertise in livelihoods/rural development; neither had experience in biodiversity conservation. Since a biodiversity expert has never sat on the IMA to oversee WMPA's workplan and budget allocation, it is easy to understand stakeholders' concerns that biodiversity conservation is a secondary goal to livelihood development. At the time of USAID's site visit, we were informed that WB, NTPC, and the POE were finalizing the Terms of Reference (TORs) for—and planning to change—the IMA's composition. Hopefully, this will provide more balance to WMPA's biodiversity mandate. The new IMA will comprise four members: two international experts and two national experts, equally divided between biodiversity and livelihoods/rural development expertise. NTPC will provide the funds for the IMA when the process is finished, supposedly in October or November 2010.

Biodiversity Staffing Capacity: Although some WMPA staff have participated in biodiversity workshops, WMPA continues not to have staff with foundational knowledge of biodiversity conservation. At the time of USAID's visit, WMPA did not even have biodiversity technical advisors. This is untenable for an institution that is attempting to fulfill a mandate for biodiversity conservation. It appears that the majority of WMPA staff has been assigned from the Ministry of Agriculture and Forestry (MAF). With the exception of senior staff, very few speak English, thereby inhibiting access to information and best practices/lessons learned from other protected areas around the world. Moreover, a forestry background, unfortunately, does not provide the foundational knowledge and understanding required for biodiversity conservation.

This problem of inadequate attention to biodiversity conservation is also reflected in WMPA's budget, which combines law enforcement and research/wildlife monitoring. Law enforcement and wildlife monitoring both take considerable time and effort to do well, and each activity needs to have a separate budget to ensure that both are adequately funded and undertaken. Currently, the balance is quite lopsided: there are 20 enforcement staff and only three research staff at WMPA. The SEMFOP, however, envisions the development and implementation of various surveys (plants, fisheries, mammals, invertebrates, birds, etc.) and conservation strategies and plans, and three WMPA research staff are clearly not enough to fulfill these commitments in a timely manner.

The absence of biodiversity expertise is reflected in the fact that WMPA's draft biodiversity strategy is awaiting input/approval by the IMA. Until the IMA has the required expertise, the strategy will not be approved. In the meantime, a five-year management plan has been developed, and it is difficult to understand how a management plan can be properly developed before the approval of the strategy. WMPA hopes to finalize the biodiversity strategy by the end of 2010.

C. Changes within WMPA

A midterm review of the SEMFOP and WMPA was conducted in February 2009 and it was determined that it was necessary to align WMPA more closely with the GoL regulatory and

administrative system. This would also include improved alignment with traditional enforcement entities – village, military and police. These and other changes are being made to Decree 38 with the aim of improving the effectiveness of the WMPA. Changes associated with this decree include:

- Changing the Chairmanship of WMPA from the Minister of Agriculture and Forestry to the Governor of Khammoune who currently oversees implementation of resettlement, reservoir and WMPA activities. This action is seen by the WB as being able to press for stronger regulatory environment for WMPA and more aligned with GoL law. The decree will give the Governor a clear line of control to clarify authorities of line agency functions.
- The decree will make logging illegal in the area, although all logging has theoretically stopped.
- The institutional responsibility for patrolling the tributaries during high reservoir levels will be clarified as the responsibility of WMPA, not the Reservoir Management Committee.

D. NNT-NPA Livelihood Development

Finally, there is a group of stakeholders questioning whether the way in which WMPA is pursuing village development within the NNT-NPA is appropriate. It was expressed that there is no special programming for development of these enclave villages within the context of biodiversity conservation. Instead, development is occurring according to standard GoL policies. Examples provided include the following:

- Swidden cultivation practiced by enclave villages is more suitable to the local topography and soil in the NNT-NPA, but this practice continues to be viewed very negatively by the GoL. However, swidden cultivation in the NNT-NPA can increase biodiversity through generating secondary forest habitats which are favored by some types of wildlife (e.g., deer, nontimber forest products (NTFPs)) and ultimately benefit the villagers. Reportedly, villagers are being shifted from upland rice cultivation (swidden) into rarer NNT-NPA habitats such as lowlands and land along streams for paddy rice cultivation. Paddy rice is not only more labor intensive but can also be less productive. This type of development is not seen as balancing livelihoods with biodiversity conservation.
- Concern was raised about shifting the enclave villagers from local, self-sufficient food security to generating cash income in order to purchase rice from the market. Shifting these villages to a market based economy will require greater access into the NNT-NPA to get cash products out to market. This increased access intensifies the risk to biodiversity within the NNT-NPA. Additionally, this could increase the unsustainable harvest of NTFPs and/or wildlife poaching. Depending on markets for food also brings its own concerns given price fluctuations depending on transport costs and availability.
- The direction of enclave village development is further questioned by the fact that the GoL moved the Vietic villages of Nam Houay and Pong Keut from the NNT-NPA and consolidated them with the Sek village of Na Kadok and the Tai Theng village of Na Thone,

respectively. This was in spite of an earlier requirement of the POE that no villages be moved out of the NNT-NPA.

SECTION 2. BIODIVERSITY-RELATED CONCERNS

A. Access into the NNT-NPA

A key reason that the NNT-NPA has the most extensive forest cover of any protected area in Laos is the formerly limited access to the area. This access has dramatically changed with the development of the reservoir, in addition to road construction on the Vietnamese side thereby making it easier to access Laos forest resources. While illegal logging, poaching and potential mining are the main threats to the NNT-NPA, it is access into the NNT-NPA which facilitates these activities and will continue to be the biggest challenge to maintaining the integrity and conservation of the NNT-NPA's biodiversity. Since their first report (1997), the Panel of Experts (POE) has repeatedly raised the issue of these threats to the NNT-NPA, which have yet to be adequately addressed.

The issue of increased access has raised concerns from the beginning of the project and highlights the difficulty WMPA faces in balancing conservation and development. This is further complicated when the initial focus was on development at the expense of biodiversity. The SEMFOP identified uncontrolled access as a key threat to biodiversity conservation, but did not anticipate its magnitude.

As mentioned earlier, one objective of the SEMFOP is to reduce the porous nature of the NNT-NPA boundary by re-orienting the access for both people and commodities through Nakai town, focusing on establishing a single, dominant entry and exit point. Vietnamese are now providing the majority of household (HH) goods for the enclave villages with terrestrial and waterway entry points into the NNT-NPA. It is proposed that improving market access to Nakai town for enclave villages would provide alternative economic opportunities in place of their current reliance on NTFPs and would reduce the villagers reliance on the dominant transborder supply route for household supplies with its inherent opportunities for extraction of NNT-NPA resources by Vietnamese traders. This change would require products coming from Laos traders at similar costs. During the development of the SEMFOP, it was proposed that the reservoir-based transportation system offered opportunities for improved control and regulation into the NNT-NPA. These potential opportunities included:

- Development of a single access point into and out of the NT2 watershed/NNT-NPA which is easy to monitor and regulate.
- The highly visible nature of the water transport system will make illegal activities more difficult to conceal.

Five years after NT2 was financed, the increasing pressures of providing open access into the NNT-NPA for the enclave villages and the inability of the WMPA to have in place a Watershed Access Plan despite the repeated recommendations by the POE raises concerns as to the GoL political commitment to control access into the NNT-NPA. Currently the development of tracks within the NNT-NPA is occurring on an ad hoc basis. USAID's understanding is that the development of the Access Plan is

still in process and that the POE has agreed to 80% of the plan. The WMPA is waiting until the next POE visit to understand what the outstanding concerns are with the plan. Currently, WMPA is using the District/Provision regulations on access into the NNT-NPA which does not call for a policy of no access. During our visit, we were told that the transportation roads are designed according to the Concession Agreement (CA) and are to be no wider than 2.5 meters. However, we were not able to go out to the field to look at the tracks due to time limitations. In addition to the ferry that villagers can use to cross the reservoir, there are over 1,000 small boats that are owned by resettlement villagers. Under the Concession Agreement, NTPC had to provide the initial boats for every two HHs. NTPC has received a request to supply enough boats that each HH would have a boat. Increased road networks within the NNT-NPA and increased access via the reservoir complicates the problem of controlling access into the NNT-NPA. Contrary to what the SEMFOP proposed, with over a thousand boats potentially on the reservoir, and the biomass left in the reservoir, it is extremely difficult for the WMPA to monitor activity into the NNT-NPA. Given the issues with patrolling the reservoir, NTPC is reviewing whether they should provide the extra boats. NTPC has proposed to the WB/ADB/POE that in place of boats, compensation should be with small stock – pigs/chickens.



WMPA has identified the following five sources of threats to the integrity of the NNT-NPA:

- 1) Reservoir villages – since the flooding of the reservoir, pressure on the NNT-NPA from both resettlement and non-resettlement communities along the western shore has increased since it is now easier to access the NNT-NPA via boats. This pressure extends to the Dividing Hills which are a NW-SE oriented range up to 1,000 m separating the Nakai Plateau from the Northern and Central Mountains area.
- 2) Enclave villages (within the NNT-NPA) – this includes the ~6,600 inhabitants (11 villages, 31 subvillages) in the lower portions of the main rivers, in addition to smaller groups of people living within the higher mountainous areas within the NNT-NPA.
- 3) Khamkeut (or northern) buffer zone villages – this area is on the northwestern border of the NNT-NPA. Reportedly, the villagers (especially Hmong) poach the area in a manner similar to the Vietnamese. POE reports have highlighted the problem that at high water level, the reservoir provides unobstructed access by boat into areas of the NNT-NPA that were formally difficult to enter. Villages in this area have links to the Vietnamese trade networks via Lak Xao and represent the highest source of poaching threat to the NNT-NPA. It is seen as critical to break the links between the NNT-NPA and Lak Xao wildlife trade networks.
- 4) Gnommalath (southern) buffer zone villages – because of the barrier of the Phou Ak escarpment, villages along Route 12 pose a lesser poaching threat than villages in the Khamkeut (northern) buffer zone.

- 5) Vietnam traders and poachers – the whole northeastern border of the NNT-NPA borders with Vietnam, which is virtually unobstructed and easier to access than from the Laos side. There are two main types of Vietnamese that enter the NNT-NPA: 1) traders who enter legally through the Ban Maka-Neua checkpoint or illegally through the forest supplying Laos villages with goods (clothing, cigarettes, etc.) and will also purchase wildlife collected by local people (e.g., pangolins and turtles); and 2) poachers who camp in the forest and harvest wildlife and other NTFP themselves. The second group brings both wire snares and weapons (such as AK47s) for capturing larger mammals such as tigers and gaur. Unfortunately when the poachers leave, the wire snares are left in place and continue to trap/kill wildlife until the snares are removed and destroyed.

Additional pressures to the NNT-NPA that were not fully appreciated at the time of the Environmental and Social Impact Analysis (ESIA) include: the extent that the flooded tributaries would become an easy access point into the NNT-NPA, easy access across the subwatersheds, increased market opportunities on the Plateau for illegal forest products, and >1000 villager boats accessing the reservoir. It is too early to determine how successful the livelihood packages are working and to what extent resettlers continue to depend on the NNT-NPA for food and other products.

B. WMPA Anti-Poaching Efforts

The key threats to biodiversity conservation include poor control of outsiders accessing the NNT-NPA, the limited capacity WMPA has to patrol in some areas of the NNT-NPA, and the ineffectiveness of fines for deterrents. Given the size of the NNT-NPA and resource constraints, it is necessary for WMPA to concentrate their limited patrolling efforts in key areas which reflect significant biodiversity and threats. Additionally, there is approximately 60 km of reservoir border that needs to be patrolled. There are four ranger posts and nine zones within the park that are intensively patrolled based on poaching threats and biodiversity.

With the reservoir level increasing, access into the NNT-NPA is easier than when the water level was lower. When the reservoir is full, entry into the NNT-NPA and between subcatchments is very easy. This was not foreseen in the ESIA. Access has also been facilitated since under the compensation agreement, one boat was given to every two families; so initially there were 1,000 or so boats. Now there are over 1,000 boats as families have purchased new boats in addition to the ones they were originally given. This is reflected in a significant increase in law enforcement activities since the reservoir was filled. For example, comparing data from FY08CE09 and FY 09CE10: the number of arrested violators increased from 46 to 136; the amount of rosewood confiscated increased from 20 m³ to 43 m³; the number of chain saws confiscated increased from 23 to 85; the number of turtles confiscated increased from 18 to 32; etc. There is widespread concern that, coupled with



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increased market access via Nakai or Lak Xao, villagers will get use to earning money from the forest and this activity will be next to impossible to stop.

Patrol Teams: WMPA's anti-poaching patrol teams consist of: WMPA staff, district police, district military, forestry officers and villagers. A couple of interviewees felt that the effectiveness of the team depends on WMPA's ability to motivate the other members of the team since WMPA staffers are the only consistent team members. There is concern that since team members are not official WMPA staff, knowledge obtained can be used to develop individual opportunities for illegal forest activities. The district military are viewed as not having the connections/knowledge of networks in wildlife/timber trade and are obtained from a larger source of recruits and may not be of primary concern. We were told that the pool of police officers used is smaller than with the district military. Therefore, it is important to make sure that the police officers are committed to the mission since they will be introduced to new "opportunities" for making money via illegal wildlife/NTFP trade.

Concerns were raised over the participation of villagers on the patrols. Villagers are sent out with the patrol teams, which enable them to understand patrolling techniques and areas, as well as the locations of wildlife, so they are much less likely to be caught if they engage in illegal activity. Villagers are provided only with a per diem for participating in patrols. Some interviewees felt that villagers are hesitant to arrest fellow villagers and have traditionally looked to local authorities for the enforcement role. This is difficult to verify based on the data of arrests we were shown since it did not go lower than district level. There are also reports that some villagers are given a hard time from other villagers for being on patrols. When questioned about concerns raised with having villagers on patrol, WMPA and others do not see this as a problem since villagers can hunt general species for food and do not need to poach. The potential conflict of interest of villagers on patrols was also minimized as some interviewees said that villagers have many livelihood activities to fulfill and do not have time to poach. Currently, villagers harvest products (legally/illegally) and trade them with the Vietnamese, who bring finished products across the border. Some of these products would be expensive and difficult to obtain by traveling all the way to the Nakai Plateau. There does not appear to be any incentives for villagers to conduct conservation activities or for reporting illegal activities.

Relationships between WMPA and the police and military are critical since WMPA needs to be seen (and respected) with the same degree as a high military official. Additionally, WMPA does not have uniforms for the patrollers—making it difficult to represent authority when in the field. The MAF is currently deciding on the type of uniform for all of NNT-NPA staff.

Patrolling efforts are also handicapped because there is often a certain learning curve with each new team since there is often one new member that is unfamiliar and unskilled with the work. WMPA staff has gone to ASEAN WEN trainings in Thailand. In 2008, a training team from Thailand came to the Nakai Plateau to train the staff. WCS has also been training and going out on patrols with WMPA. WMPA is attempting to build their capacity by participating in training for trainers at WMPA headquarters so they will be able to train their own staff. At the time of USAID's visit, they were waiting for approval and funds from the MAF. There also is the need to do simple training for villagers.

Checkposts: The following stationary checkposts were established in August 2010: two road checkposts and three water checkposts on the Nam Soth, Nam Theun, Nam On. Each checkpost is staffed with four personnel. An additional four checkposts will be built near the Vietnamese border. Current plans are to staff the four new checkposts with seven people comprised of WMPA, police, military, District Agriculture and Forestry officers and villagers. Staff will be rotated on a monthly basis. There will be one permanent family (husband/wife) living at each checkpost.

The effectiveness of checkposts was raised during several discussions. Stationary posts are considered to not be as effective as mobile checkposts since locals know about the locations and therefore can easily work around them. Large trucks would have to go through the checkpost, but it is easy for motorbikes to go around. There is also a concern that stationary checkposts could become a job in and of itself and the person staffing the position will not get out of the checkpost to do a patrol.



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C. Law Enforcement Measures

Based on discussions, the effectiveness of law enforcement measures is not clear. Fines and penalties for violations seem too weak to serve as a deterrent for future illegal activities. It is our understanding that the first violation often results only in a warning with the justification that either the people are not aware of the law or misunderstood what they were doing was illegal. Therefore, for the first offense the person is educated. However, illegal good/snares can be confiscated at that time. Additionally, no fine is issued if a forest product (plant/animal) is claimed to be solely for personal consumption, although it is not obvious how this would ever be proven. WMPA acknowledged that the fines were very low for violators.

D. Illegal harvesting of high value timber within the NNT-NPA

There are two types of illegal harvesting of high value timber that continues to be raised in the context of NT2. The first is industrial scale 'salvage logging' which was only recently halted and the second is the continued harvesting of rosewood and other high value timber by villagers and others.

The Nakai Plateau and the NNT-NPA have a long history of logging under a concession by the GoL to the state enterprise, Bolisat Phatana Khet Phoudoi (BPKP). Illegal harvesting of high value timber has been raised as a critical issue even before the project was financed by the WB and ADB. As a result of a GoL/WB logging mission to assess reports of logging in areas outside of the reservoir inundation zone, harvesting outside of the zone was halted in 2000. A 2001 report on forestry in Laos by the World Bank, Sweden and Finland stated, "Recent World Bank missions have assessed the extent of unauthorized, illegal, unplanned and illicit logging in the Nam Theun 2 watershed area where logging is prohibited." The report also noted serious logging infractions in the NNT- NPA, and other areas which the GoL had designated as off limits to logging.

1. Industrial scale -salvage logging

Phonesack Group's sawmill on the Plateau was established specifically to process salvage logs before NT2 was completed, registered with the GoL in 2006 and remains in operation. The district government oversees its operation. During discussions with various GoL entities, there was no consistency as to which GoL authority is responsible for the oversight and operation of this sawmill. One source stated that the sawmill receives a quota every year which is issued by MAF. Another source stated that the company had stopped collecting salvage logs from the reservoir in 2009, but they were still processing stockpiles in addition to logs coming from other areas. However, this statement was contradicted when the source stated that the logs were still coming from the reservoir. Additionally, we were told that logs come onto the Plateau from other concession sites for processing. In the rainy season, logging trucks are not allowed to use the main Nakai road (May-Oct) so the sawmill uses that period of time to process their stockpiles. DAFO stated that 5-6 trucks/month come into the sawmill during the rainy season through the Lak Xao-dam road. Information was not consistent as we were told that: 1) there were no plans to shut down this sawmill since they get logs from other sources, not from the reservoir; 2) some sawmills had been effectively shut down due to no quota/sources; and 3) the sawmill had been effectively shut down and the GoL was waiting to inventory the logs and remove them.



However, until earlier this year, salvage logging operations were still being conducted. In fact, at least 30 barges from the Nam Ngum reservoir and other areas were brought onto the Plateau in 2009 specifically to continue salvage logging. During the periods that the reservoir was full, barges were sent up into the tributaries to cut trees as part of salvage logging operations. Reportedly, these operations were not for selecting mixed woods – only expensive species for cutting. At the time of USAID's site visit, a number of barges (~11) still remained on the reservoir. In an earlier report, the POE had requested that all of the barges be removed from the reservoir, and when this was raised during discussions we were told that the barge owners are not able to afford to



transport them off the Plateau. Another hypothesis was also provided that the barges were waiting until after the international attention on the project has diminished and will then resume logging operations. NTPC sees itself with limited influence in this discussion and sees it as a GoL responsibility with the WB ensuring that agreements are followed.

Concern over salvage logging has been raised by the POE, WB and ADB. There is consensus that logging did resume after the salvage logging period ended. However, no one we met with could provide USAID with information as to the amount of salvage logs that remained to be processed and a timeframe for when the sawmill would be shut down. USAID was told that the Prime Minister formally notified WB that salvage logging ended at COD.

WB stated that there were other sawmills on the Plateau and that there was nothing illegal about their operations. The WB views this issue being resolved through the sequence of steps the GoL is undertaking. The WB did not have any data on the volume of logging that was conducted after the salvage logging period ended and believe that the problem has been solved as salvage logging has now been formally stopped by the Prime Minister's letter.

2. Rosewood

The two rosewood species found in Laos are IUCN Red listed as vulnerable and endangered. Reportedly, during the Chinese Olympics, rosewood coming from Laos was selling for ~10,000 USD per m³. Since then the price has dropped with recent reports of rosewood selling at 3-4,000 USD per m³. The POE reports have regularly raised the issue of illegal harvesting of rosewood as an immediate threat to its survival in the NNT-NPA. The threat of survival of rosewood cannot be overstated since it is easier to poach than wildlife and can be easily carried out of the forest by a person walking or on a motorcycle. There is no shortage of high value wood in the NNT-NPA and when one species is depleted the poachers will move to other species and areas. Currently, the value of wood is higher than that for wildlife.

During discussions with GoL there does not seem to be a heightened level of concern for the survival of this species. An inventory on rosewood has not been conducted since there are no funds for such an assessment, which is considered a central government function. It could be possible to hire villagers for the inventory, but then they would know where the rosewood is and unless the incentives are increased to maintain rosewood it could be easily removed. Estimates were given that only about 5% of rosewood is outside of the NNT-NPA and it is distributed throughout the forest, although not in dense plantings. There is rosewood left in the NNT-NPA and reservoir area, with the preponderance of illegal logging occurring in May and June.

In an effort to downplay the concern of illegal rosewood harvesting linked with NT2 – a number of interviewees raised the fact that in the 1980s, Vietnamese poachers basically extirpated eaglewood (contains a fungus that oil was distilled from and sold to Arab countries). Their conclusion was that what is occurring with rosewood has happened with other species and is nothing new to this project.

E. Wildlife issues

NNT-NPA: Compared to other protected areas in Laos, there is a real paucity of larger terrestrial wildlife in the NNT-NPA. Arboreal species are abundant (e.g., gibbons) but terrestrial species are not, primarily because of intensive poaching in recent years and the thousands of snares left in the forest. Information from enclave villagers, WCS survey and results of camera trapping confirm that populations of some threatened species are precariously low in the NNT-NPA and have declined since the 1990s due to poaching.

Camera trapping is being conducted on a routine basis. The camera traps are not designed to compare one area against another because they are not laid out in a matrix that can be replicated. The cameras are placed in a “hunter style” typically on trails that wildlife use and the camera traps are set up in each area every four years. There were initially 55 cameras for use but the number is now estimated between 45-50. There is a lack of staff and equipment to carry out camera trapping on a regular basis throughout the NNT-NPA. Transects were initially used but are not any longer because of time and labor intensity involved. Unfortunately, without being able to undertake a monitoring program that is scientifically valid it is not possible to achieve results that are statistically and scientifically valid.

Buffalo in the NNT-NPA continue to be a major concern. Prior to the project, there were approximately 20/25 head of buffalo per family and about 500 head per village. Although there was enough grazing land on the Plateau for the buffalo, it was reported that most of this land was designated for the Village Forestry Association as the result of political interests. Since all the villagers had to sell a substantial portion of their buffalo prior to resettlement, there were too many on the market and the prices were extremely low. Therefore many villagers decided to release their buffalo into the NNT-NPA instead of selling them at the low market prices. The issue of selling villagers buffalos should have been resolved before resettlement so there would have been other options other than releasing them into the NNT-NPA; thus competing with wildlife, in addition to providing an excuse for villagers to enter into the NNT-NPA. There are still an estimated 300-500 buffalos in the NNT-NPA which need to be removed. This must be a combined effort by all GoL entities so villagers will not put them back in after they have been removed. Buffalos that remain in the forest are using the salt licks and it is unclear how this will impact the effectiveness of the salt licks to keep the elephants in the area. During our visit we were informed villagers were to remove their buffalo from the forest by the end of this year, otherwise they will become the property of the GoL and can be shot.

Plateau: The following provide examples of some of the wildlife conservation efforts being conducted by NTPC on the Plateau:

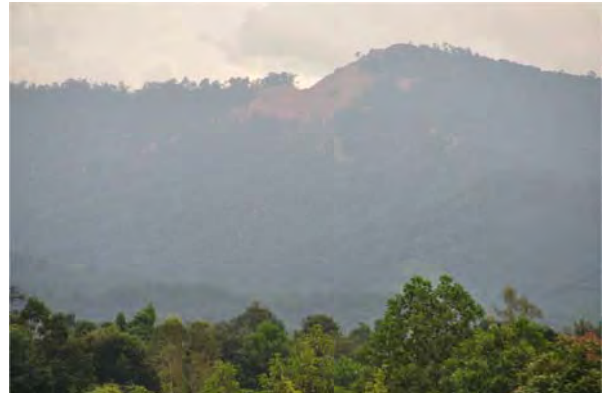
- Elephants: NTPC’s Elephant Program Phase I and Phase II were conducted by WCS. WCS has estimated the Nakai-Nam Theun elephant population at around 140 individual animals. This makes it one of the most significant herds of Asian elephant left in the wild. The elephants are most frequently observed at the southern end of the Plateau. There are eight artificial mineral licks have been constructed to replace sites lost to the inundation, and these are being used by the elephants , other wild animals and buffalo that have been left in the NNT-

NPA by the villagers. WCS also provided training to villagers in human-elephant contact monitoring and in passive and active crop protection measures. To date, there have been no elephants poached in the NNT-NPA. However, there have been recent reports of poaching in other parts of Laos and even captive elephants.

- Turtles: Since the area drains out completely during low reservoir levels there needs to be an interface between the land and water. NTPC created a new wetland area to provide this interface for turtles and tortoises. However, the area needs to be large enough so when poachers come into the area, the turtles/tortoises will not be decimated.

F. Gold Mining

The Phonesack Group has an established mining operation near Lak Xao, ~12 km away from the NNT-NPA. In November 2009, the company entered into the NNT-NPA for exploratory mining activities. Phonesack has concessions in the area, including one that is next to the artisanal miners concession which is close to the NNT-NPA border. The concessions are given by MEM and maps of the concessions were not available at the WMPA office in Lak Xao and reportedly could be obtained from Phonesack. Due to rains and high river levels, USG was not able to visit the mine site at Nakodok or see the status of the roads that were cut into the NNT-NPA. When USG discussed this issue with various stakeholders we were given a number of different versions as to what happened.



NT-NPA.

- For example, we were told by some GoL staff that the NNT-NPA sign was knocked down by a landslide or by the river flooding but not by Phonesack's activities. The WB and other GoL officials have stated that the sign was knocked down by Phonesack and has been replaced by them.
- There were mixed stories as to the status of the 2-3 km of roads that were cut into the NNT-NPA, depending on who was asked the question. Answers ranged from the roads were already reforested so they cannot be used for access, to they are being used for motorcycle patrols by the Lak Xao WMPA office, to Phonesack has not provided the funds for reforestation.

Reportedly, the Prime Minister has given WMPA the authority to fine the company but they do not have the capacity. There is now an agreement with Phonesack to not mine in the NNT-NPA. The Lak Xao WMPA office is responsible for ensuring the area remains clear of mining and for reforesting the roads. There is a military concession close to, but not in the NNT-NPA.

When various GoL and others were questioned as to whether the company should or would be fined, various answers were provided. It is clear that this is a very sensitive issue with a company that has high political ties. GoL issued a decree to remove the company from the NNT-NPA.

Another issue raised was the possibility of mine workers in the area entering the NNT-NPA for poaching or illegal logging. Reportedly, a village will report to WMPA if either mine workers enter the area illegally or the mine expands back into the NNT-NPA. Although it is not clear what are the incentives for villagers to do this since incentives are received for activities related to development and a small per diem for patrolling instead of reporting illegal activities.

G. Laos-Vietnam Cooperative Action Plan

In 2004, cross visits of both GoL and Vietnamese, led to the joint development of a Cooperative Action Plan for the control of illegal crossborder hunting, trade and transport of fauna and flora and was signed in late 2004. As stated earlier, the CAP was to be maintained and intensified under the SEMFOP. The CAP was developed by field level officers in Ha Tinh/Quang Binh (Vietnam) and Bolikhamxay/Khammouance (Laos) provinces and reviewed for approval by Vietnam – Forest Protection Department and Laos Department of Forestry. This was the first cooperative joint action plan for this area to control the transboundary wildlife trade and represents an important contribution to the protection of natural resources and biodiversity.

We were told that there is a meeting every year with Vietnamese authorities to exchange information. An annual report on Road 8 Border Post is provided during the meeting but no details were given on its content. GoL officials at the Border Post said that maybe there was illegal trade before but now after the cooperation with Vietnam wildlife has not moved across the border. We were told that the cooperation between Thailand, Laos and Vietnam has essentially eliminated the illegal trade. Information of illegal trading is exchanged between governments and the authorities will investigate, but there have been no reports on illegal trade.

During the course of meetings with GoL staff, it does not appear that this Plan is being implemented and further it is not clear who is taking responsibility for its implementation and what resources (staff and financial) are dedicated to it.

H. Border Wildlife/illegal logging issues

Road 8 Border Post was visited since it is well known as a transit point for pangolin trade from Malaysia through Laos to Vietnam. Based on discussions with GoL officials at the border, contrary to other reports, we were informed that neither timber nor wildlife crosses the border at this location into Vietnam.

CITES training had been done for this post but there were no CITES posters to be seen. When asked to see CITES records or any records, we were initially told we could and then told we could not since the records were not available.

Lak Xao WMPA reported that they were working primarily on development, not conservation activities in this area. They have a development fund which is used to give a small per diem for villagers to go out on patrols. However, there does not appear to be any incentives for conservation activities or for reporting illegal activities. This raises concerns since both the WMPA and POE has identified the

northern buffer zone villages as a great threat to biodiversity. We were also informed that there is no illegal activity occurring in the NNT-NPA which they patrol which seems to contradict WMPA photos showing illegal logging activities in the Laos-Vietnam transborder area.

SECTION 3. NT2 RESERVOIR ISSUES

There are 16 villages around the reservoir with 1,100 registered boats. There are 1,049 fishers that sell their fish catch, which accounts for 79.95% of total number of resettlers (132 HHs). Data shows that 1,479.17 tons of fish have been caught/year with 80% of the catch being sold, 15% for HH consumption and only 5% processed before selling.

The fish market has developed quickly without a lot of external support. At this early stage, fish stocks appear to be doing well. This is seen as very positive for the resettlers as they have been making a good income from their catch. Some concern was expressed that the resettlers might become over-reliant on fisheries, which could become a problem when/if the fish stocks decline. However, there was speculation that in the longer term, revenue from livestock will match fisheries revenue.

A. Reservoir Management Committee

A Reservoir Management Committee (RMC) has been set up for oversight of the reservoir fishery. The Committee is composed of the following three units: 1) Fishery Management Unit, 2) Coordination and Patrolling Unit and 3) Regulation and Dissemination. The Vice Governor of Khammoune chairs the RMC.

To control fishing on the reservoir, licenses have been issued for fish consumption, sales, trading and boats have been registered. Daily fishing tickets for outsiders are also available which costs 10,000 kip to catch up to 5 kg of fish. Each village fishing association controls issuance of the daily tickets. There is no upper limit to the number of daily tickets that can be issued; it depends on the number of visitors. There are 25 individuals with trading licenses of which five are women.

The reservoir has been divided into management territories for each of the resettlement villages. Six conservation areas have been identified which are basically the tributaries that empty into the reservoir and the land bridge in front of the dam. Conservation signs have been put up at the dam site, Nam Sod, Nam Mon, Nam Sangong, Nam Sa Nap, Nam Theun, Nam Noi and Nam On. Fishing is not allowed from June-October since it is the breeding season. A survey is currently being conducted to see if the villagers could be allowed to harvest in these conservation areas during a portion of the year, depending on location of spawning grounds, fish movement, etc.

Villagers are not to fish in the tributaries, but there are not enough patrols to cover the area. Patrolling is further complicated when the reservoir water level is at 538 meters, and the NNT-NPA and its tributaries flood. The main question is who has responsibility patrolling the area when the reservoir floods into the NNT-NPA? Is this the responsibility of the RMA and then when the water level recedes the land and tributaries are once again the responsibilities of the WMPA? USAID understands that a

proposal is under consideration as part of changing Decree 39 to make the NNT-NPA a straight line boundary for to resolve this ambiguity.

B. Reservoir Patrols

The RMC has a patrolling team consisting of 28 people comprised of District police, soldiers, RMS VFG and others. So far they have patrolled 22 times and arrested 21 people who were outsiders reportedly from Vientiane. The patrols went out based on reports they received from villagers. The patrol team also monitors traders buying fish at five locations – Oudomsouk, Nakaitai, Nongbousa kham and Soppan Thalang.

Several interviewees believed that 10 boat-mobile RPU teams are not enough to reduce poaching in approximately 300 km² of the eastern reservoir and the SCAs; that is, one team per 30 km² is insufficient. The same level of effort applied to the 4,000 km² of watershed would require more than 130 full-time patrol-teams – which is not possible given budget, etc. Additionally, the Concession Agreement identifies the thousands of island areas of the Nakai Dam, the embayments of the tributaries of the Nam Theun and Nam Theun connecting with the reservoir as special conservation areas under RMA's authority and need to be patrolled. Therefore, the issue is how to effectively patrol this area given the available resources.

There is not a patrolling plan due to the lack of budget for patrolling or boats. The RMC recently received two boats purchased by NTPC. They will go on regular patrols if they receive a budget from the GoL. Their budget for 2010-2011 is 800,000 million kip = ~100,000 USD/year. Approximately 30% of the budget will be used for patrolling. NTPC initially provided a budget ~150,000 USD for 2 years, but direct financing of the RMC is not required by the Concession Agreement.

C. Fisheries

NTPC is preparing a fisheries co-management plan to engage resettlers, which includes the Village Fishing Association which has been created to patrol and levy catch and management fees on behalf of the Village Fishing Association groups and the Reservoir Management Secretariat (RMS). The Village Fishing Association and the RMS are fairly new institutions and will require some time before they are fully functional.

Fish stocking and other activities will be funded by NTPC. There has already been an annual fish stocking into the reservoir of 40,000 fish (*Puntious sp.*) brought into the area from a fish station as part of a cultural ceremony and not specifically as a food source. Of the tons of fish that have been caught very few are *Puntious*. NTPC recognizes the need to monitor fish species, especially since the first full draw-down of the reservoir will occur in 2011 could possibly impact fish populations. After the first full drawdown, NTPC will develop a systematic stocking of reservoir fisheries taking into account concerns of invasive fish species. Currently, NTPC is conducting studies to determine which species survives better in reservoir conditions. A hydrobiologist has been doing systematic surveys and will be working with international experts until 2014 conducting baseline and follow-up surveys. There is regular fish catch

monitoring data being collected. However, none of this information is made available to the public because it is regulated in the concession agreement. However, all the information is made available to the lenders, the POE and IAG. NTPC does have a biodiversity target for fisheries, although that information was not on hand.

D. Reservoir Biomass

Reservoir biomass removal has been a concern of stakeholders since the beginning of the project. It has been recognized that if significant amounts of biomass remain in the reservoir after inundation, there will be serious impacts on water quality. The POE has emphasized the seriousness of the issue and consequent need for timely biomass removal in almost every mission. The IAG noted in its 2009 report that not all of the biomass was removed from the reservoir before inundation in April 2008. Water quality issues are likely to become a problem and are currently understated because of the amount of biomass left in the reservoir as a result of cost and pressure to keep on time with construction. There are reports that fish are starting to have a bad taste which is attributed to the water quality in the reservoir.



When this issue was discussed, NTPC stated that the brush left in the reservoir helps maintain the fisheries and prevents people from engaging as easily in illegal activity. Additionally, NTPC stated that water quality data shows that water quality has been better than anticipated, and dissolved oxygen (DO) levels are not a concern in most areas due to lots of flow from tributaries and wind across the lake surface); water quality downstream has higher DO content than the Xe Bang Fai.

SECTION 4. VILLAGE FORESTRY ASSOCIATION (VFA)

The Village Forestry concession is 20,800 ha and the Village Forestry Association has 1,028 HH members from 16 subvillages/10 villages. Approximately 10-12,000 ha of the concession area are used for medicinal/NTFP collections, and 6,000 m³ of timber is cut for the VFA saw mill annually. At this point, the finished products are going to Japan. Approximately 100 people are employed mostly from resettled villages. However, outside skilled workers were hired to operate the machinery.



VFA's focus is on sustainable use of the forest. The Provincial Forestry Office surveys and marks the trees for cutting. Although MAF has a model for sustainable use, VFA has applied for FSC and chain of custody certification. There are >40 commercial

species that are processed. There is quite a lot of rosewood (small diameter species) but they are not legally allowed to cut it. Villagers do cut and take various species of trees from the concession, but only a few for their house since they are difficult to cut and transport. Each village patrols their area of the concession which is 1 HH//village/day designated for patrols.

This type of livelihood activity could complement the conservation goals of the biodiversity offsets but as a newly created institution, the VFA has faced many problems. NTPC supported the VFA initially and facilitated their access to the market. However, NTPC support ended last year and since then the VFA has struggled to survive. It is a cooperative association and paying a substantial portion of income in forest resource taxes to the GoL. To date, they have paid 726,617 USD and this year they have paid 250,000 USD. For an income of 280,000 USD they paid 177,443 USD in taxes. The VFA is currently in the process of changing their status from an association to a limited liability company since Laos does not have laws governing an association. The VFA Board decides on the amount of money that goes to the villagers. Last year, each HH was given 1 million kip (~120USD) as their dividend. The target income for each HH from the VFA is 300 USDs. They are now in the process of switching HH payments from dividends to shares.

Concern was expressed over future operations, whether there will be long term sustainability and the issue of quota setting. The VFA has the right to use the forest for the next 70 years but has to reapply for its quota every year. For sustainability and planning purposes, it is felt that a long-term quota is preferable.

During our visit, employees did not have safety equipment apart from a few dust masks. During the period of NTPC funding, safety equipment (glasses, ear plugs etc) were used. However, when NTPC stopped funding the project, the workers' perception is that NTPC took the equipment with them. Our discussions with NTPC did not confirm this and they had no idea what happened to the safety equipment.

SECTION 5. RESETTLED VILLAGES

Due to time constraints we did not meet with resettled villagers. Information obtained is from meetings with other stakeholders.

NTPC is required to meet the concession agreement targets related to livelihood improvement. There are benchmarks for years 2013 and 2017 on the Plateau. For the downstream area, NTPC will use 2012-2013 data compared to 2009 to determine whether goals are being reached.

Resettlers received 0.6 ha land for agriculture. Soil quality on the Plateau has always been an issue and the Plateau was used in the past for grazing livestock not for agriculture. Although resettled villagers had the option to move off the Plateau to Lak Xao where soil quality was better, they opted to stay on the Plateau for cultural, spiritual and social reasons attached to their territory. There was a grievance filing process for villagers who weren't satisfied with their allotment; the original allocations were defined by the concession agreement. Due to the quality of the soil, resettlers will need to

develop rotational cropping to build up biomass and use this as a model. Villagers have traditionally depended on natural resources; therefore, it is very difficult to teach people other means of earning incomes/livelihoods.

These villagers are undergoing a dramatic social change that has not yet been recognized. The fact is that, based on previous lifestyles, there is not enough private space for individuals. Additionally, there is a stark transition from an extensive agricultural system to an intensive agricultural system which requires a period of time to adjust. The livelihood programs are very prescribed so there is little room for flexibility.

Participatory land use planning (PLUP), approved by GoL, is being supported by ADB and funded by NTPC. It is important that the PLUP is being conducted under the auspices of the GoL so that they will have ownership in the process. NTPC is also providing technical assistance in specific areas (livestock, nutrition, etc.). PLUP was mandated in the concession agreement and will be applied to all resettled villages. The Provincial government approved the results of the PLUP and allowed for the distribution of another 150 ha of land. The process has been slow since there is not a standard definition of second generation and what land rights they would be entitled to. The definition will probably end up being restricted to the progeny of resettlers. Extended family will be able to come and benefit from the villages services but they would not be entitled to their own land. Under the PLUP there is a condition that they must make full use of the land they are allocated which has raised tensions. This will result in some of the village forestry land being allocated to villages for second generation families, crops, etc. All HHs will decide together what to do with the additional land that has been granted by the government. Different HH have different needs and vulnerabilities so may want to use land differently than other HHs. PLUP has been completed for two villages and it is expected it will be completed for all villages by February/March 2011.

NTPC has finally hired a social scientist. Although it would have been better to have involved this person at the outset of the resettlement process, it is hoped that the social scientist will help with communication between the villagers and Resettlement Unit staff so the staff can understand the reasons why resettled villagers act as they do.

NTPC is optimistic that the reservoir's draw-down areas will be productive for agriculture and grazing; e.g., >2,000 ha of land that will be able to support floating rice.

Ahoe Vietic Minority HH

Based on reports, it appears that the issue with the Vietic families from Sop Hia is not yet resolved. NTPC's social scientist will look into this issue as a response to the POE continuing to raise concerns. Reportedly, the Vietic families were never allowed to move to another location within their spiritual territory which was within the NNT-NPA corridor, and in eyesight of the reservoir. There is lack of agreement as to which entity has responsibility for these families – NTPC, the GoL or District GoL. NTPC recommends that there should be some way for these people to still visit their spiritual home. This issue will be raised during the next POE visit in October/November 2010.

SECTION 6. RECOMMENDATIONS

WB Biodiversity Offset

- WB needs to ensure the success of maintaining the NNT-NPA as a biodiversity offset, otherwise it will become out of compliance with its own safeguard policy. This will require WB to provide support and resources as needed without depending on external aid organizations or NGOs to provide funding resources.
- WB and GoL need to reassess the status of the Northern Extension since this area is highly important, providing additional contiguous habitat that forms an integral component of any conservation plan for the NNT-NPA and the critically endangered saola (which the SEMFOP mandates a conservation action plan). Contrary to earlier beliefs, conservation funds for this area have not proven forthcoming and consequently the area is not being adequately managed or protected.
- Conduct a review of financial and staffing resources required for WMPA to meet both its patrolling and conservation mandates as outlined in the SEMFOP.
- International biodiversity experts need to be hired under WMPA technical assistance or another equally effective mechanism to support both patrolling activities and research/wildlife monitoring activities, including implementation of SEMFOP conservation and management programs.

Access into the NNT-NPA

- Since the increased pressures into the NNT-NPA are a combination of direct and indirect impacts of the project, it seems appropriate for NTPC to provide additional mitigation funds for both the WMPA and RMC.
- The 2004 Laos-Vietnamese Cooperative Action Plan needs to be resourced and implemented without further delay.

WMPA anti-poaching activities

- Law enforcement measures need to be adequate to provide as an effective deterrent mechanism for illegal logging and wildlife poaching.
- There needs to be a different style of patrolling where WMPA patrols are not depending on other government officers and villagers as part of their composition.
- Independent audits of patrol teams to assess effectiveness of patrols and to reduce any potential illegal activity by team members.
- Under the current scenario, incentives for more effective engagement of local villagers are important to ensuring the success of patrolling efforts, in addition to stricter penalties, as appropriate.

- Full-time mobile checkpoints should be seriously considered given that experts in enforcement have determined them to be more effective in controlling illegal transport of wildlife and other resources.

Wildlife

- Based on the SEMFOP biodiversity conservation activities, it is critical to undertake a robust biodiversity monitoring program that is scientifically valid and begin implementing species specific conservation and management plans as described in the SEMFOP. Priority needs to be given for critical species such as saola, tiger etc.
- Since the end of Phase II there has been no studies being conducted on the wild elephants, NTPC should undertake a follow-up assessment.

Reservoir

- NTPC/GoL need to provide adequate financial and staff resources in order for the RMC to conduct regular patrols on the reservoir.

Village Forestry Association

- NTPC/GoL need to provide support to the VFA in order that a long-term financial and production sustainability plan is developed.

Cross-cutting

- Monitoring data (water quality, grievance complaints, etc.) needs to be made available to the public.
- NTPC needs to liaise once again with WMPA and ensure that the Reservoir Fisheries Association and Village Forestry Association are achieving their original objectives as laid out in the project development plans.