



Nam Theun 2

TRIP REPORT AND PROJECT UPDATE

About International Rivers

International Rivers is a non-governmental organization that protects rivers and defends the rights of communities that depend on them. International Rivers has been monitoring the Nam Theun 2 hydropower project and other dams in Laos for more than a decade, opposing destructive projects and advocating for better compensation and mitigation measures for affected communities. International Rivers' staff members visit the Nam Theun 2 project site regularly.

International Rivers was opposed to World Bank and Asian Development Bank support for Nam Theun 2 because: a) the dam does not meet World Commission on Dams guidelines; b) Nam Theun 2's risks to affected communities outweigh any potential project benefits; and c) dams have not contributed to poverty reduction in Laos. International Rivers continues to monitor Nam Theun 2's development to ensure that commitments made by the Nam Theun 2 Power Company, the Lao government and the international financial institutions to affected communities and on the environment are met.

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Cover photo: Ban Sop Phene resettlement village, Nakai Plateau

Executive Summary

The Nam Theun 2 Hydropower Project (NT2) in Laos is approaching an important milestone. Water is due to begin rising behind the dam in just a few months, but villagers are not ready to face NT2's impacts. Construction is 70 percent complete and proceeding on schedule, while social and environmental programs continue to lag behind.

As evidenced by discussions with local villagers and a review of project documents, the NT2 project has experienced a number of delays and problems since construction began in 2005. The resettlement of villagers on the Nakai Plateau and the implementation of livelihood restoration programs are behind schedule. Resettled villagers have noted health improvements and the benefits of new houses and better roads provided by the project. But those benefits will be overshadowed by the failure of livelihood programs if implementation does not improve soon.

Downstream, the \$16 million budget and the proposed compensation and mitigation measures are inadequate to deal with the scale and severity of NT2's impacts on communities in the Xe Bang Fai area. Additionally, the short time remaining to implement the program before dam operation means that villagers are likely to experience a significant drop in their incomes and major impacts before new livelihood programs yield any results. It is essential that the Nam Theun 2 Power Company (NTPC) provide interim compensation to down-

stream villagers until livelihood projects restore their incomes to pre-NT2 levels.

In December 2007, with only six months remaining until scheduled reservoir impoundment, NTPC and the Government of Lao PDR (GoL) reportedly agreed on a biomass clearance plan. This is a welcome, if belated, development. However, the proposed clearance operation may be too little too late to prevent significant water quality problems.

NTPC and the GoL's poor planning and execution have also exacerbated the hardship of villagers affected by construction activities in Gnommalat district. The taking of land and assets before payment of compensation, the failure to provide replacement land, and broken promises regarding irrigation provision have left some households wondering how they will feed their families in the coming years.

The December 2007 World Bank-Asian Development Bank (ADB) NT2 Update acknowl-



Nam Theun 2 dam site, November 2007

edges some of these failings but argues that as social and environmental programs will continue beyond construction completion, sufficient time remains to remedy the defects in these programs. However, NT2's social and environmental impacts are closely tied to the construction timeline; resettled villagers and those affected by construction activities are already experiencing significant impacts, and downstream villagers will start experiencing negative impacts once power production begins in 2009.

Problems experienced to date can be attributed in part to poor planning and to a lack of high-level commitment, staff and resources to execute viable social and environmental mitigation and livelihood restoration programs. Provisions of the Concession Agreement and World Bank and ADB policies, particularly regarding resettlement and information disclosure, have been violated. But despite numerous monitoring missions, the international financial institutions have not taken strong enough stances—including withholding loan and grant disburse-

ments—to correct critical problems and minimize negative impacts on affected people. Less than two years remain before power production and revenue generation begins, at which time the World Bank, the ADB and other international financial institutions' leverage in the project will decline significantly.

The performance of NT2 has broader implications for the Lao hydropower sector. There are approximately six hydropower projects under construction in Laos, and the Lao government intends to develop nearly 30 new hydropower projects by the year 2020, most of which will export power to Thailand or Vietnam. Strategic sectoral planning and the implementation of social and environmental regulations and mitigation programs are not keeping pace with these developments. The commitment made to donors and investors that NT2 would help improve the overall social and environmental performance of the hydropower sector is not being met.

The following recommendations should be implemented before NT2 dam gates are closed for reservoir filling:

XE BANG FAI DOWNSTREAM PROGRAM

- The savings and credit scheme should be revised to ensure that villagers are not bearing the risks of livelihood restoration pilot projects. If villagers follow NTPC's advice and the project fails, NTPC should repay the loan to the village savings fund. If villagers do not have the time or resources to effectively manage the project, then its design is flawed and NTPC should repay the loan. Interest rates should also be revisited, in consultation with villagers, based on repayment experience to date.
- Because NTPC's livelihood programs are not likely to be successful for at least several years, NTPC should commit to developing and implementing an interim compensation scheme to address the impacts of NT2 operations on downstream villagers until livelihood restoration programs yield sustainable results. Additional funding will be required, as the \$16 million budget is inadequate to deal with the scale of anticipated downstream impacts.
- NTPC and the GoL should develop a flood prevention program in consultation with affected villagers and ensure that there is sufficient funding available to implement the program.
- NTPC, the GoL, the World Bank and the ADB should ensure disclosure of: 1) the Downstream Program Implementation Plan; 2) marketing surveys for the Xe Bang Fai; and 3) hydraulics and water quality studies for the downstream areas.

PROJECT LANDS COMPENSATION

- The Independent Monitoring Agency for the Resettlement Management Unit (RMU) should urgently disclose its review of the Project Lands' compensation program.
- NTPC and the GoL should provide income support to significantly affected Project Lands' villagers until livelihood programs restore villagers' incomes to pre-NT2 levels.

BIOMASS CLEARANCE AND WATER QUALITY

- NTPC should not burn the cut biomass in the reservoir area but should move it outside the reservoir area, ideally for mulching and use on the Plateau.
- NTPC and the GoL should disclose the biomass clearance plan and the fill-and-flush plan for 2008 and 2009. To facilitate learning for other hydropower projects in Laos and the region, the various proposals considered and the rationale behind the selected plans should also be disclosed.
- NTPC should commit to regularly disclose, via its website, data from its water quality, fisheries and greenhouse gas emissions monitoring programs.

NAKAI PLATEAU RESETTLEMENT

- NTPC should ensure that all villagers are settled in their new sites and that all houses and resettlement infrastructure have been completed before the bypass tunnel is closed and partial reservoir filling begins.
- NTPC and the GoL should clarify with resettled villagers that rice support will continue until resettlers are self-sufficient in rice, and that rice and protein support will be continued for vulnerable households until they attain and sustain the household income target. The situation of Nong Boua village, where rice support was cut-off in 2003 or 2004, should be reviewed since they are undergoing a second transition period as other villages are resettled.
- Villagers whose rice crops were affected by flooding of the drawdown zone in August 2007 should be compensated for these losses.
- NTPC should explain how reduction of the buffalo population is being managed and monitored.
- Water supply systems in resettlement villages should be evaluated to address pump failures and water shortages in the dry season.

International Rivers' November 2007 Visit to Nam Theun 2

An International Rivers' staff member visited the NT2 project site in late November 2007, accompanied by an interpreter. Researchers working with International Rivers also visited the Xe Bang Fai downstream areas in late 2007. The purpose of these trips was to gather first-hand information regarding the implementation of the NT2 project. Following the field visit, International Rivers met with representatives from NTPC, the World Bank, the ADB and non-governmental organizations. GoL officials did not respond to International Rivers' meeting requests.

Although the project area is open to the public, International Rivers informed NTPC and the GoL of its intentions to visit the area before the trip. The teams were not accompanied by GoL or NTPC representatives.

To obtain as comprehensive an understanding of the situation as possible, International Rivers tried to visit many villages and to interview more than

one family representative in a given village. In total, our teams visited 30 villages across the three main project affected areas, and spoke with approximately 140 people over 13 days. The teams typically spent 1.5 to 2 hours talking with each group, asking both open-ended and direct questions, as well as requesting specific recommendations from villagers to address their concerns.

Project Status



- Construction is on schedule and is more than 70% complete.¹
- Resettlement on the Naki Plateau is behind schedule. Resettlement is required to be completed—with all related infrastructure in place—by May 2008, before the dam gates can be closed. Only 30% of new houses had been completed as of December 2007.² NTPC reported that 800 of 1,216 houses had been completed at the end of January 2008.³
- Livelihood restoration plans for the resettled villagers, villagers affected by construction activities, and villagers downstream along the Xe Bang Fai River are all behind schedule.
- Dam closure and reservoir filling is planned for June 2008. The Panel of Experts (PoE) must certify that the Concession Agreement’s resettlement requirements have been met before the dam gates can be closed.
- Power production (and revenue generation) is planned for December 2009.

Although this sample is small compared to the overall number of affected people (more than 100,000), the majority of people interviewed in each project area expressed serious—and similar—concerns. In a country where people are reluctant to speak openly and critically about a government-supported initiative, this is especially significant.

Information from the field was verified and supplemented by a review of recent project documents, meetings with NTPC, the World Bank and the ADB, and a written exchange with NTPC.

The trip report does not provide a comprehensive overview of the dam and its current or future impacts across all project areas. International Rivers primarily seeks to monitor and report on NT2’s environmental and social impacts and the implementation of mitigation and compensation programs. The trip report is divided into sections that correspond to the three main impact areas of the NT2 project: the Xe Bang Fai downstream area, project construction lands, and the Naki Plateau resettlement area. A fourth section addresses biomass clearance and water quality implications, which are critical cross-cutting issues.

Xe Bang Fai Downstream Program

BACKGROUND⁵

The Xe Bang Fai River will receive large amounts of additional water from the Nakai Plateau reservoir after it passes through the power station and the downstream channel. More than 120,000 people in the Xe Bang Fai area will be negatively affected by the NT2 project.⁶ NTPC says⁷ it is planning for the worst-case scenario along the Xe Bang Fai, which means 85 percent fish losses, increased high frequency floods in the Xe Bang Fai and its tributaries, erosion of riverbanks and loss of riverbank gardens, major water quality problems, and transportation difficulties for downstream villages.

In an attempt to mitigate NT2's impacts and compensate Xe Bang Fai villagers, NTPC has developed a Downstream Livelihood and Asset Restoration Program (Downstream Program). This program will be implemented in approximately 220 villages, including nearly 90 riparian villages. In violation of World Bank and ADB involuntary resettlement and information disclosure policies, the Downstream Program has not been publicly disclosed. NTPC says that information on program planning and implementation has been provided to people living in the downstream area. Villagers with whom International Rivers spoke seemed to have a general understanding of NT2's likely impacts and the proposed livelihood restoration programs.

The Downstream Program focuses on micro-credit funds to support agriculture, aquaculture and livestock projects. NTPC is also supporting water and sanitation improvements, and in some villages, water gate rehabilitation or mini-polder flood protection. Pilot livelihood restoration projects were initiated in a downstream demonstration village, Boeung Xe, in 2005.

CURRENT SITUATION

The \$16 million Downstream Program budget and the proposed compensation and mitigation measures are inadequate to deal with the scale and severity of NT2's downstream impacts. Additionally, the short time remaining to implement the program before dam operation means that villagers are likely to experience a significant drop in their incomes and major impacts before new livelihood programs yield any result. It is essential that NTPC provide interim compensation to downstream villagers until livelihood projects restore their incomes to pre-NT2 levels.

NTPC is now implementing the program in approximately 42 pilot villages in the upper, lower and middle Xe Bang Fai area, which is less than 20 percent of the villages that are likely to be affected when NT2's operations begin. NTPC says it intends to expand the program to all the riparian villages in 2008, and initiate activities in the remaining villages in late 2009.⁸

The World Bank, the ADB and the NT2 Panel of Experts (PoE) note that the Downstream Program is behind schedule, which poses risks to affected villagers. The PoE's most recent report states: "The problem [with the Downstream Program] at this point is that many of the impacts of the project will be felt well before comprehensive counter measures are in place."⁹ The World Bank-ADB December 2007 NT2 Update agrees that "[t]he progress of implementing the Downstream Program poses considerable challenges, especially the livelihood activities, and needs significant acceleration."¹⁰



Children transporting water near the Xe Bang Fai River

The PoE also points to the Downstream Program's short and long term funding gap, noting that the \$16 million budget "was never going to be sufficient funds to complete the tasks envisaged" to at least restore the livelihoods of affected people, as required by the Concession Agreement.¹¹

Researchers working with International Rivers visited 18 villages in the Xe Bang Fai River downstream area and spoke with approximately 75 people in November/December 2007. Many of these villages have received approximately 2 million kip/household (about \$200) from NTPC through a village savings fund. These funds can then be borrowed for various livelihood projects, ranging from fish ponds to pig-raising to tomato cultivation. The PoE report raises concern about the adequacy of proposed livelihood projects: "the existing programs do tend to look more like a series of essentially unrelated if useful sub-projects than the product of a coherent plan."¹²

Villagers reported that they have to pay back the loans to the village savings fund, with monthly

interest ranging from one to three percent, whether or not the projects succeed or fail. As a result, while one villager may have success raising pigs and generate enough income to repay the loan on time with interest, another villager's fish pond may fail and leave him only with debt. Those people with unsuccessful projects have been forced to sell buffalo and other assets to repay the village savings fund. Some villagers report that they have already stopped participating in the fund or will no longer borrow for livelihood projects.

NTPC says that in the case of project failure, the rea-

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sons are investigated and loan repayment is only expected if "mishandling" can be demonstrated. NTPC also maintains that such failure is probably exceptional.¹³ However, in every pilot village that International Rivers' researchers visited, people



Fishing in the Xe
Bang Fai

reported that some projects (most often pig raising or fish ponds) had failed. No one said that they did not have to repay the loan to the village savings fund.

The uptake of new and untested livelihood systems to replace traditional fishing and farming activities is a long-term venture. There are a number of shortcomings with the livelihood projects and more time should have been allocated to learn from these pilots before scaling them up across hundreds of villages.

For example, in Mahaxai Tai villagers reported that in the first year of the pilot project, five families took out loans for fish ponds. The company told them that the tilapia fish seedling would produce fish large enough to sell after three months. After six months, the fish were still too small to sell and villagers had a hard time affording the fish feed. All five families had to sell buffalo or cattle or find work outside the village to pay back the loan. The second year, approximately 23 families tried new fish ponds. Those fish were still in the pond at the time of International Rivers' visit, but villagers reported that six months had passed and they were still too small to sell. The villagers with whom

International Rivers spoke said they will not try fish ponds again next time. They want the company to come more often to help them with these projects.

In the Boueng Xe demonstration village, ten families tried to grow wet-season tomatoes as suggested by the company. Villagers reported that the small tomatoes fell off the vine before they could harvest them. The plastic required to protect the plants was also too expensive. They lost money and now they have to pay back the loan. But the activity with the highest failure rate is pig raising. Fifteen families tried to raise approximately five pigs each. All the pigs died, and villagers said that the people had to sell rice to pay back their loans.

While some of the projects seem to work better for some villagers and in some villages, these and other reports contradict NTPC's assertions that villagers are not bearing risks and that the pilots are performing well. NTPC says, "An evaluation is currently underway but our initial findings and confirmed by many monitoring missions is that the pilot village experience is positive including the micro finance component and the livelihood activities."¹⁴

Experience from Khamfeuag Noi village

According to villagers, 24 fish ponds have been developed using loans from the village savings fund. Only two families were able to sell some of the fish they raised in the pond. The fish does not grow very fast because they do not have enough good fish feed. The company said they would be able to sell the fish in three months, but villagers reported that the fish were still very small at that time. Seven fish ponds dried up

and villagers told the company they should not have to pay interest on these loans and be given a longer repayment period, but they have not received a response yet. One villager with two ponds said he has to pay 49,000 kip/month on his loan. It will take him one to two years to pay off the debt. If he can't pay back the money, they will take two buffalo from him (which were listed as collateral in his loan contract). Poorer members

of the village are especially concerned about this system. Villagers are reluctant to get involved in other activities, such as cotton cultivation and textile production, because they see that fish ponds have forced people into debt. Villagers suggested that interest should only be applied after two or three years, not from the beginning of the loan.

Flooding is a major concern for villagers, some of whom lose rice crops and other assets every two to three years as a result of Xe Bang Fai flooding. NT2 is expected to increase flooding in the Xe Bang Fai area, even if power production is stopped when the river overtops its banks at Mahaxai. At the nearby Theun-Hinboun Hydropower Project, recent research has shown that flooding along the Hinboun River has become increasingly severe over the past decade, leading to large-scale abandonment of rice paddy fields.¹⁵ While NT2 and Theun-Hinboun vary in some technical specifications, there are important lessons to be learned from the Theun-Hinboun experience. NTPC should prepare for a worst-case scenario where wet-season rice production is no longer viable along the Xe Bang Fai due to protracted annual flooding.

Most of the flood-prone villages visited by International Rivers said they had requested flood protection works (dikes, mini-polders, water-gate rehabilitation) from NTPC, but in many cases were told that funding is not available. NTPC says it will determine which water gates will be rehabilitated before dam operation begins in consultation with local and provincial government authorities. NTPC also asserts that the implementation of mini-polders to rectify the flooding problem is not a simple solution.¹⁶ However, the PoE argues “there is no obvious reason why present plans call for only seven of the fourteen water gates needing repair to be rehabilitated before [Commercial Operations Date] or why only one mini-polder is to be built by then.”¹⁷

RECOMMENDATIONS

- The savings and credit scheme should be revised to ensure that villagers are not bearing the risks of livelihood restoration pilot projects. If villagers follow NTPC's advice and the project fails, NTPC should repay the loan to the village savings fund. If villagers do not have the time or resources to effectively manage the project, then its design is flawed and NTPC should repay the loan. Interest rates should also be revisited, in consultation with villagers, based on repayment experience to date.
- Because NTPC's livelihood programs are not likely to be successful for at least several years, NTPC should commit to developing and implementing an interim compensation scheme to address the impacts of NT2 operations on downstream villagers until livelihood restoration programs yield sustainable results. Additional funding will be required, as the \$16 million budget is inadequate to deal with the scale of anticipated downstream impacts.
- NTPC and the GoL should develop a flood prevention program in consultation with affected villagers and ensure that there is sufficient funding available to implement the program.
- NTPC, the GoL, the World Bank and the ADB should ensure disclosure of: 1) the Downstream Program Implementation Plan; 2) marketing surveys for the Xe Bang Fai; and 3) hydraulics and water quality studies for the downstream areas.

Biomass Clearance and Water Quality

BACKGROUND¹⁹

One of the major threats to downstream villages once NT2 starts operating is the quality of water that will pass from the reservoir down through the power station, into the downstream channel and then to the Xe Bang Fai, before eventually reaching the Mekong. Experience with tropical reservoirs, including some in Laos and Thailand, indicates that biomass should be removed before the area is flooded to prevent the rotting vegetation from polluting the stored water. The failure to do so adequately would likely lead to fish kills in both the reservoir and downstream rivers, and result in water that is unsuitable for drinking and irrigation in the downstream channel and along the Xe Bang Fai.²⁰ This poses significant risks to the livelihood programs proposed for both Nakai Plateau resettled villagers and villagers living downstream.

Failure to clear biomass is also likely to exacerbate the problem of greenhouse gas emissions from the NT2 reservoir. The characteristics of NT2—a tropical reservoir with a large drawdown zone—are similar to those of Brazilian reservoirs where high methane emissions have been measured.

CURRENT SITUATION

In December 2007, with only six months remaining until scheduled reservoir impoundment, NTPC and the GoL reportedly agreed on a biomass clearance plan. This is a welcome, if belated, development. However, the proposed clearance operation may be too little too late to prevent significant water quality problems.

During the last rainy season (August 2007), a partial filling of the reservoir occurred. According to the World Bank-ADB Update, “degraded water quality was observed, resulting in limited fish kills downstream of Ban Thalang” when, during two to three days, “levels of dissolved oxygen went close to zero from Ban Thalang to the dam site at Nakai.”²¹ The Update concludes, “Such impacts are a possible indication of what might initially be expected with full reservoir filling (and longer periods of inundation) in the future,”²² a situation which International Rivers and independent experts have been predicting for several years. In late 2007, the World Bank and the ADB finally recommended that NTPC clear as much biomass as possible from areas which will be permanently flooded.

The clearance plan has not been disclosed, but according to NTPC, “the biomass clearance plan focuses on areas of interest for the development of livelihood programs. As a priority, areas below [minimum operating level] will be cleared, for (i) access corridors and (ii) fishing areas.” A total of 3,000 hectares will be cut and burnt. The operation will be carried out before impoundment by the Lao Ministry of Agriculture and Forestry with support from NTPC. NTPC adds, “After this operation, more than half of the area below [minimum operating level] upstream of Ban Thalang will be clear of vegetation. However, the largest part of biomass will still remain in the soils, not affected by this clearance.”²³

According to Dr. Guy Lanza, Aquatic Ecologist/Microbiologist from the University of Massachusetts-Amherst who reviewed the NT2 Environmental Assessment and Management Plan:

Burning the biomass will add air pollutants including carbon dioxide, ozone and other greenhouse gases and toxic substances; notably mercury. It is well known that burning biomass releases considerable quantities of toxic mercury from both biomass (wood and leaves) and from the scorching of the soil as well... Burning will also greatly accelerate the release of nutrients trapped in the biomass (nitrogen, phosphorus, sulfur, various trace elements). The nutrients will be in a concentrated and readily available form as ash. The new slug of nutrients in the ash 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 from sudden Biochemical Oxygen Demand (BOD), fish kills, the formation of toxic metabolites by cyanobacteria, and the release of toxic chemicals from the reservoir sediments.²⁴

More explanation should be provided as to why NTPC will only clear biomass from approximately half of the permanently flooded reservoir area. To avoid additional water quality impacts caused by burning, the biomass should be cut and removed where it could ideally be mulched for use in the area. If burning is unavoidable due to the short time remaining and the large volume to be cleared, the biomass should be removed and burnt outside the reservoir area.²⁵

Regarding other water quality concerns, NTPC commissioned an assessment of the degree of mercury contamination in the ecosystems of Laos in 2006 “in order to quantify the impact of the future NT2 development in terms of the possible mercury contamination of the site fish.”²⁶ The report concludes that mercury is present in the Nam Theun, Xe Bang Fai and Nam Kathang rivers, although the

NTPC’s biomass clearance plan is a welcome, if belated, development. However, the proposed operation may be too little too late to prevent significant water quality problems.

levels were lower than those found at the Petit Saut dam reservoir in French Guiana, for example. “Nevertheless, taking into account the poor quality of water that is predicted in the Nam Theun reservoir during the first years following filling, it is recommended that the fish mercury contamination should be monitored for public health reasons.”²⁷

NTPC has committed to a two-year fill-and-flush plan for the reservoir which it says will have more of an impact on water quality than the selective vegetation removal. Details on this plan have not been provided. NTPC says it will continue to monitor water quality levels throughout the 25-year concession period, although it is not clear if methyl-mercury levels in fish will also be monitored. NTPC asserts it is also developing a procedure to monitor greenhouse gas emissions from the reservoir.²⁸

RECOMMENDATIONS

- NTPC should not burn the cut biomass in the reservoir area but should move it outside the reservoir area, ideally for mulching and use on the Plateau.
- NTPC and the GoL should disclose the biomass clearance plan and the fill-and-flush plan for 2008 and 2009. To facilitate learning for other hydropower projects in Laos and the region, the various proposals considered and the rationale behind the selected plans should also be disclosed.
- NTPC should commit to regularly disclose, via its website, data from its water quality, fisheries and greenhouse gas emissions monitoring programs.

Project Lands Compensation

BACKGROUND²⁹

More than 2,500 households have been affected by NT2 construction activities, including construction of transmission lines, roads, and project facilities.

Households in Gnommalat district near the NT2 power station, regulating pond and downstream channel are the most severely affected, where many have lost more than 10 percent of their land and assets to the project.

The downstream channel is 27-kilometers long and approximately 100-meters wide, with access roads on either side, cutting through significant areas of paddy fields and other village land. The channel also blocks access to the forest and villagers' gardens and rice paddies on the other side. Villagers in the area have lost paddy land, houses, gardens, fruit trees, fisheries, irrigation water supply, and other assets to varying degrees.

As documented by International Rivers in 2006 and 2007, there have been significant problems with the assessment of entitlements and the delivery of compensation and replacement land for project lands' villagers. Villagers with whom International Rivers spoke expressed significant confusion about the compensation system. Many were also frustrated by what they considered to be delayed, inadequate and unequal compensation payments. Villagers who lost



agricultural and paddy land were most concerned about the lack of replacement land.

Disbursement of compensation payments began only in mid-2006, more than a year after NT2 construction activities started to impact villagers' land and resources. This is a violation of the Concession Agreement and the World Bank involuntary resettlement policy. Resettlement Action Plans for Project Lands were finally disclosed in November 2007.

CURRENT SITUATION

NTPC and the GoL's poor planning and execution have exacerbated the hardship of villagers affected by construction activities in Gnommalat district. The taking of land and assets before payment of compensation, the failure to provide replacement land, and broken promises regarding irrigation provision

have left some households wondering how they will feed their families in the coming years.

In late November 2007, International Rivers visited three villages affected by construction of the downstream channel and spoke with approximately 15 villagers. The confusion and frustration noted during International Rivers' two previous visits with regards to compensation entitlements and their delivery remains.

NTPC asserts that most compensation payments³⁰ have been made, but that contradicts what villagers reported. Villagers told International Rivers that compensation had not been provided for land and crops taken for the main Ital-Thai construction camp, for fisheries losses and for some fruit trees and hardwood trees. A number of villagers who lost more than 10 percent of their land and now will have to accept cash compensation instead of new land said the company keeps promising the money "next month, next month", but has yet to deliver.

Villagers' former paddy fields, cleared for downstream channel construction

Between 300 and 400 households³¹ in the downstream channel area lost more than 10 percent of their productive land assets. Land-for-land replacement is critical, especially given the importance of rice paddy fields to villagers' livelihoods. However, sufficient replacement land is apparently no longer available in the area, so only six households received land-for-land replacement.³² The remaining households are still waiting for new land, adequate compensation and/or livelihood programs.

NTPC, the World Bank and the ADB have reported that villagers preferred cash compensation to land. But many villagers with whom International Rivers spoke said that they only preferred cash compensation because the company offered land that was of poor quality or too far away. According to NTPC, "The land for land option was unsuccessful due to the lack of available equivalent land within an acceptable radius of the [affected households'] residence and other fields. Land that could

Experiences from Gnommalat District

One villager reported that she received approximately 10 million kip (\$1,000) in compensation for all her paddy land. She does not think they measured the land correctly. She said the money lasted only one year (less than \$3/day). Before, she could grow all the rice that her family needed. "I raised seven children and grew enough rice to feed all of them. But now, there is nothing left. I don't know what to do." If they want to participate in some of the livelihood projects the company is offering, such as pig and frog raising or mushroom cultivation, they have to invest some of the compensation money they received for their land. Another villager said "now we have to buy everything. Before we didn't have to buy anything because we just got food from our paddy fields, fruit trees and the river."

One villager explained, "We are afraid

to say anything because it could be bad for us. If we say too much, maybe we will be taken by the police." In another village, someone noted: "If we say something wrong against them they're going to use power against us later. Every time the company comes, they tell us that villagers have to say they already got their compensation. The project told us, if someone asks, even if you don't have your compensation money, say you do."

One headman said that the company has not paid the village for losses of common property resources. He doesn't know when they will get compensation or land for the people who lost more than 10 percent of their assets. Villagers still complain about the compensation because they don't have enough money to buy rice. There used to be fish in the river but

now it is polluted by chemicals from the construction work. The company has talked about rubber trees and other plantations, but nothing has started yet. "The company helps, but they are too slow."

Another villager said that the company gave them about 1,000 small frogs, built a pen and gave them frog feed. All the frogs died. Last year the company tried large frogs, but they didn't have any offspring. The company gave her seeds for pineapple and mango trees and some vegetables. Because of the lack of water, most of the crops died. She wants the company to provide irrigation for that land. She wants money to buy new land for rice paddy. The company keeps telling her "next month, next month."

be economically developed (irrigated land) was outside [affected households'] range and did not meet [affected households'] standards of replacement land due to the walking distance and other factors."³³ While NTPC says that the "acceptability of replacement land could not be forecasted"³⁴, it is the responsibility of the project that the availability of replacement land was not investigated before commitments were made in the Social Development Plan, and before villagers' land was taken.

The recently disclosed Resettlement Action Plan for Gnommalat district says that "when asked about their priorities for livelihood restoration measures, a total of 412 households of significantly impacted [project affected households]... representing 93 percent of the total number of affected households in Project Lands, give highest priority to rice paddy and the raising of large animals, in particular cattle."³⁵ Despite these preferences, given the lack of available land, the Resettlement Action Plan proposes the following livelihood restoration programs for significantly affected villagers: wet-season rice improvement, cash crops and horticulture, livestock production improvement, non-agriculture based skills and small business.

The experience reported in one village indicates that these projects are all at early stages and producing mixed results at best. According to villagers in Sangkeo, the pig and frog projects supported by the company were not successful (villagers reported that the animals died). Some pineapple trees have grown well, but the other fruit trees died. The one family that tried to grow mushrooms in 2006 was able to sell the mushrooms two or three times. Two families are trying fish ponds this year, but it is too early to sell the fish. The company has talked about rubber trees and other plantations, but these projects have not started yet.

Finally, NTPC continues to contradict itself on the initially promised benefit of irrigation from the downstream channel to support affected villagers in Gnommalat. The November 2007 NTPC Project Update states: "The water diverted from regulating pond and from downstream channel will allow large scale dry season irrigation in the Gnommalat

The taking of land and assets before payment of compensation, the failure to provide replacement land, and broken promises regarding irrigation provision have left some households wondering how they will feed their families in the coming years.

plain."³⁶ But the October 2007 Resettlement Action Plan for Mahaxay and Gnommalat argues, "The development of irrigation in the Gnommalat Plain through the use of water from the future Downstream Channel described in the [Social Development Plan] as a key element for agricultural development and livelihood restoration has essentially become an obsolete option due to the following: 1) the Downstream Channel as currently designed is not a multi-purpose channel and is not suitable for irrigation due to its hydraulic properties. 2) Water in the Downstream Channel will only be available after [Commercial Operations Date] in December 2009. The water in the Downstream Channel will most likely be unsuitable for domestic or agricultural use for several years after 2009."³⁷

RECOMMENDATIONS

- The Independent Monitoring Agency for the Resettlement Management Unit (RMU) should urgently disclose its review of the Project Lands' compensation program.
- NTPC and the GoL should provide income support to significantly affected Project Lands' villagers until livelihood programs restore villagers' incomes to pre-NT2 levels.

Nakai Plateau Resettlement

BACKGROUND³⁸

Seventeen villages of more than 6,200 indigenous peoples on the Nakai Plateau are being resettled to make way for the NT2 reservoir. Resettlement is required to be completed—with all related infrastructure in place—by May 2008, before the dam gates can be closed.

The resettlement program has been fraught with delays, missing its original deadline to have all villages resettled by the 2006–2007 dry season. As a result of these delays, NTPC began moving people to temporary houses in their new villages in April 2006 under what has been called “transitional resettlement.”³⁹ As of December 2007, 30 percent of new houses had been completed.⁴⁰

CURRENT SITUATION

Progress has been made in terms of resettlement infrastructure (permanent housing construction and water supply installation, in particular) since International Rivers’ visit in March 2007. Villagers with whom International Rivers spoke in November 2007 noted the following benefits: better houses, water supply for domestic use, new roads, electricity (in some cases), and health improvements. At the end of January 2008, NTPC reported that approximately 800 of 1,216 houses had been completed.⁴¹

The World Bank–ADB December 2007 Update notes: “At this rate, all houses should be completed a month before the reservoir impoundment target date of June 2008. However, the schedule is tight and needs close monitoring.”⁴² NTPC asserts that the remaining houses will be completed by the end of March 2008.⁴³

Partial reservoir filling will occur with the closure of the bypass tunnel, currently scheduled for March 2008. To minimize difficulties for resettlers, houses and resettlement infrastructure should be completed before tunnel closure.

However, as the PoE explains, “Though prospects have improved since January 2007 for meeting the Concession Agreement’s requirements for dam closure in time, the POE remains concerned about ongoing delays in implementing the necessary livelihood activities and the risk that resettler living standards will drop following reservoir impoundment.” The World Bank–ADB Update agrees: “... there have been delays in the transformation of a sound

planning framework for development of sustainable livelihoods on the Plateau into an operational program. Such delays can pose serious risks to the achievement of project targets....”⁴⁵

In late November 2007, International Rivers visited the Nakai Plateau and spoke with approximately 50 villagers in nine villages. One village (Nakai Tai) had yet to move to its resettlement site, and one group (14 households of Vietic villagers and one Lao Loum household from old Sop Hia) had chosen to move uphill from their old village site. The seven other villages International Rivers visited were in their resettlement locations.

Vietic villagers told International Rivers that they would like to remain in their current location and receive tools and additional materials for their houses. They want electricity, piped water from the river, a truck for transporting sick people and goods, and road access to be extended to the village. NTPC says they are “proceeding at village level on the basis that [Vietic villagers] will remain in their current location indefinitely, though the final decision on their status must be agreed by GOL. There are, however, certain limitations arising from the choice made by the [Vietic villagers] to remain in a traditional set-up in the protected corridor area. Road access will need to remain very limited, and electricity highly infeasible.”⁴⁵ More consultations should be conducted with Vietic villagers urgently to find a solution that meets their needs, taking into account their selected location, and is consistent with resettlement benefits provided to other villages.

With the exception of the Nong Boua demonstration village (which has been in its resettlement location since 2004), people with whom International Rivers spoke did not know what their new agricultural activities would be; if their agricultural plots would be irrigated; if and how they would grow rice in their new locations; and how many buffalo



Milling rice in Nong Boua village

they would have to sell by when (due to the shortage of land for grazing).

NTPC says, “In 2008 the first irrigation schemes outside the Pilot Village will commence operation. Irrigation schemes will continue to be developed until all 0.66 ha plots are covered. All the 0.66 ha plots will be cultivated in the 2007 wet season, with proportions cultivated in rice.”⁴⁶

Last year, some villagers were encouraged to cultivate rice in the drawdown zone. Due to partial reservoir filling in August 2007, approximately 60 ha

of rice were destroyed by flooding.⁴⁷ Villagers raised concerns about these losses, and should be compensated for them by NTPC.

In terms of buffalo reduction, NTPC asserts, “Over the past 3–4 years there has been a natural trend towards overall reduction—possibly somewhat related to anticipation of reduced grazing land but also due to changing lifestyles. It is now expected that a sustainable herd population of approx. 3000 head will be reached by 2009.”⁴⁸ NTPC should clarify how this activity is being organized to ensure that: 1) villagers are not selling buffalo to offset rice shortages; 2) villages that will have more access to grazing land and fodder are not selling buffalo unnecessarily; 3) each household is able to keep some buffalo; and 4) the price of buffalo does not fall sharply.

Villagers have been receiving rice and protein support from NTPC during the resettlement process. Many villagers said that protein support had ended around September 2007 and that rice support would end by May 2008. Villagers with whom International Rivers spoke wanted rice support to continue at least until the next rice harvest in November 2008.

Since resettlement and livelihood programs have been delayed, extension of rice support is important to ensure that villagers are not forced to sell buffalo or other assets to purchase rice during this transition phase. The Concession Agreement says that rice and protein supplements will be provided to vulnerable households “until they attain and sustain the Household Income Target” (Schedule 4, Part 1, 12.3.1). The World Bank–ADB Update says “rice support will continue for all resettlers until they are

self-sufficient in rice.”⁴⁹ NTPC asserts that rice support is to continue at least until the end of 2008: “Withdrawal of rice support will be closely linked to rice harvests by villagers as well as income derived from livelihood development.”⁵⁰ This contradicts what villagers told International Rivers and needs to be clarified.

RECOMMENDATIONS

- NTPC should ensure that all villagers are settled in their new sites and that all houses and resettlement infrastructure have been completed before the bypass tunnel is closed and partial reservoir filling begins.
- NTPC and the GoL should clarify with resettled villagers that rice support will continue until resettlers are self-sufficient in rice, and that rice and protein support will be continued for vulnerable households until they attain and sustain the household income target. The situation of Nong Boua village, where rice support was cut-off in 2003 or 2004, should be reviewed since they are undergoing a second transition period as other villages are resettled.
- Villagers whose rice crops were affected by flooding of the drawdown zone in August 2007 should be compensated for these losses.
- NTPC should explain how reduction of the buffalo population is being managed and monitored.
- Water supply systems in resettlement villages should be evaluated to address pump failures and water shortages in the dry season.



Conclusion

Reservoir filling is imminent and the NT2 hydropower project faces a decisive moment. One of the project's selling points was that the Panel of Experts would have unprecedented powers: they must certify that all resettlement infrastructure has been completed, in compliance with the Concession Agreement, before the dam gates can be closed. NTPC and the GoL should take this deadline seriously. But the numerous slippages to date have already jeopardized the PoE's authority. If PoE recommendations had truly been binding, as the World Bank asserted when NT2 was approved, livelihood restoration programs would not be so critically behind schedule on the Nakai Plateau and downstream areas. If World Bank policies had been followed, villagers affected by construction activities would have received compensation before they lost their land. It is past time that the social and environmental programs were prioritized alongside construction. NTPC and the GoL should increase the staff resources and budget available for livelihood restoration programs, fix critical shortcomings and step-up implementation in all project areas before the Nakai Plateau is flooded.

Villager from old
Ban Sop Hia, Nakai
Plateau

Appendix

Nam Theun 2 Project Background

Nam Theun 2 (NT2) is a US\$1.45 billion hydropower project currently under construction in central Laos. When it begins operations in December 2009, NT2 will export most of its 1,070 MW of power to Thailand. The project will also forcibly displace more than 6,200 indigenous peoples to make way for its 450-square kilometer reservoir, and impact more than 120,000 Lao farmers and fishers downstream.

NT2 is a trans-basin diversion which means it will dramatically alter not one, but two river basins. A 39-meter high dam will block the Nam Theun River to form the reservoir. Once the reservoir has been filled, water will be directed down a 350-meter drop to the power station, before being transferred to the Xe Bang Fai. Both the Nam Theun and the Xe Bang Fai are tributaries of the Mekong River.

In 2005, NT2 and its project developers, the Nam Theun 2 Power Company (NTPC), which includes Electricité de France International, the Electricity Generating Company of Thailand, Ital-Thai Development and the Lao government, got the go ahead in the form of loans and guarantees from the World Bank and the Asian Development Bank (ADB).

The World Bank and the ADB asserted that the project would reduce poverty in Laos. They vowed not only that the social and environmental risks could be managed, but that NT2 would jumpstart

development for Laos as a whole. Following the World Bank and ADB's endorsement, other public and private financial support was offered from the European Investment Bank, the Nordic investment Bank, COFACE, and other export credit agencies and private banks.

NT2 is governed by a variety of legal documents that outline the obligations of NTPC and the Government of Lao PDR (GoL). The NT2 legal framework includes the Concession Agreement between the GoL and NTPC, and loan agreements with project financiers such as the World Bank and the ADB. The World Bank and ADB loan and guarantee agreements with the GoL and NTPC in turn require compliance with these institutions' own policies. Essentially, these legal agreements constitute the promises made to Lao villagers regarding compensation and mitigation measures, and the allocation of responsibility amongst NTPC and the GoL.

Endnotes

- ¹ World Bank-ADB Update on the Lao PDR: Nam Theun 2 (NT2) Hydroelectric Project, December 2007, p. 4.
- ² Ibid, p. 7.
- ³ Nam Theun 2 Power Company (NTPC), written response to International Rivers questions, January 2008. Available at: <http://www.internationalrivers.org/en/southeast-asia/laos/nam-theun-2>.
- ⁴ There will be downstream impacts in other areas, such as the Nam Theun downstream of the dam site where water flows will sharply decrease. However, the International Rivers' field visit focused on the Xe Bang Fai area where the largest number of affected people live.
- ⁵ Excerpted from International Rivers' May 2007 Nam Theun 2 Trip Report and Project Update, available at: http://www.internationalrivers.org/files/NT2TripReport2007_full.pdf.
- ⁶ These numbers are based on a survey conducted by independent experts (Shoemaker, Baird and Baird, *The People and their River*, 2001). NTPC asserts that only 75,000 people in 221 downstream villages will be affected by NT2, which includes the Khamkeut district downstream of the Nam Theun. NTPC's downstream livelihood restoration program targets 75,000 villagers.
- ⁷ Meeting with Olivier Salignat, NTPC Social and Environmental Deputy Director, March 8, 2007.
- ⁸ NTPC response to International Rivers, January 2008.
- ⁹ McDowell, Scudder, Talbot, Lao PDR Nam Theun 2 Multipurpose Project, Twelfth Report of the International Social and Environmental Panel of Experts, September 2007, p. 33. Available at: http://siteresources.worldbank.org/INTLAOPRD/Resources/293582-1092106399982/492430-1092106479653/POE_Report_12_Sept07.pdf.
- ¹⁰ World Bank-ADB Update, p. 11.
- ¹¹ Panel of Experts, p. 35.
- ¹² Ibid, pp. 34-35.
- ¹³ NTPC response to International Rivers, January 2008.
- ¹⁴ Ibid.
- ¹⁵ FIVAS, "Ruined rivers, damaged lives: The Impacts of the Theun-Hinboun Hydropower Project on Downstream Communities in Lao PDR", November 2007.
- ¹⁶ NTPC response to International Rivers, January 2008.
- ¹⁷ Panel of Experts, p. 33.
- ¹⁸ Excerpted from International Rivers' May 2007 Nam Theun 2 Trip Report and Project Update, available at: http://www.internationalrivers.org/files/NT2TripReport2007_full.pdf.
- ¹⁹ NT2 EAMP, 2005, Chapter 3; Lanza, "Review of the Water Quality Assessment (EAMP), Proposed Nam Theun 2 Hydroelectric Project," 2005, and Theiss, "Reservoir Fisheries Predictions for the Nam Theun 2 Hydroelectric Project", 2005. Available at: <http://www.irn.org/programs/mekong/namtheun.php?id=namtheuntech.html>.
- ²⁰ World Bank-ADB Update, pp. 10-11.
- ²¹ Ibid, p. 10.
- ²² NTPC response to International Rivers, January 2008.
- ²³ Personal communication, Dr. Guy Lanza to Aviva Imhof, September 11, 2006.
- ²⁴ Personal communication, Dr. Guy Lanza to Aviva Imhof, February 14, 2008.
- ²⁵ Hydreco for NTPC, "Assessment of the Degree of Mercury Contamination of Ecosystems in Laos—Final Report," October 2006, p. 1.
- ²⁶ Ibid, p. 32.
- ²⁷ NTPC response to International Rivers, January 2008.

- ²⁸ Excerpted from International Rivers' May 2007 Nam Theun 2 Trip Report and Project Update, available at: http://www.internationalrivers.org/files/NT2TripReport2007_full.pdf.
- ²⁹ NTPC response to International Rivers, January 2008.
- ³⁰ NTPC, "Resettlement Action Plan 3—Mahaxay and Gnommlath District," October 2007 says 377 households. NTPC's response to International Rivers states: "Note that number of significantly impacted PAPs has been revised down from this figure following very close revision of the impact assessment, the final designs of the constructions sites as well as the PAPs assets as registered during the baseline studies prior to land hand over."
- ³¹ NTPC response to International Rivers, January 2008.
- ³² Ibid.
- ³³ Ibid.
- ³⁴ NTPC, "Resettlement Action Plan 3—Mahaxay and Gnommlath District," October 2007, p. 26.
- ³⁵ NTPC/GOL, "Nam Theun 2- Lao PDR, Project Update November 2007, Overview of the Project", November 2007, slide 15. Available at: <http://www.namtheun2.com/Project%20Update/Overview%20of%20the%20project.pdf>.
- ³⁶ NTPC, "Resettlement Action Plan 3—Mahaxay and Gnommlath District," October 2007, p. 11.
- ³⁷ Excerpted from International Rivers' May 2007 Nam Theun 2 Trip Report and Project Update, available at: http://www.internationalrivers.org/files/NT2TripReport2007_full.pdf.
- ³⁸ For more details regarding the transitional resettlement process, see the IRN NT2 Trip Report September 2006, available at: <http://www.irn.org/programs/mekong/namtheun.html>.
- ³⁹ World Bank-ADB Update, p. 7.
- ⁴⁰ NTPC response to International Rivers, January 2008.
- ⁴¹ World Bank-ADB Update, p. 7.
- ⁴² NTPC response to International Rivers, January 2008.
- ⁴³ Panel of Experts, p. 10-11.
- ⁴⁴ World Bank-ADB Update, p. 8.
- ⁴⁵ NTPC response to International Rivers, January 2008.
- ⁴⁶ Ibid.
- ⁴⁷ Ibid.
- ⁴⁸ Ibid.
- ⁴⁹ World Bank-ADB Update, p. 7.
- ⁵⁰ NTPC response to International Rivers, January 2008.