International Rivers Network Visit to Nam Theun 2 Hydropower Project in Laos June 2006

TRIP REPORT AND PROJECT UPDATE



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ABBREVIATIONS

ADB	Asian Development Bank
COD	Commercial Operations Date
EAMP	Environmental Assessment and Management Plan
GoL	Government of Laos
IFI	International Financial Institution
IMA	International Monitoring Agency
IRN	International Rivers Network
NBCA	National Biodiversity Conservation Area
NGO	Non Government Organization
NT2	Nam Theun 2
NTFP	Non Timber Forest Product
NTPC	Nam Theun 2 Power Company
PoE	Panel of Experts
RMU	Resettlement Management Unit
STEA	Science, Technology and Environment Agency
ToR	Terms of Reference
WB	World Bank
WMPA	Watershed Management and Protection Authority
XRF	Xe Bang Fai

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EXECUTIVE SUMMARY

Three IRN staff members visited the Nam Theun 2 hydropower project (NT2) in June 2006. During our visit, IRN met with representatives from the Government of Laos (GoL), the Nam Theun 2 Power Company (NTPC), the Asian Development Bank (ADB), the World Bank (WB) and CARE International. Over a period of six days we traveled to the Nakai Plateau, the downstream channel area in Gnommalat District, and visited villages along the Xe Bang Fai. We also met with relevant officials in Vientiane and at ADB headquarters in Manila.

Our main purpose was to gather first-hand information regarding implementation of the NT2 project. We interviewed construction workers, local officials and those affected by the dam project, and observed various construction and resettlement activities. The information we received during our field visit was supplemented and updated with information from recent project documents. IRN also wrote to NTPC after the field trip to raise questions and give NTPC the opportunity to respond to our findings. NTPC's responses have been incorporated into this field report to the extent possible.

Key Concerns and Recommendations

IRN has identified the following key concerns regarding implementation of the Nam Theun 2 Hydropower Project:

1. Downstream Channel Compensation Inadequate

According to interviews with villagers in three villages located along the upper part of the downstream channel, provisional cash compensation for loss of rice fields and common property resources has been wholly inadequate to compensate for the lost production values of their land. Many families lost part or all of their rice fields due to downstream channel construction.

The amounts of provisional compensation given to families are insufficient and inconsistent. For example, three families in Ban Keovilay lost most of their rice fields and received only 600,000 Kip (US\$60) in compensation for lost production value. Other families in Ban Keovilay received 800,000 and 1.8 million Kip in compensation, still insufficient to compensate for lost production value. There seemed to be no explanation for why some families received more compensation than others. The lack of adequate compensation is leading to rice shortages in some families.

In addition, some villagers report that although they used to practice double cropping on their rice fields, they were only compensated for the lost production value of one crop. People have also received inadequate compensation for loss of common property resources, such as fisheries, vegetable gardens, fruit trees, access to bamboo forests and non timber forest products.

NTPC denies these problems and claims that the grievance mechanism is working well. Despite this, IRN believes that serious problems remain with calculation of provisional compensation. We believe that the problems can be attributed to the following factors:

- poor planning for project lands (which includes downstream channel) compensation;
- the lack of a publicly available plan for permanent livelihood restoration for project lands affected communities;
- the involvement of the district government in disbursing compensation, leading to a high likelihood of mismanagement;

- inadequate baseline surveys; and
- inadequate monitoring measures for project lands communities.

IRN recommends that an independent team be commissioned to carry out systematic and thorough consultations with all project-affected people living along the downstream channel and to review all relevant NTPC documentation to determine where problems continue to exist and to make recommendations for rectifying these problems as soon as possible.

2. Xe Bang Fai Livelihood Restoration Program

A total of 159 villages living in the Xe Bang Fai River basin will be affected by increased water flows as a result of NT2. The initial study outlining the measures to be undertaken during the downstream livelihood and asset restoration program was due to be completed in early 2006, but the report has still not been disclosed.

IRN is concerned about the viability of implementing an extensive livelihood restoration program in so many villages in such a short period of time. There are only three years left until commercial operation, and the livelihood restoration program is only now being piloted in just 20 villages. NTPC should develop a provisional compensation scheme to ensure that people are adequately compensated until livelihood restoration measures yield benefits as promised.

The livelihood restoration program places a heavy emphasis on dry season vegetable cultivation. Farmers are willing to switch from rice cultivation to planting vegetables during the dry season if there is a market for their produce. If all 159 Xe Bang Fai villages, as well as those on the Nakai Plateau, start to produce dry season vegetables, villagers are concerned that the local market will be flooded and they will be without a buyer. A successful marketing strategy is clearly needed for Xe Bang Fai villages.

3. Nakai Plateau Resettlement

At the time of our visit, 330 families were going through transitional resettlement on the Nakai Plateau. As NTPC decided to move people at the beginning of the rainy season, before any of the new infrastructure was in place, villagers were living in temporary housing and will have to spend a few months clearing their agricultural land and establishing their new lives. At most of the sites, people were moved before wells or boreholes had been dug, causing water shortages in some villages. Villagers are receiving food subsidies over the next six months.

IRN is concerned that the rains will impede access to all the transitional villages during the rainy season, making food and water deliveries difficult. The situation will need to be closely monitored throughout the rainy season to ensure that people are getting what was promised.

IRN continues to be concerned about whether or not Nakai Plateau villagers will be able to keep their buffalo when they move to the new resettlement area due to a shortage of land and forage. NTPC claims that no villager will be *forced* to sell their buffalo, but villages with large numbers of buffalo will be encouraged to sell them and seek alternative investment models that are less land intensive. Villagers are also concerned about whether they will be able to grow rice in their new plots. NTPC states that they are experimenting with varieties of rice and with agro forestry systems, but few details have been released about these systems and their effectiveness.

A major part of villagers' livelihood in the new resettlement areas is supposed to come from the cultivation and sale of cash crops. Villagers are concerned about where they will sell their vegetables once the project is completed. NTPC has reportedly conducted a marketing study,

but the study has not been released to the public. <u>It is critically important that the marketing</u> study is disclosed in its entirety, and that its findings are discussed with Nakai Plateau villagers.

IRN has heard that the amount of usable hardwood timber on the Nakai Plateau has been overestimated, and that there is a shortage of wood for building the houses and other structures for the resettlement sites. This could seriously delay the resettlement process and should be investigated and rectified immediately. Lower than expected timber stocks in the community forest areas will also affect the long-term viability of the resettlement program.

4. Salvage Logging Delayed

The Government of Laos is expected to earn as much as US\$70 million from salvage logging of the Nakai Plateau. As of June 2006, no contract had been awarded to carry out the salvage logging operations. In August 2006, NTPC stated that the GoL had contracted a company and that logging would commence this coming dry season. Meanwhile, no clear plan for managing the logging operations has been released to the public. Careful planning is critical given the proximity of the Nakai Plateau to the Nakai Nam Theun NBCA, the potential impacts to endangered species in the area, and the impacts that logging will have on access to non-timber forest products for Nakai Plateau villagers. The salvage logging management plan should be released as soon as possible, and the logging operations should be carefully monitored over the coming two years.

5. No Plans for Biomass Clearance

IRN is concerned that if most of the biomass is not cleared from the reservoir before impoundment, the decomposing vegetation will cause serious water quality problems in the new reservoir, resulting in massive fish kills in both the reservoir area and downstream along the Xe Bang Fai. NTPC has informed IRN that "there are no agreed plans for biomass clearance at present." This will affect the viability of the livelihood restoration programs in both areas. To avoid serious water quality issues, all biomass should be cleared from the reservoir areas that will be permanently flooded. NTPC should immediately commission a study to investigate the best method for clearing the vegetation, and put in place plans to clear all biomass from the reservoir area during the 2007-2008 dry season. The biomass should not be burned, but cut and carried out of the reservoir.

6. Excessive Dust in Roadside Villages

Many villagers on the Nakai Plateau and in Gnommalat District complained about the excessive dust from project vehicles. While NTPC and the head contractor have stated that roads are being sprayed several times a day to minimize dust, villagers informed us that spraying occurred sometimes only once a week, and sometimes even less than that. Villagers complained of respiratory illnesses arising from the dust. IRN recommends that at the beginning of the coming dry season all roads passing through villages that are subjected to project-related traffic be sealed as a matter of priority.

7. Road Construction in the NT2 Corridor

The Nakai Plateau is surrounded by two important National Biodiversity Conservations Areas (NBCAs). The Phou Hin Poun – Nakai Nam Theun Corridor (the Nam Theun 2 Corridor) links these two NBCAs and is an important migration route for many wild animals, including a herd of wild Asian elephants. The dam site and the new road from Ban Phonsa-ad to the dam site are located in the Nam Theun 2 Corridor.

During our visit, we observed that the shoulders of the new road to the dam site were logged well beyond the allotted width. In some areas, a swathe of at least 100 meters was cut through

pristine forest. As is often the case in Laos, we believe that construction of the road was used as a pretext for logging the surrounding area. IRN is concerned about the impacts of the road construction on the ecological integrity of the corridor, and the hindrance this might cause to animal migrations.

8. Fisheries Already Affected by Construction Activities

A study on fisheries on the Nam Theun and Xe Bang Fai was conducted by Dr. Maurice Kottelat. This study was supposed to collect baseline data on fisheries, but the surveys took place in May 2006, long after construction had begun. Under these circumstances, the study cannot be considered a baseline. Indeed, IRN has heard reports that Dr. Kottelat found unusually low fish diversity downstream of the dam site, and in the Xe Bang Fai downstream of the Nam Kathang/Nam Gnom confluence, which are likely related to excessive sedimentation in the rivers as a result of dam construction.

9. Excessive Sedimentation as a Result of Construction Activities

Numerous monitoring missions have pointed out the excessive sedimentation that is occurring in the Nam Theun and the Nam Kathang as a result of poor management of construction activities. The Head Contractor is finally using flocculating agents (chemicals which bind the fine particles together and prevent them from flowing into the rivers) in two locations downstream of the powerhouse tunneling works. However, IRN understands that at all other sediment basins no flocculation is occurring. Also there are many diffuse sources of turbid discharges where there is no sediment removal, such as from all the large roads and newly cleared areas. This excessive sedimentation is likely already impacting fisheries and other aquatic biodiversity in the main impacted rivers.

10. Delays in Release of Information and Monitoring

Many studies relating to social and environmental aspects of the project have not been disclosed, and continue to be delayed. IRN is concerned that although construction is proceeding rapidly, key social and environmental management plans have not been completed and key monitoring arrangements are not yet in place. In addition, NTPC states that they will disclose only executive summaries of key documents such as the marketing study for the Nakai Plateau and Xe Bang Fai areas, the Xe Bang Fai Livelihood Asset and Restoration Program and the baseline study on fisheries on the Nam Theun and Xe Bang Fai. This is not in line with the standards of transparency that the project developers and financial institutions claim to adhere to.

11. Lao National Hydropower Policy

In June 2005, the Lao government enacted a National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR. The policy was enacted as a precondition for World Bank support for Nam Theun 2 During our visit to Laos it became clear that the policy was not being implemented, nor did it appear that any steps were being taken to implement it. For example, several hydropower projects are moving forward, yet Environmental Impact Assessments and Social Development Plans have not been disclosed as required by the policy. As implementation of the National Hydropower Policy was a precondition for World Bank support for Nam Theun 2, the World Bank should take immediate steps to ensure that the GOL is implementing the policy.

I. INTRODUCTION

Three IRN staff members visited the Nam Theun 2 hydropower project (NT2) in June 2006. The team also visited several other hydropower projects in the Lao PDR. During our visit, IRN met with representatives from the Government of Laos (GoL), the Nam Theun 2 Power Company (NTPC), the Asian Development Bank (ADB), the World Bank (WB) and CARE International. Over a period of six days we traveled to the Nakai Plateau, the downstream channel area in Gnommalat District, and visited villages along the Xe Bang Fai. We also met with relevant officials in Vientiane and at the ADB headquarters in Manila.

Our main purpose was to gather first-hand information regarding the implementation of the NT2 project. We interviewed the project developers, construction workers, local officials, international NGOs and those affected by the dam project, and observed various construction and resettlement activities.

Even though the project area is open to the public, IRN informed NTPC and the Government of Laos of our intentions to visit the area before our trip. No representative of NTPC or the GoL accompanied our team.

The information in this report was mostly collected through field interviews and formal meeting discussions. To obtain a complete understanding of the situation, IRN made a conscious effort to interview more than one family in a given village and, whenever possible, to visit many villages in the same area. In some cases, families with similar economic backgrounds and circumstances were chosen as interviewees in order to reveal trends and patterns. Mr. Vinya Sysamouth served as a translator for the IRN team during the fieldwork.



Photo 1: Nam Theun 2 dam construction site.

After fieldwork, IRN made every effort to verify the gathered data. We discussed our findings with NTPC, ADB, CARE and other stakeholders and expressed concerns through meetings and other forms of communication. The information we observed and received during our field visit was supplemented with updated information taken from recent project documents. In addition, IRN wrote to NTPC after our field trip to raise questions and give NTPC the opportunity to respond to our findings. NTPC's responses have been incorporated into this field report to the extent possible.

II. DOWNSTREAM CHANNEL COMPENSATION INADEQUATE

The downstream channel is a 27-km long purpose-built channel that carries the water from the NT2 powerhouse to the Xe Bang Fai River. The channel is around 100 meters wide including access roads on either side, and therefore cuts through a large swathe of rice paddies and other land. The land used for the downstream channel and other NT2 facilities are referred to as "project lands." Some families have lost almost all of their rice fields to the project, while others have lost a portion of their land.

IRN visited villages located along the upper part of the downstream channel on June 8, 2006 and interviewed five households in Ban Keovilay, Group 1; four households in Ban Lao,

including the village headman; and three households in Ban Phone Lad Khouay, also including the village headman. All the villages are located in Gnommalat District. The information IRN received was consistent between households.

IRN was aware that provisional compensation had been distributed to affected families living on project lands while a permanent livelihood restoration program was under development. This compensation was given as cash, and will be paid every year until a permanent livelihood restoration program is implemented. However, what we were not aware of is the inadequacy of the provisional compensation, and



Photo 2: The downstream channel, which will carry water from the powerhouse to the Xe Bang Fai.

the impacts that this is having on people's livelihoods and food security. Since IRN's visit, we have learned that the World Bank and ADB staff visiting the area in May 2006 also found similar evidence of problems with provisional compensation, and demanded that compensation be recalculated and redistributed to affected communities. NTPC has informed us that there are no plans to recalculate provisional compensation for downstream communities.

A more detailed outline of the results from our interviews is included in Appendix 2. A summary of our key findings is as follows. NTPC's responses to these issues are included in the summary.

The villages IRN visited are almost all of Makhong ethnicity. Many people cannot read or write Lao. This makes them more vulnerable to exploitation when calculating and distributing cash compensation. NTPC claims that the District Working Groups responsible for compensation distribution included Makhong members, that affected people were consulted in preparation of the entitlement matrix, and that this matrix has been disseminated and made available to all affected people. Despite this, it was quite clear in the interviews that we held with affected people that many did not understand how cash compensation had been calculated and why they had received the amounts that they did.

The cash compensation that has been given to villagers is <u>wholly inadequate</u> in compensating for the lost production value of the land, and the amounts given to families are <u>inconsistent and uneven</u>. For example, three families in Ban Keovilay lost most of their rice fields and received only 600,000 Kip (US\$60) in compensation for lost production value. This buys enough rice to feed a family of eight for a little over six weeks. These families were previously self-sufficient in rice. Other families in Ban Keovilay received 800,000 and 1.8 million Kip in compensation, still insufficient to compensate for lost production value. The same is true for the other villages visited: people received anywhere from 20,000 Kip to almost 4 million Kip. There seemed to be no reason as to why some families got more compensation than others. The lack of adequate

compensation is leading to <u>rice shortages in some families</u>. These villagers are already poor and have no safety net on which to fall back.

NTPC claims that the calculation of compensation was based on the declared assets by affected people. However, NTPC does admit that some affected people undervalued their assets and production volumes at the time of the baseline surveys due to a fear that the information was being used for taxation purposes. While NTPC claims that the information in the baseline surveys was rechecked from January to June 2006, there are clearly a large number of remaining problems, as evidenced by the findings from IRN's trip and the number of complaints (approximately 55) being handled by the grievance committee at present. NTPC denies that the rice shortages are a result of the project. This contradicts statements made by villagers to IRN.



Photo 3: A house at Ban Phone Lad Khouay. The owner lost most of her rice fields to the downstream channel construction.

Some villagers in Ban Lao and Ban Phone Lad Khouay report that although they used to practice double cropping on their rice fields, they were only compensated for the lost production value of one crop. NTPC claims that they compensated for loss of double cropping, which contradicts statements made by villagers to IRN.

People have received <u>inadequate</u> <u>compensation for loss of common</u> <u>property resources</u>. Most villagers from Ban Lao and Ban Keovilay, Group 1 used to fish in the Nam Kathang in the deep pools where the regulating dam is being built. No-one has received compensation for loss of fisheries. Some people have

received compensation for loss of vegetable gardens along the banks of the Nam Kathang, others have not. Many villagers also lost bamboo forests and fruit trees and have not been compensated for these losses. NTPC states that they are "addressing the common property resources", that compensation amounts have been agreed with villagers, and money will be deposited into a community fund. IRN has not been able to verify whether this has indeed occurred or not, but this issue should be followed up on in future monitoring mission.

Two households in Ban Keovilay were reportedly forced to relocate in September 2005, and have not received all of their promised compensation. NTPC confirms that final replacement housing has not been given to villagers who were forced to relocate. This is unacceptable and should be immediately rectified.

Water in the village well at Ban Keovilay, Group 1 dried up in March this year for the first time. We suspect that the downstream channel drained the groundwater from the well. NTPC does not deny this claim, and states that a new well will be drilled during the next dry season.

IRN's Assessment of the Situation

Despite NTPC's denials, IRN believes that there are still serious problems with the calculation of provisional compensation. We believe that the problems can be attributed to the following factors:

- 1. The process for project lands compensation was poorly planned from the beginning. The Resettlement Action Plan for project lands was completed only in March 2005, and was incomplete and inconclusive. This plan contained only vague and untested options for livelihood restoration and was deemed wholly inadequate by the IFIs. As a result, according to the Concession Agreement, Schedule 4, Part 1, Section 13.1 (c), an updated resettlement plan for project lands was supposed to be submitted to the Resettlement Committee at least 15 days prior to the proposed commencement of implementation. Despite this, the plans were only completed at the end of June 2006, and are undergoing revisions at present. At present, there are no publicly available plans for permanent livelihood restoration for downstream channel communities. This is a severe and serious deficiency in project planning.
- 2. The disbursement of compensation was handled by the District Working Group, which is formed by the District Government. While a representative of NTPC is reportedly present during the process of compensation disbursement, IRN believes that discrepancies between recorded compensation and actual compensation received should be investigated. Villagers reported that they believed that money was being pocketed by district government officials.
- 3. The baseline surveys were inadequate. Firstly, affected people misunderstood the purpose of the surveys and under-reported their assets. Secondly, IRN is aware that four different teams were conducting the baseline surveys and that these teams did not standardize their systems to calculate losses. As a result, compensation amounts for the same assets may vary between communities.
- 4. Compensation for loss of common property resources was poorly planned and continues to be inadequate, as noted by numerous IFI monitoring missions as well as in reports of the Lenders Engineer, the monitoring agency employed by all of the project lenders.
- 5. The Independent Monitoring Agency for the Resettlement Management Unit is not yet in place, resulting in inadequate monitoring for project lands communities. NTPC claims that an internal monitoring process for all severely impacted households will begin in the fourth quarter of this year, but does not give any information about what this process will consist of.

Recommendation:

IRN recommends that an independent team be commissioned to carry out systematic and thorough consultations with all project affected people living along the downstream channel and to review all relevant NTPC documentation to determine where problems continue to exist and to make recommendations for rectifying these problems as soon as possible. In addition, IRN requests that the updated Resettlement Action Plan for project lands be released immediately to affected communities and the public, and that permanent livelihood restoration activities commence as soon as possible.

III. XE BANG FAI LIVELIHOOD RESTORATION PROGRAM

A total of 159 villages living in the Xe Bang Fai River basin will be affected by increased water flows as a result of NT2. Impacts will include loss of fisheries, increased flooding during the wet season, inability to cultivate riverbank vegetable gardens, water quality problems, erosion and transportation difficulties. The goal of NTPC's livelihood and asset restoration program is to restore the livelihoods of project affected households to at least the same level as before Commercial Operation Date (COD). The program is supposed to be implemented from October 2005 to October 2014. Phase 1 of the program is under development at present and involves 20 pilot villages. The main objective of phase 1 is "to implement adequate and cost effective restoration options in 20 villages that will serve as demonstration projects for restoration of assets and livelihoods through community grants and technical assistance at all remaining project affected villages in Xe Bangfai River Basin" (Terms of Reference, p.55).

The program is considering a range of livelihood restoration options, including improvement of existing water gates, fisheries management, flood protection, aquaculture, livestock and poultry, rice and irrigation, asset restoration and domestic water supply. The study's Terms of Reference acknowledges that dry season rice cultivation is not economically viable for villagers along the Xe Bang Fai. This is a significant turn-around for NTPC, as dry season irrigated rice cultivation for Xe Bang Fai communities has long been promised as a great benefit of Nam Theun 2. Instead, the program will focus on cash crops such as vegetables during the dry season, raising the question of potential markets for these crops.

The initial study outlining the measures to be undertaken during phase 1 of the program was due to be completed in early 2006, but the report has not been released to the public. NTPC claims that the study is undergoing revisions and notes that only an executive summary will be made available to the public.

IRN visited two villages participating in the pilot project, Ban Beung Xe and Ban Gnang Kham. Ban Beung Xe is a relatively wealthy village situated along the lower Xe Bang Fai, and is NTPC's first pilot village. NTPC has implemented a revolving fund to administer and carry out the compensation activities. The revolving fund is operated and controlled by the community, and started in August 2005 with the initial participation of 60 households. The plan is to eventually include all villagers in the program.

NTPC contributed US\$250 per household to the revolving fund. This amount was calculated based on the projected loss of fisheries per household per year at market value. Riverbank vegetable gardens and other losses were not included in this calculation. Since fish catch varies from village to village on an annual basis, each village will receive a different amount of compensation.

The purpose of the revolving fund is for villagers to invest in activities that will generate income, such as pig raising and fish farming. The revolving fund administrators, elected by villagers, are responsible for developing business plans. NTPC provides villagers with technical advice and training where necessary. In addition, NTPC is providing assistance to the village in establishing a village savings fund.

Programs at Beung Xe

Since August 2005, Ban Beung Xe has engaged in various livelihood restoration projects through the revolving fund program. NTPC hopes that after the projects are well established at

Ban Beung Xe, these villagers could serve as trainers for neighboring villages. The Resettlement Management Unit (RMU), the District Working Group, and NTPC staff are all involved in the program.



Photo 4: Fishponds at Ban Beung Xe.

Fishponds: Villagers in Ban Beung Xe told IRN that they had fishponds before NTPC's livelihood program began, but they were not a priority since they could always catch fish from the Xe Bang Fai. People are not sure if they made any profits from their former fishponds, since they did not calculate investments and yields.

Fifteen families are participating in the fish pond program, and each family will eventually have up to three ponds. The first few ponds have been dug and stocked with seedlings from Thailand. Technical experts from Thailand visit the village once a week for a day. The ponds are just being

developed so it's too early to tell whether they will be profitable or not, but villagers seemed enthusiastic about them.

The villagers will also experiment with rice-fish culture, which means raising fish in rice paddies during the dry season. To prevent fish escapes, people said they would use nets and water gates. However, this is still in the experimental stage.

Pig Raising: During IRN's visit, villagers had bought 30 piglets from Pakse at a total cost of 20 million Kip (US\$2,000) with money from the village revolving fund. The pigs are native species. Villagers are planning to raise the pigs and sell them at the market.

Dry season vegetables: Villagers were enthusiastic about growing vegetables during the dry season instead of rice. As vegetables require less water, there are lower fuel costs and higher profits. Forty households grew tomatoes last dry season. Each invested one million kip (US\$100) and earned 3 million kip (US\$300) in return. They are also being trained to grow watermelon, cabbage, lettuce, peanuts and other vegetables.

Concerns

Villagers expressed fears about how NT2 will affect their lives. They are worried that there might be more flooding, that they will lose their wet season rice crops, and that their animals may be washed away. They are also concerned about erosion from the higher water levels in the river.

Villagers in Ban Gnang Kham felt that they were forced to join the revolving fund as they perceived it was the only option if they wanted to receive compensation from NTPC. Villagers also felt that they were forced to contribute 5,000 Kip/month into the village savings fund. They wanted to be members, but did not know if they could afford to contribute the required amount.

Farmers are willing to switch from rice cultivation to planting vegetables during the dry season if there is a market for their produce. However, villagers at Ban Gnang Kham said that for the program to be successful, someone would have to come to the village to buy their produce as

there are no markets nearby and the transportation costs would be too high for them to transport the goods themselves. In addition, if all 159 Xe Bang Fai villages, as well as those on the Nakai Plateau, start to produce dry season vegetables, villagers are concerned that the local market will be flooded and they will be without a buyer. Other market options are neighboring Thailand and Vietnam, but the lack of access and increased competition make these difficult. Tariffs are often placed on the vegetables by both the Lao and Thai provincial authorities, making it harder for farmers to sell their goods. A successful marketing strategy is clearly needed for Xe Bang Fai villages.

Villagers and district officials at Beung Xe were under the impression that a one-off \$250/household payment into the revolving fund would be the entire compensation paid to them for losses as a result of Nam Theun 2. They did not feel this was sufficient, particularly as they would be losing fisheries on an annual basis, and their loss of vegetable gardens and other assets were not included in the calculation of this amount. When asked about this issue, NTPC stated that "revolving funds and saving accounts form part of the asset and livelihood restoration in all riparian villagers, pending final agreement and approval from IFI's. They are not intended to be a direct compensation, but will be used to support local initiatives and encourage further development within the framework given above." NTPC's response does not clarify to what extent revolving funds will be used as part of the livelihood restoration package. The purpose of the revolving fund and the other forms of compensation that will be given to Xe Bang Fai villagers need to be more clearly articulated.

IRN is concerned about the viability of implementing such an extensive livelihood restoration program in so many villages in such a short period of time. There are only three years left until commercial operations, and the livelihood restoration program is only now being piloted in just 20 villages. Careful timing of activities will need to take place in order to ensure that people are adequately compensated for their losses.

Recommendations:

It is of primary importance that the Downstream Livelihood and Asset Restoration Program report be completed and released to the public urgently, and that an extensive public education and consultation program with all Xe Bang Fai villagers commence as soon as possible so villagers are informed about the program and their entitlements.

NTPC should already develop a provisional compensation scheme to ensure that people are adequately compensated until livelihood restoration measures yield benefits as promised.

IV. NAKAI PLATEAU RESETTLEMENT

At the time of project approval, NTPC had intended to move the first group of villages¹ on the Nakai Plateau during the 2005-2006 dry season, and the second group² during the 2006-2007 dry season. However, delays in implementation – attributed by the Panel of Experts to the lower priority given to resettlement activities by the project developers – resulted in a failure to meet this deadline. By late 2005, NTPC was stating that both groups of villages would be moved during the 2006-2007 rainy season. However, by April 2006 NTPC decided to move the first

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¹ Village group 1 consists of Nam Nian, Sop Hia, Sop Phene, Nongbouakham, Sop On, Bouama, Phonesavang and Sop Ma.

² Village group 2 consists of Done, Khone Khen, Ka Oy, Nakai Neua, Nakai Tai, Thalang, Oudomsouk, and Phonphanpek.

group of villagers, plus Ban Done and Khone Khen, during the 2006 rainy season. The second group of villagers will be moved during the 2006-2007 dry season as originally planned.

NTPC called this new process "transitional resettlement" and states that this decision was made due to the expressed desire of the villagers to get their new lives underway as soon as possible. However, another reason for the sudden change of plans was concern that closure of the coffer dam would lead to excessive flooding of villages located close to the river.

The IRN team visited several villages on the Nakai Plateau on June 6-7, 2006. The purpose was to assess the progress of transitional resettlement, evaluate how villagers were faring, and identify any gaps in planning. IRN visited the following villages:

- 1. Original Ban Sop Hia
- 2. Original Ban Nam Nian
- 3. New Ban Nong Boua
- 4. New Ban Boua Ma
- 5. Original Ban Nakai Neua
- 6. New Ban Sop Phene
- 7. Ban Phone Savat (Resettlement Area 8A, containing migrants from Ban Sop Hia)

At the time of our visit, 330 families were going through transitional resettlement, and as of early August 2006, 550 families had moved to their new village land. The villages we visited were in different stages of resettlement. Ban Boua Ma was resettled a month before our visit, and Ban Phone Savat and Ban Sop Phene were in the midst of their move. This enabled us to witness a range of different resettlement situations.

The Transitional Resettlement Process

NTPC has been moving people to their new sites before any of the new infrastructure is in place. Villagers have built temporary housing and will spend the next few months clearing their agricultural land and establishing their new lives. Resettlers will be paid 20,000 kip per day for their work in clearing their agricultural land. NTPC has hired a contractor to build the permanent housing for the villagers. and villagers have the option of working for the contractors as laborers. Many people moved to the new sites before wells were built, and were relying on water deliveries from NTPC. People are being given a rice



Photo 5: New temporary housing at Ban Boua Ma resettlement village.

and protein package for a minimum of six months while they establish their new lives.

IRN visited three villages undergoing transitional resettlement: Ban Boua Ma, Ban Sop Phene and Ban Phone Savat. Ban Boua Ma appeared to be faring relatively well under the circumstances. The village seemed well organized, and several permanent houses were under construction. Plots of land had been marked out and people were living in their individual plots. There were five boreholes in the village, although villagers reported that water supply was not

sufficient for the whole village's needs. Most people had left their animals in the old village and needed to walk about an hour each way to tend to them. People were mostly concerned about whether they would be able to keep all their buffalo in the new village, and whether they would be able to grow enough rice or food in the new village. They were also concerned about the

market for the vegetables that they were

expected to grow.

Unfortunately, Ban Sop Phene and Ban Phone Savat were not doing as well as Ban Boua Ma. This may be a result of NTPC's lack of preparation and its decision to move people during the wet season. People were in the process of constructing temporary dwellings on what will become their agricultural land. They had not been able to move to their permanent village site as the area had not yet been cleared.

During IRN's visit to these villages, villagers informed us that they had not received water



Photo 6: Villagers at the New Ban Sop Phene waiting for food and water.

for three days. We confirmed that the water tanks were empty and there was no borehole as yet. At Ban Sop Phene, villagers were dirty and said they had been unable to bathe. Some people were using a small tractor attached to a locally-made trolley to take people from the village to the Nam Theun River several kilometers away to bath and gather water. At Ban Phone Savat, villagers were fortunate enough to have discovered a dried streambed near the village where they dug a small well to gather water. We discovered that the reason water had not been delivered was because the delivery truck's tire had exploded, keeping the truck out of commission for a few days.

IRN brought this issue to the attention of NTPC's resettlement manager, Mike Beauchamp, on the same day that we visited these villages. Mr. Beauchamp looked into the issue the following day and reported that water had been delivered to Sop Phene, Phone Savat and Sop Ma that day. In addition, we were informed that all three settlements now have boreholes for drinking and bathing, with water truck deliveries on-going as a backup for bathing. As of July, there were still over 100 boreholes to be drilled to ensure a steady supply of water for all the newly resettled villages. At the time of our visit, NTPC had only one truck available for water deliveries. We have since been informed that NTPC has one additional Russian truck that is available for water deliveries.

Villagers from Ban Sop Phene stated that they had received three kilograms of rice per person when they moved three weeks ago, and that this rice had run out. Some villagers were sharing rice from the previous year's harvest brought from their old village. They were expecting another delivery of rice and food, but were not sure when it would arrive. Mr. Beauchamp claimed that rice and protein packages had been delivered as scheduled, and that some villagers from Sop Phene may have "jumped the queue" and voluntarily moved to the new site ahead of schedule, accounting for their lack of food support. IRN has not had an opportunity to confirm or deny these claims.

IRN is concerned that the rains will impede access to all the transitional villages during the rainy season, making food and water deliveries difficult. The situation will need to be closely monitored throughout the rainy season to ensure that people are getting what was promised.

Ban Sop Hia and Ban Nam Nian

Ban Sop Hia and Ban Nam Nian are the two villages located closest to the dam site. Both of these villages were scheduled to move off the Nakai Plateau to Nam Pan in Khamkeut District, Bolikhamxay Province by May 2006. However, in late 2005 NTPC discovered that Nam Pan would be an unsuitable site for the new village due to pollution of the river by a goldmine upstream. As a result, there has been a great deal of uncertainty about where these villagers will move to.

The discovery of the water pollution at Nam Pan was a major setback for NTPC, the people of Ban Sop Hia, Ban Nam Nian and Ban Nam Pan. The GoL and NTPC originally selected Ban Nam Pan as a site for an irrigation project that would include the immigrants from Sop Hia and Nam Nian, as well as the host village. According to the Panel of Experts' (PoE) report of February 2006, in October 2005 villagers reported to local authorities that the river was polluted from an unlicensed goldmine along the upper Nam Pan. Test results showed a high level of mercury, arsenic, lead, iron and fecal coliform that exceeded Word Health Organization standards. Therefore the irrigation project and further plans to relocate villagers to Nam Pan were stopped.

Since this time, villagers have been given the option to remain on the Plateau or to move to another location in Khamkeut district. As of August 2006, 36 households had moved to



Photo 7: Temporary housing at Ban Phone Savat, resettlement site 8a.

resettlement site 8a on the Nakai Plateau (Ban Phone Savat), and NTPC was looking for alternative sites on the Plateau for another 27 households. A further 40 households want to move off the Plateau, but no suitable site has yet been found for them.

At the time of our visit to the area, villagers told IRN that they were disappointed about not being able to move to Ban Nam Pan and were confused about their options as they had been given conflicting information by both NTPC and the GoL. NTPC has been encouraging people to remain on the Plateau, but many people wish to return to Khamkeut District where they

are originally from. It is unknown as to when a decision will be made about the remaining 40 households.

Other Issues

IRN continues to have concerns and questions regarding several aspects of the livelihood restoration program for the Nakai Plateau. Our key questions are as follows:

How many water buffalo will villagers be able to bring to the new site, and how will they
ensure there is sufficient food for them?

- Will villagers be able to grow rice, as promised by NTPC, on the new resettlement lands?
- Will there be a market locally and internationally for Nakai Plateau villagers' produce?
- How successful will the forestry program be?

Water Buffalo

Villagers living on the Nakai Plateau have been concerned for a number of years now about whether they will be able to keep their buffalo when they move to the new resettlement area. Farm animals such as water buffalo and cows are an important investment for villagers. Not only do they help with farm labor, but they are an investment that can be sold off for cash in times of need. One of the biggest concerns has been whether there will be sufficient forage for water buffalo once the reservoir has been filled. The Social Development Plan of March 2005 listed various options for growing forage, but none of them had been tested yet.

Many villagers at Ban Nong Boua, the pilot village, revealed that they did not bring their livestock to the new village due to the lack of available land and forage. They continue to return to their old village to tend the herds.

We raised this issue with NTPC staff during our visit. Mike Beauchamp, NTPC's Resettlement Manager, stated that if the potential of the drawdown zone is taken into account, there is sufficient land for all the buffalo and cattle currently residing on the Plateau, which number around 6,000. He claimed that there are a few good forage species that will be able to grow in the drawdown zone, however no studies have been released on this issue. He stated that no villager will be *forced* to sell their buffalo, but villages with large numbers will be encouraged to sell them and seek alternative investment models that are less land intensive. IRN is not opposed to this strategy, as long as villagers are given the option to keep their buffalo and are given training on how to grow forage to feed them.

Recommendation:

Any studies commissioned by NTPC that investigate the potential for buffalo forage on the Nakai Plateau should be immediately released to the public, and consultations held with Nakai Plateau resettlers to inform them of their rights to buffalo in their new villages. Trainings should be held with villagers in how to grow forage for their buffalo and other large farm animals in their new sites.

Rice Cultivation

Villagers are also concerned about whether they will be able to grow rice in their new plots. Originally, villagers were promised 0.16 hectares of irrigated paddy field per family, but NTPC later admitted that the soil is too porous for irrigated paddy. NTPC now states that they are experimenting with varieties of rice that can grow on sandy soil, and with agro forestry systems that would integrate upland rice with forage for buffalo, but few details have been released about this system and its effectiveness.

Market Availability

A major part of villagers' livelihood in the new resettlement areas is supposed to come from the cultivation and sale of cash crops. IRN has raised concerns over the past couple of years regarding a viable market for these crops in the vicinity of the Nakai Plateau. At present there is

a limited local market on the Nakai Plateau. The village headman at Ban Nong Boua pilot village informed IRN that at the moment there is a sufficient market for their crops in



Photo 8: Agricultural land plot at the new Ban Boua Ma. The land is sandy and would not be suitable for rice cultivation.

Oudomsouk because of the large numbers of construction workers present. However, he stated that they do not have a huge market for vegetables outside of Oudomsouk, and he expressed concerns that as more villagers produce cash crops, and when NT2 construction workers leave the area after the dam's completion, there will be a high supply and low demand for vegetables. He was aware that NTPC was still trying to find a market for their vegetables. Other villagers we interviewed also expressed similar concerns about where they would sell their vegetables once the project was completed.

NTPC informed IRN that a marketing study had just been completed, and that the two main potential markets were Thailand and Vietnam. However, IRN is aware that tariffs imposed on goods by provincial officials on both sides of the border have made export to Thailand prohibitively expensive. NTPC has stated that an executive summary of the marketing study will be released to the public.

Recommendation:

It is critically important that the marketing study be released to the public in its entirety, and that its findings be discussed with Nakai Plateau villagers, so that all affected and interested parties are aware of the study's recommendations and NTPC's proposed plan of action.

Forestry Program

IRN heard reports that logging by the District Agriculture and Forestry Office had occurred in some of the forests that were supposed to belong to the Nakai Plateau Village Forestry Association. Mr. Christophe Maurel from NTPC did not deny this. In addition, IRN has heard that the amount of usable hardwood timber on the Nakai Plateau has been overestimated, and that there is a shortage of wood for building the houses and other structures for the resettlement sites. This could seriously delay the resettlement process and should be investigated and rectified immediately. Lower than expected timber stocks in the community forest areas will also affect the long-term viability of the resettlement program.

V. SALVAGE LOGGING DELAYED

The Government of Laos is expected to earn as much as \$70 million from salvage logging of the Nakai Plateau. This is comparable to three or four years of net revenue from Nam Theun 2, yet this revenue is not subject to the NT2 revenue management framework.

As of June 2006, no contract had been awarded to carry out the salvage logging operations. The government reportedly had difficulties with contract negotiations, causing delays. In August

2006, NTPC stated that the GoL had contracted a company and that logging would commence this coming dry season.

Meanwhile, no clear management plan has been released to the public, although a Lao version of the plan is reportedly complete. Careful planning is critically important given the proximity of the Nakai Plateau to the Nakai Nam Theun NBCA, the potential impacts to endangered species in the area, and the impacts that logging will have on access to non-timber forest products for Nakai Plateau villagers. The logging operations will also require the influx of thousands of workers into the area, with no apparent plan as to how these workers will be managed.

Recommendation:

With only two dry seasons left before reservoir filling, and the lack of a clear management plan available to the public, IRN is concerned that time pressures will result in poorly planned and implemented logging operations. The salvage logging management plan should be released as soon as possible, and the logging operations should be carefully monitored over the coming two years. In addition, Nakai Plateau villagers must be informed of the logging plans as soon as possible to ensure they understand the impact these plans will have on their access to NTFPs.

VI. NO PLANS FOR BIOMASS CLEARANCE

IRN is concerned that if most of the biomass is not cleared before reservoir impoundment, the decomposing vegetation will cause serious water quality problems in the new reservoir. The poor water quality will result in massive fish kills in both the reservoir area and downstream along the Xe Bang Fai, depriving tens of thousands of people of a major source of livelihood. The NT2 Environmental Assessment and Management Plan states that:

To help improve water quality in the Nakai Reservoir in the initial years after inundation, NTPC will encourage the removal of biomass from the inundation area prior to flooding through firewood collection and the salvage of timber (EAMP Chapter 3, p.78).

The EAMP goes on to state:

Vegetation will be removed before flooding the reservoir... The priority shall be to clear the vegetation in areas which will be permanently flooded. The results of the ongoing biomass survey of the inundation area will be used as a means for maximizing removal in areas of high biomass (EAMP Chapter 3, p.92).

Despite this, NTPC informed IRN in their August 2006 letter that other than the salvage logging and charcoal production of timber by the Village Forestry Association, "there are no agreed plans for biomass clearance at present" although "NTPC was investigating the viability of various biomass clearance options with the government."

The correct approach to minimize the water quality degradation that will occur from the decomposable materials and nutrients in biomass is to remove all of the vegetation from all areas of inundation. The one exception may be areas of the reservoir that are subjected to shallow flooding, and where the plant species are already adapted to seasonal flooding. Both woody and non-woody plant material should be removed. The material should be cut and removed from the basin area prior to inundation, and not burned. Leaving the biomass in place or burning the biomass will cause similar water quality degradation, but on markedly different time scales.

Leaving the intact biomass in place will cause decomposition that will lower oxygen levels and add humic substances and other plant residues that will further lower the water quality. Burning the biomass will add air pollutants and toxic substances; notably mercury. Burning will also greatly accelerate the release of nutrients trapped in the biomass, which will support the sudden growth of excess algae and bacteria in the reservoir water, which in turn will trigger a cascade of water quality problems including greatly reduced dissolved oxygen levels, fish kills, and the release of toxic chemicals from the reservoir sediments.



Photo 9: The Nakai Plateau still contains areas of dense forest such as this.

Recommendations:

It is critically important that all biomass is cleared from those areas that are permanently flooded, in order to avoid serious water quality issues. NTPC should immediately commission a study to investigate the best method for clearing the vegetation from the reservoir area, and put in place plans to clear the entire biomass from the reservoir area during the 2007-2008 dry season. This method should not be to burn the biomass, but the cut it and carry it out of the reservoir area.

In addition, IRN is concerned about ongoing water quality in the reservoir. During the dry season, large areas of the reservoir's bed will become exposed, allowing biomass re-growth. This biomass will decompose during the wet season, leading to potential water quality problems on an annual basis. This issue needs to be studied further prior to reservoir impoundment.

VII. EXCESSIVE DUST IN ROADSIDE VILLAGES

Many villagers on the Nakai Plateau and in Gnommalat District complained about the excessive dust from project vehicles. While NTPC and the head contractor have stated that roads are being sprayed several times a day to minimize dust, villagers informed us that spraying occurred sometimes only once a week, and sometimes even less frequently. Villagers complained of respiratory illnesses arising from the dust.

NTPC has informed IRN that most project-related roads will be sealed by the end of 2007, and that watering was being done six times daily "in areas where project-related activities took place." While we dispute that even this has taken place, what is clear is that spraying is not occurring regularly along roads which are used substantially for the project, but where construction activities are not necessarily taking place.

Recommendation:

IRN noted that in some villages the roads passing through the village have already been sealed. IRN recommends that at the beginning of the coming dry season all roads passing through villages that are subjected to project-related traffic be sealed as a matter of priority. This should eliminate the need for spraying of the roads and reduce respiratory illnesses and the inconvenience of large amounts of dust in the village.

VIII. ROAD CONSTRUCTION IN THE NT2 CORRIDOR

The Nakai Plateau is surrounded by two important National Biodiversity Conservations Areas (NBCAs): the Nakai Nam Theun and Phou Hin Poun NBCAs. These NBCAs serve as refuges for many endangered and threatened species of flora and fauna. The Phou Hin Poun – Nakai



Photo 10: Road construction in the NT2 Corridor.

Nam Theun Corridor (the Nam Theun 2 Corridor) links these two NBCAs and is an important migration route for many wild animals, including a herd of wild Asian elephants. The dam site and the new road from Ban Phonsa-ad to the dam site are located directly in the Nam Theun 2 Corridor.

During IRN's visit, we observed that the shoulders of the new road were logged well beyond the allotted width. In some areas, a swathe of at least 100 meters was cut through pristine forest. The Panel of Experts pointed this out in their February 2006 report. As often happens in Laos, we believe

the construction of a road was used as a pretext for logging the surrounding area. IRN is concerned about the impacts of the road construction on the ecological integrity of the corridor, and the problems this might cause for animal migrations.

IRN informed the ADB of our concerns. ADB staff acknowledged that they were also concerned about this issue, and noted that there had been no monitoring arrangement in place previously. They stated that the remainder of the road's route would be along the tops of the ridges, therefore requiring only a narrow right-of-way, although this would make the road longer than originally planned. They also stated that there was now a monitoring system in place and that there will be replanting where excessive cuttings had been already made. This issue will need to be followed up in subsequent monitoring missions.

IX. DELAYS IN WILDLIFE PROTECTION AND MANAGEMENT PROGRAM, FISHERIES ALREADY IMPACTED BY NT2 CONSTRUCTION

Various plans for the protection and management of wildlife on the Nakai Plateau are not yet complete. A study on fisheries on the Nam Theun and Xe Bang Fai was conducted by Dr. Maurice Kottelat with support from the Living Aquatic Resource Research Center. According to the Concession Agreement, the objectives of this study were to obtain baseline fish and aquatic species distribution and a habitat inventory in the downstream and upstream sections of the

Nam Theun and Xe Bang Fai, including the Nam Phao/Nam Kata catchments. The final report is scheduled for the end of August 2006.

A fundamental problem with this study is that surveys took place in May 2006, long after construction had begun on the Nam Theun. Under these circumstances, the study cannot be considered a baseline, as construction activities would have already affected fish diversity in the Nam Theun. Indeed, IRN has heard reports that Dr. Kottelat found unusually low fish diversity downstream of the dam site, and in the Xe Bang Fai downstream of the Nam Kathang/Nam Gnom confluence, which are presumably related to excessive sedimentation in the rivers as a result of dam construction.

Other wildlife studies have been delayed and are yet to commence. For example, as of August 2006 NTPC had just finalized the ToR for the transitional strategy for reservoir impoundment and was commencing advertisements for the contract. The commencement date was expected to be the next dry season, but could be further delayed. In addition, there have been ongoing delays in the commencement of the pre-impoundment species and habitat inventories and the development of a post-impoundment species and habitat management plan. NTPC now states that the activities are expected to commence in September 2006.

X. EXCESSIVE SEDIMENTATION AS A RESULT OF CONSTRUCTION ACTIVITIES

Numerous monitoring missions have pointed out the excessive sedimentation that is occurring in the Nam Theun and the Nam Kathang as a result of poor management of construction activities. Pressure from the Lenders Engineer has eventually forced the Head Contractor to use flocculating agents (chemicals which bind fine clay particles together to assist their removal prior to discharge into the rivers) in two locations downstream of the powerhouse tunneling works. However, flocculation is not being used in any other sediment basin, despite the fact that many of these sites have fine clay particles which cannot be removed without flocculation. Also there are many diffuse sources of turbid discharges where there is no sediment removal, such as from the very wide road easements and newly cleared areas. This is causing excessive sedimentation, which is likely already affected fisheries and other aquatic biodiversity in the main impacted rivers.

While it is understood that UXO clearance requires partial vegetation clearance, it appears that vegetation is fully cleared at many construction sites well in advance of construction commencing. This apparent lack of planning and phasing of construction activities is likely to be contributing to increased erosion and sedimentation.

XI. EMPLOYMENT OF LOCAL PEOPLE AT THE NAM THEUN 2 CONSTRUCTION SITE

Many local people interviewed by IRN throughout the Nam Theun 2 project area complained about not being given employment at the construction site. For example, at Ban Nam Nian only four people were employed at the construction site. Other people wanted to get jobs but could not. Villagers living along the downstream channel complained that they needed to pay 400,000 to 500,000 kip (US\$40-\$50) in bribes to get a job with the construction contractors, which is a common practice in Laos. As a result, most of them were unable to get jobs at the site.

XII. DELAYS IN RELEASE OF INFORMATION AND MONITORING

Many studies relating to social and environmental aspects of the project have not been disclosed, and continue to be delayed. IRN is concerned that although construction is proceeding rapidly, key social and environmental management plans have not been completed and key monitoring arrangements are not yet in place.

The following documents have not been released to the public, and as far as we are aware, have not been finalized. In addition, NTPC is refusing to release many critical documents to the public in their entirety, stating that only executive summaries will be released:

- Project Implementation Plan (supposed to have been disclosed in January 2006);³
- Salvage Logging Plan (supposed to have been completed in 2005);
- Community Forestry Plan (supposed to have been completed in 2005);
- Resettlement Action Plan for Project Lands (supposed to have been completed prior to commencement of construction activities on project lands);
- Downstream Livelihood and Asset Restoration Program Phase 1 for the Xe Bang Fai (supposed to have been completed by February 2006). The program was funded by the World Bank's Nam Theun 2 Social and Environmental Program Loan. NTPC states that only an Executive Summary will be made public.⁴
- Marketing studies for goods from the Nakai Plateau and Xe Bang Fai. NTPC states that only an Executive Summary will be made public.
- Baseline wetland, terrestrial, and fish surveys. Wetland and terrestrial surveys were supposed to begin in April.⁵ NTPC now states that the studies will commence in September. The fish survey was completed in August 2006, but NTPC states that only an Executive Summary of the fish survey will be made public.

The Government of Laos was supposed to contract three international monitoring agencies (IMAs) to monitor its Environmental Management Unit, Resettlement Management Unit and Watershed Management and Protection Authority. These IMAs were supposed to be functional by the end of 2005.⁶ As far as we are aware, only the IMA for the WMPA has been contracted, and no details have been released as to who has received the contract. The IMAs for the Resettlement Management Unit and Environmental Management Unit have not been appointed, leading to a gap in ongoing, intensive monitoring of NT2 activities.

Additionally, two new members were supposed to be appointed to the World Bank's International Advisory Group (IAG) for NT2 and a website was to be developed by April 2006.⁷

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³ According to a letter from the World Bank NT2 Project Manager Mr. Mohinder Gulati, and ADB Director of the Mekong Department's Infrastructure Division, Mr. John Cooney, to Aviva Imhof and Shannon Lawrence in March 2006, the Project Implementation Plan would be disclosed in April. ADB, in a meeting with IRN in June 2006, said the plan would be disclosed in June or July 2006.

⁴ In June, ADB told IRN that ADB should receive the report in July and that its disclosure was an IFI requirement.

⁵ According to the letter from the Mr. Mohinder Gulati and Mr. John Cooney to Aviva Imhof and Shannon Lawrence in March 2006.

⁶ According to a letter from the World Bank NT2 Project Manager Mr. Mohinder Gulati to Aviva Imhof and Shannon Lawrence in November 2005.

⁷ According to the letter from Mr. Mohinder Gulati and Mr. John Cooney to Aviva Imhof and Shannon Lawrence in March 2006.

To date, there is no information regarding new IAG appointments on the World Bank's website and an IAG website has not been established.

XIII. LAO NATIONAL HYDROPOWER POLICY

In June 2005, the Lao government enacted a National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR. The policy was enacted as a precondition for World Bank support for Nam Theun 2. The policy contains some commendable principles, including:

- All large hydropower projects must produce a full Environmental Impact Assessment and Environmental Management Plan, and a comprehensive monitoring and evaluation framework involving independent monitors;
- Full compensation should be given to all people whose assets, resource use and livelihoods are altered by the project. There should be targets for compensation, livelihood restoration and community development over the entire lifespan of the project;
- Public disclosure of all relevant documents;
- All hydropower projects constructed since 1990 should develop a plan by the end of 2007 to bring the projects into compliance with the policy.

During our visit to Laos it became clear that the policy was not being implemented, nor did it appear that any steps were being taken to implement it. The policy is supposed to be jointly implemented by the Ministry of Industry and Handicrafts and the Science, Technology and Environment Agency (STEA). However, it appears that neither agency is taking responsibility for implementation of the policy. During our trip, we met with representatives from the Lao National Committee for Energy, the Asian Development Bank and the World Bank to discuss various hydropower projects and to request the Environmental Impact Assessments and Social Development Plans for hydropower projects currently under development. We were referred to STEA for these documents, yet when IRN contacted STEA, they were not able to provide us with the requested documents. Other people have also reported not being able to access requested studies about dams in Laos.

Development is moving forward on several hydropower projects, yet the required documents have not been disclosed. IRN has recently written to the Lao government to request the Environmental Impact Assessment, Environmental Management Plan, Social Development Plan and other reports for the Nam Ngum 2, Nam Ngum 3, Xe Kaman 3 and Nam Theun 1 hydropower projects. We are awaiting a response to this letter.

Recommendation:

As implementation of the National Hydropower Policy was a precondition for World Bank support for Nam Theun 2, and is also required as part of the World Bank's Lao Environment and Social Project Loan, the World Bank should take immediate steps to ensure that the policy is being implemented by the GoL.

APPENDIX 1: IRN NAM THEUN 2 SITE VISIT ITINERARY8

May 31, 2006

- Meeting One: Electricité du Laos, Vientiane, Laos
 - Mr. Thongphet Douangngeune Manager, Environmental Office Electricité du Laos

June 1, 2006

- Meeting One: Hydropower Office, Ministry of Industry and Handicrafts
 - Mr. Xaypaseuth Phomsoupha, Chief of Bureau of the Secretariat Lao National Committee for Energy (LNCE)
 - 2. Mr. Viraphonh Viravong, Advisor to the Lao National Committee for Energy
 - 3. Dr. Somboune Manolom, General Manager Lao Holding State Enterprise (LHSE)
- Meeting Two: Nam Theun 2 Power Company, Vientiane, Laos
 - 1. Mr. Christophe Maurel, Chief Operating Officer, NTPC
 - 2. Ms. Nathalie Bo, Public Relations and Communications Assistant, NTPC

June 2, 2006

- Meeting One: The World Bank
 - 1. Mr. Patchamuthu Illangovan, Lao Country Manager The World Bank
 - 2. Mr. Morten Larsen, Consultant-Infrastructure World Bank Field Office, Vientiane, Laos
- Meeting Two: Asian Development Bank

Mr. Edvard Baardsen

Deputy Head of Mission, Lao PDR Resident Mission

June 6, 2006

- Visit dam construction site, Nakai Plateau
- Visit Ban Sop Hia and Ban Nam Nian on the Nakai Plateau

June 7, 2006

- Meeting One: Nakai Plateau, Oudomsouk, Laos
 - 1. Jean Foerster, Social and Environmental Director, NTPC
 - 2. Mike Beauchamp, Nakai Plateau Resettlement Manager, NTPC
- Visit the following villages:
 - 1. Organic fertilizer facility at Ban Nong Boua
 - 2. Pilot resettlement village, Ban Nong Boua
 - 3. Resettlement village, Ban Boua Ma. Talked to villagers, observed housing construction and visited agricultural land plots.
 - 4. Ban Nakai Neua. Talked to villagers.
 - 5. Two newly resettled villages, Ban Sop Phene and Ban Sop Hia (now called Ban Phone Savat).
- Visit the Intake Structure/Headrace Tunnel construction site

⁸ The IRN team spent a total of six weeks in Laos, Thailand and the Philippines. The days given are not in consecutive order, but arranged according to activities relating to Nam Theun 2 project.

June 8, 2006

- Visit the Surge Shaft construction site
- Visit the Power Station construction site
- Visit the Regulating Pond construction site
- Visit the Downstream Channel construction site
- Visit villages collectively known as Ban That along the Nam Kathang that are affected by regulating pond construction
- Visit the following villages affected by downstream channel construction:
 - 1. Ban Keovilay
 - 2. Ban Lao
 - 3. Ban Phone Lad Khouay

June 9, 2006

- Meeting One: Nam Theun 2 Power Company, Thakek, Laos
 - 1. Mr. Roel Schouten, Fisheries & Downstream Development Team Leader, NTPC
- Visit villages along the Xe Bang Fai:
 - 1. Ban Beung Xe, Savannakhet Province
 - 2. Ban Yang Kham, Khammouane Province

June 22, 2006

- Meeting One: CARE International, Vientiane, Laos
 - 1. Mr. Frank Reimann, Country Director
 - 2. Mr. Heinrick Nielsen, Consultant

June 23, 2006

- Meeting One: ADB Headquarters, Manila, Philippines
 - 1. Mr. John Cooney, Director, Infrastructure Division, Southeast Asia Department. ADB
 - 2. Mr. S. Chander, Director, Infrastructure Division, Private Sector Operations Department, ADB
 - 3. Ms. Amparo Dato, Energy Strategy Coordinator of GMS Energy Sector Strategy, ADB

Remote Participants:

- 4. Mr. Edvard Baardsen, Senior Infrastructure Specialist, Infrastructure Division, Southeast Asia Department, ADB
- 5. Ms. Buiduy Thang, Nam Theun 2 Task Manager, ADB
- 6. Ms. Marla Huddleston, Senior Social Development/Resettlement Specialist, ADB

International Rivers Network Staff

Ms. Aviva Imhof, Campaigns Director

Mr. Carl Middleton, Southeast Asia Campaigns

Mr. Vinya Sysamouth, China/Lao Campaigner

APPENDIX 2: IRN VISIT TO COMMUNITIES AFFECTED BY DOWNSTREAM CHANNEL

Date of visit: June 8, 2006

Note: most of these villagers are from the Makhong ethnic group. Also note that many villagers describe the quantity of land in "blocks". This is one square rice field.

Ban Keovilay, Group 1

Located next to upper part of Downstream Channel

House #2: family

Family lost all their land (15.5 blocks). 8 people in family (6 kids and 2 adults). They have only 0.5 block left. They received 600,000 kip in compensation for the year. They don't have enough rice to eat. A 50 kg bag of rice costs 200,000 kip, so they can only buy 3 bags of rice with their compensation. A 50 kg bag would last 15 days with 8 people in the family. Before, they had enough rice with the harvest from their fields.

The father applied for a job with the company, but they have to pay 400,000 to 500,000 kip to get a job. Now they do a lot of small activities to get by, such as collecting NTFP, bamboo and bananas.

They used to fish in the Nam Kathang but now there's construction so they can't access the river. They used to have a well, but since the canal was dug it has been empty. The village well also dried up in March this year. They started constructing the canal in December 2005.

They are fed up of asking the construction company for compensation as they always send them to the district. The district always tells them to grow vegetables and mushrooms and to dig their own well. The company hasn't come to see them but may have seen the village headman.

The father can't read but his son can.

Another woman from Ban Keovilay, Group 1:

Of a total of 15 blocks of rice fields, she lost 12. She got 1.8 million kip in compensation, which included for her vegetable garden along the Nam Kathang. She used to plant vegetables along the Nam Kathang but has been prevented from doing so for the past 2 years. She has five children and doesn't have enough rice. The district keeps telling them to do things for themselves – eg dig fish ponds.

Another woman from Ban Keovilay, Group 1:

She had a total of 17 blocks of rice fields, now has only 4 blocks left. She got 800,000 kip in compensation. She has six kids. She had a vegetable garden and got 250,000 kip in compensation for this. She used to make 80 bags of unhusked rice from her land, which was more than enough for the year. The compensation is not enough to buy rice for the year.

Woman and man from Ban Keovilay, Group 1:

They lost all their land and got 600,000 kip in compensation for two years, including compensation for the loss of vegetable garden along Nam Kathang. They lost some bamboo forest as well and didn't get any compensation.

Another woman from Ban Keovilay, Group 1:

She got 600,000 kip for 30 blocks of rice fields this year. She doesn't know if she'll get any more compensation. She has two children. She lost her land 4 or 5 months ago. She didn't get any compensation for lost vegetable gardens along the Nam Kathang. Some people got compensation for vegetable gardens, others didn't. Her husband has worked for NTPC for the past 2 or 3 months. She confirms that the well water dried up this year.

Ban Lao, opposite side of the canal

<u>Woman</u>

Lost all her land and received 1.2 million kip in compensation for 1 year. She lost 10 big blocks of rice fields. She has four kids. When she used to do rice cultivation she had enough rice – she would harvest around 2400 kg of unhusked rice. Now she doesn't have enough rice. In this village, 8 or 9 households lost everything to the project. There's one person who lost his land and all he got was 40,000 kip

She understands that she'll get 1.2 mill/yr until NT2 is finished, and then she'll get permanent compensation.

They took her land in November right after harvest, and she got compensation in March. She has asked for more compensation but hasn't received it.

Man

Lost 3 hectares of land. He has half of 3 blocks left on each side of the canal. He received 2.93 million kip. He got compensation in January. He's unclear about future compensation. They say they're going to compensate each year but he's not sure whether they will. He thinks he received the compensation from NTPC not the government. He has just enough compensation to survive. He has 7 people in the family. He received 270,000 kip for vegetable gardens. He didn't get compensation for banana trees, bamboo forests or other fruit orchards. He used to fish in the Nam Kathang in the deep pools, but now they're been buried. He says the whole village would fish in the Nam Kathang and haven't received compensation. There are 130 families and 122 households in the village.

Another person in the group:

Two houses in Keovilay village were forced to move as their houses were in the path of the canal. They were forced to take their home apart and the company promised to compensate for this by building a new home within 20 days, but this didn't happen. They moved in September 2005. Now they don't have home or land and have to rent a house. The government came and made them take the house apart in the middle of the rainy season. The government paid 1.2 million kip for the family to take apart the house and paid the first month rent in their shack that they're renting (50,000 kip/mth). After that the family had to cover the 50,000 kip themselves.

Village headman

Everybody has been affected by loss of vegetable gardens. There are 14 families in the village who lost rice fields. For vegetable gardens, most people got compensation, but some didn't.

He says that the person in charge of money from NTPC and the government representative came and gave money at the same time. It wasn't clear why some people got compensated and others didn't. Some people didn't get compensated for lost fruit trees.

They would like to ask that the company pay permanent compensation soon, because the villagers are waiting. He would also like to point out that in some fields they do double cropping, but the compensation was calculated based only on one crop cycle.

They have been doing dry season rice agriculture for 6-10 years. For irrigation, the pump belongs to the government and they pay for the electricity. Sometimes they can make money from dry season agriculture, sometimes not.

Ban Phone Lad Khouay

Village headman

A lot of people have lost land in the village. Sometimes they've lost 1-2 ha and have only received about 2 million kip in return. In total the village lost 20 ha of land. They only give a little for compensation and its not enough to buy rice.

About 18 families lost land, and most only have a few plots left. The typical compensation was 1.2 million kip for 1 ha loss. Some people get compensation, some don't. Some people got as little as 20,000 kip. Its not clear how the compensation was calculated.

The compensation was distributed on September 10, and they said they would come back (not sure who "they" are.) They called this temporary compensation and they are supposed to get permanent compensation later. They have asked the government how much they will get in permanent compensation, but the government says they haven't calculated it yet.

They fish in a local stream so have not been affected by construction on the Nam Kathang. Their water supply is also okay.

He would like to ask the company to build more bridges across the channel, as there are not enough in the current plan. They will have to walk very far. They want three more bridges to be built.

For vegetable gardens near the headrace tunnel, some people got compensation and some didn't. They also lost bamboo forest and fruit trees which they had planted themselves (mango and others). They have not been compensated for these losses. They gave the officials the estimated cost of peppers, fruit trees and others and were told they would receive compensation for five years, but have heard nothing since.

He doesn't know how people who don't have land now will get by. It will affect the whole village as those who don't have land will have to depend on relatives.

They don't have electricity now, but they want it.

Family group of women

They lost 2.45 ha of land, and received 3.995 million kip. They have six blocks of land left. The district gave the compensation to the village headman, who gave it to her. They received no compensation for vegetable gardens. Also, she used to double crop, but they only compensated for one crop. She doesn't know when they will be receiving the compensation again. Right now they are eating rice from last year's crop but they have only a few sacks left.

18 people in their family who cultivate the land. They cannot read. The construction workers building the canal work all night when it doesn't rain. If it is really loud it wakes them up. Construction started in November.