

Introduction

The Government of Lao PDR's programme of building large-scale hydroelectric dams to export electricity includes at least 24 projects presently being built or under study.¹ Two of these, the Xeset 2 and Xeset 3 hydroelectric projects, are being proposed for construction in the Xeset River Basin in southern Laos (Figure 1 and 2).

The proposed construction of the Xeset 2 and 3 dams threatens the livelihood security of thousands of families living on the Boloven Plateau in Champasak and Salavan provinces, southern Laos. With generation capacities of 70 and 16 megawatts respectively, nearly all of the electricity would be sold to Thailand. Almost all of the people living in communities along the Xeset and Houay Tapoung rivers are of ethnic minority groups, with many being of the Jrou¹ and Kouay² ethnic groups. All communities living along these rivers catch fish, cultivate rice and vegetables, and many families have small-scale coffee plantations, the harvest of which is their major source of cash income. These rivers are also important for domestic water consumption, including washing and bathing, and supply drinking water for people and livestock

Methodology

The fieldwork described in this study was undertaken from May to August 2004 and in August 2005. Field research was conducted in villages located along the Xeset and Tapoung rivers on the Boloven Plateau in Lao Ngam district, Salavan province and in Pak Song district, Champasak province. (See Figure 3)

Members of 43 communities were interviewed, individually and in small groups, in houses, fields, and along the rivers. Field research was mainly based on qualitative research, while quantitative data was acquired through access to the few (generally incomplete) project-related documents available to the public. The research was conducted by Lao nationals and was conducted in Lao and Jrou languages.

From Feasibility Study to Power Purchase Agreement

In July 2000, Electricite du Lao (EdL), the state-owned enterprise that oversees the generation and distribution of electricity in Laos, announced that with the construction of the Xeset 2 and Xeset 3 hydroelectric projects "Southern provinces like Savannakhet and Champasak will have a better power supply."² In 1999, the Norwegian consulting company Norconsult carried out the feasibility study for the projects, with US\$1.8 million in funding from the Norwegian Agency for Development (NORAD).

In March 2004, the *Vientiane Times*, reported that, "The China North Industries Corporation (NORINCO) and Electricite du Laos (EDL) last week agreed to cooperate in the construction of the Xeset 2 hydropower plant." It was also reported in the same article that, "The agreement, made at the Prime

¹ Ethnic Lao people also know this ethnic group as Laven.

² This ethnic group is also known as Souay

Minister's Office, stipulates a lump sum of US\$135 million to finance the hydropower project", and that, "Eighty percent of this sum shall be provided by the contractor through China Import & Export Bank as a low interest loan between EDL and NORINCO." In November 1999 a feasibility study on the development of hydropower projects on the upstream of Xeset River was completed. The report concluded that, "the cascaded development of the Xeset 2 and Xeset 3 hydropower plants is both feasible and practical."³ According to Chinese sources, NORINCO is a large company in China with close ties to the Ministry of Defense. NORINCO apparently does not have much expertise in dam construction, but it is well known as one of China's main weapon and bomb manufacturers.

In July 2004, a press release from the Electricity Generating Authority of Thailand (EGAT) announced that, "EGAT informed EDL of its pleasure to purchase electrical power from Xeset 2 Hydropower Project."⁴

Rivers Profile

The Xeset and Tapoung rivers flow from the Boloven Plateau in a northerly direction and their courses are roughly parallel (see Figure 2). The Tapoung (also known as the Houay Tapoung or 'Tapoung stream') is the largest tributary of the Xeset, entering the Xeset approximately one kilometer upstream of the Xeset's confluence with the Xedon River, an important tributary of the Mekong River. Both rivers are characterised by large seasonal differences in flow volume, although the larger and deeper Xeset generally maintains a minimal flow during the dry season (December to May), while the Tapoung occasionally ceases to flow during March and April (every three to five years). Both rivers are characterised by successions of rapids, deep pools and waterfalls.

Project Profile

The Xeset River is the location of the second large hydroelectric dam built in Laos, the Xeset 1 dam. (The first hydroelectric dam, the Nam Ngum, was completed in 1975.) Since its commissioning in 1991, the 45 MW Xeset 1 dam has been generating electricity for domestic consumption and for export to Thailand. However, the Xeset 1 dam has a small reservoir, and low dry season flow volumes of the Xeset River have resulted in correlated low volumes of electricity generation by Xeset 1.

While the Xeset 2 and Xeset 3 dams would generate electricity, the projects are also being promoted as a means to increase rainy season water storage on the upper Xeset to increase flow volumes for Xeset 1, downstream of Xeset 2 (See Figure 4). In other words, they are seen as a solution to the electricity generating problems associated with the Xeset 1 dam.

The US\$24 million Xeset 3 project would be built on the 20 metre-high Tat Sang Poi waterfall on the Xeset River, at the village of Ban Set Khot, Pak Song district, Champasak province, with a dam height of 11 metres. The Ministry of Industry and Handicraft's Power System Development Plan⁵ (August 2004), which was funded by the World Bank, indicates a reservoir area of 1.3 km². A four km-long canal or tunnel would divert water to a 16 megawatt generating station located approximately nine kilometres (km) downstream of the dam.

The US\$135 million Xeset 2 dam would be built at the six metre-high Tat Teuay waterfall, on the Xeset River near the village of Ban Da Sia Nhay. The Power System Development Plan (2004) indicates that the 16 metre-high dam would create a reservoir of 1.6 km² and have a generating capacity of 70 MW.

The Xeset 2 project includes a 12 metre-high dam built on the Houay Tapoung stream near Dong Noi village, Lao Ngam district, that would divert the Houay Tapoung's water through an 1.6 km-long canal and 6.8 km-long tunnel to the Xeset 2 reservoir. According to the Power System Development Plan, "Diversion of the Houay Tapoung supplements the generation flows for both Xeset 2 and Xeset 1."

According to EdL officials, the diversion canal will capture and divert the upper Houay Pao stream (another Xeset tributary) to the Xeset 2 reservoir. The canal or tunnel would also cross the lower Houay Dok. Whether the diversion is by tunnel or canal, both of these streams would be disrupted by tunnel construction or captured and diverted by the diversion canal.

EdL officials familiar with the project have reported that the Government of China would provide 80 percent of the project funding, with EdL funding 20 percent (possibly in-kind support). The Chinese company NORINCO has been awarded the construction contract but the planned start of construction in late 2004 has since been delayed. However, it has recently been reported that construction of roads associated with the project has begun.

Potential Impacts

The Xeset 2 and Xeset 3 hydroelectric projects, individually or as a whole, include large-scale inter-basin and intra-basin diversions and flow alterations of the Xeset and Tapoung rivers, as well as a number of tributary streams of these rivers. The following is a brief description of some of the major ecological and livelihood impacts in different areas of the Tapoung and Xeset river basins.

Downstream of the Xeset 2 Dam to the Existing Xeset 1 Reservoir

According to the Norconsult feasibility study (1999), the design for Xeset 2 includes an 8.4 kilometre-long headrace tunnel (6.8 km) and canal (1.6 km) from the dam to the powerhouse, located just upstream of the existing Xeset 1 dam (see Figure 4 for details). According to the Lao PDR Power System Development Plan (2004), the headrace will have a capacity of 32.84 cubic metres per second (m³/s). The average volume of water entering the reservoir ("reservoir inflow") would be 12.5 m³/s, with an average flow of 34.6 m³/s during the wettest month, and an average flow in the driest month of 1.9 m³/s. It is not clear whether these flows indicate volumes of the Xeset River only, or include the volume of water diverted from the Houay Tapoung. Whatever the case, the "mandatory release" of water into the Xeset River downstream from the Xeset 2 dam is expected to be just 0.5 m³/s.

This indicates that all but a small percentage of the Xeset River's water will be diverted by the Xeset 2 dam through the headrace channel, to the Xeset 2 powerhouse, and then released directly into the Xeset 1 reservoir. As a result, an approximately 16

km-long stretch of the Xeset River between the Xeset 2 dam and the Xeset 2 powerhouse will be affected by significant negative impacts caused by the massive reduction of river flow volumes. Essentially, the Xeset River will be reduced to a trickle for much of the year.

There are seven villages with 706 families and 2,736 families that use this stretch of the Xeset River.

Village*	Number of Households	Population	Ethnic Group
1. Done Dou	122	440	Kouay/Souay
2. Mouan The	160	650	Kouay/Souay
3. Inpeng	99	386	Kouay/Souay
4. Bak Nhay	67	280	Jrou/Laven
5. Nateu	77	310	Brou/Katang ³
6. Saneum Noke	68	290	Kouay/Souay
7. Khiang Thang Le	56	210	Brou/Taoy ⁴
8. Pho Toke	57	170	Katang and Souay
Total	706	2,736	

*All villages located in Lao Ngam district, Salavan province.

People from these villages catch fish in the Xeset River, with many doing so on a daily basis. Village people also cultivate fields along the edge of the river and make gardens in the fertile soils of the riverbanks, with the Xeset River being a plentiful and convenient source of water for their crops and their livestock. Some of these villages rely on the Xeset as their source of drinking water, at least during the dry season.

According to a man from Nateu village, “We have not heard much about Xeset 2 and don’t know any details about what will happen if they build the dam. After they built Xeset 1, we saw that some types of fish – *pa houa mom*, *pa kho*, *pa kheung* – disappeared from our river.”

With much of the Xeset River’s flow being extracted by the Xeset 2 dam, the people of these seven communities are likely to see the disappearance of not only their fish, but almost all of the benefits that they receive from their river.

Downstream of the Xeset 3 Dam to Xeset 2 Reservoir

The 16 MW Xeset 3 project would include a 3.9 km-long headrace channel linking the dam’s reservoir to its powerhouse on the Xeset River.

The headrace channel would divert most, and possibly all, of the Xeset’s flow away from an approximately 9 km-long stretch of the Xeset below the dam. The Power System Development Plan does not indicate that there will be any “mandatory release” of reservoir water through the dam and into this stretch of the Xeset River.

³ The Lao generally knows this ethnic group as Katang.

⁴ The Lao generally knows this ethnic group as Taoy.

Along the approximately six km stretch of river from the Xeset 3 powerhouse to the Xeset 2 dam, water flows would be radically altered by the proposed generating scheme of Xeset 3. According to the Power System Development Plan report, Xeset 3 would generate electricity from between three to nine hours per day. However, it appears most likely that time-of-day generation would occur for shorter periods of time to meet peak electricity demand times in southern Laos or of the export market in Thailand, generally in mid-afternoon or in the evening, and as a result of the relatively small volume of water stored in the Xeset 3 reservoir. In other words, it is likely that there would be large surges of water entering this stretch of the Xeset for approximately three hours per day, when demand is highest, there is sufficient water supply in the reservoir, and when the maximum amount of electricity can be generated.

People from at least four villages use the approximately 16 km stretch of the Xeset River between the proposed Xeset 3 and Xeset 2 dams. Villagers from the villages of Da Sia Noi, Po Khem (population 560), Den Savang and Phou Mon cultivate vegetable gardens along the riverbanks and catch fish in the river.

Upstream of the Xeset 3 Dam: Reservoir area, Diversion of Upstream Tributaries

Reservoir Area

According to the Power System Development Plan, the Xeset 3 reservoir would have a “maximum” and “minimum” reservoir area of 1.3 km². A map of the Xeset 3 project in the Plan indicates that an approximately one km-stretch of the Xeset River will be flooded by the reservoir, as will the houses of at least six families living in the village of Set Khot.

While the reservoir would flood agricultural land, household lands, and disrupt fisheries, the people of Set Khot village tell of their experiences with local government officials,

“When the official came to survey, we said to them that we do not understand about what the benefits of the dam would be. The officials’ answer was, ‘The construction of the dam brings many benefits, like export of electricity. People will have electricity. Trees will be cut and exported which brings revenue to develop our nation.’”

Surveys done by government officials have also demarcated the areas where the electricity transmission lines to the town of Pak Song and to connect Xeset 3 with the Xeset 1 transmission line and to the town of Pakse will be built. Agricultural land of five villages (Nong Hin Khao, Beng, Katouat, Houay Vay, and Thong Set) along the Xeset River would be affected by the towers supporting the transmission lines. People want to plant their crops of cabbage and Chinese lettuce, but are worried that their crops would be destroyed during construction of the transmission line. Said one male farmer in Nong Hin Khao, “We are just waiting to see if they will come to build the project. We do not want them to build the dam. It will badly affect our land and the environment. The official compensation will not be adequate, just like in the case of the Houay Ho dam. But we dare not oppose the government officials.”

A local ethnic Lao man of Set Khot village, who completed his studies in Germany, observed that,

“In Germany they have stopped building dams in many places, because of the impact on the environment. The forest is destroyed, people are displaced; the results are not worth the benefits. I hear only our country say that you will become rich if you build dams. As for me, I do not want the dam to be constructed. It would be better to practise agriculture. In Laos, only the officials will get rich. The people will remain poor.”

Diversion of Nearby Streams into Reservoir

According to the Norconsult Feasibility Study for Xeset 2 and 3, the upper and middle reaches of the Houay Teuay Nhay and Houay Sai streams (Xeset tributaries that enter the mainstream below Xeset 3 and above Xeset 2) would be diverted into the Houay Pin some 3 km upstream of its confluence with the Houay Pao, which flows into the Xeset a few km above the Xeset 3 dam.

Soldiers staying at the No. 16 and No. 18 military camps, as well as Kong Toun village (120 households) in Pak Song district use the Houay Sai, while soldiers based at the No. 409 military camp, as well as villagers from Nong Soung (80 households), Li Cheuang (120 households) and Nong Hin Khao (both parts; about 160 households in total) villages use the Houay Teuay Nhay. All these people would be negatively impacted by the plans to divert these streams.

Downstream of Diversion Dam on Tapoung River

According to the Power System Development Plan, there is no information regarding the average annual flow volume of the Tapoung River at the site of the proposed diversion dam, nor is there a “mandatory release” of water from the diversion dam into the Tapoung River. However, two sets of statistics included in the report relate to “Earthfill Dam: Auxiliary” and these appear to be the two possible designs for the diversion dam on the Tapoung. One set of figures indicates a 12 metre-high dam (crest-length 120 m). The second set indicates a 13 metre-high dam (crest length 78 m). However, there is no information indicating the volume of water to be diverted from the Tapoung to the Xeset 2 reservoir.

According to village people living along the Tapoung River downstream of the site of the proposed diversion dam, government officials have told them that “almost all” the water from the Tapoung River will be diverted to the Xeset 2 reservoir.

Along the Tapoung River people farm riverbanks and adjacent plains. Crops include corn, chilies, tobacco, pumpkins, cucumbers, Chinese lettuce (*phak kat*), cabbage (*phak sou*), a type of vegetable known locally as *mak saveu*, and many other kinds of vegetables. These crops are harvested for home consumption, with excess produce sold at the market. For some families, sales of these crops generate an income of several hundred thousand Lao kip per year. During the dry season, the Tapoung River is a source of irrigation for dry season crops grown on riverbank vegetable gardens and in their fields. In some areas irrigated dry season rice crops (*na seng*) can be grown using water from the Tapoung.

Also, particularly during the dry season, many wild plants grow along the Tapoung’s riverbanks. Many of these plants are edible and supplement the cuisine and diets of

local people. Some of these plants are known to people for their medicinal benefits and are used as remedies for various illnesses.

The fisheries of the Tapoung River are a very important livelihood resource for all communities living along and in the vicinity of the river and its tributaries. Fishers of the Tapoung rely on nets and fish traps to capture fish and catch other aquatic animals such as shrimp, crabs and mollusks, all of which are an important source of dietary protein for local people. In some areas, village people also build small temporary 'ponds' in low-lying areas to catch fish as rainy season water levels decrease then "raise" the fish, allowing the fish to grow for two to three months, before catching them.

Waterfalls such as the Sen and Sok Falls on the Tapoung River seem to form an effective barrier to fish migrations into the middle and upper stretches of the river. However, downstream of the waterfalls, seasonal fish migrations between the Tapoung, the Xeset and the Xedon rivers (the latter a tributary of the Mekong River) ensures a very productive fishery for many villages in the lower stretch of the Tapoung River. There are also, however, plenty of fish living upstream of these waterfalls, although not as many species.

The raising and sale of livestock generates a significant income for many families living along the Tapoung River. Pigs, cattle, water buffalo, goats and chickens rely on the Tapoung as a source of water during the dry season. Local people say that their livestock are healthier when they are able to access fresh, flowing water for drinking, rather than water from ponds, pools and puddles. During the height of the dry season (March-April), small streams and tributaries of the Tapoung usually dry up, leaving the river as the main source of drinking water for livestock.

The Tapoung River is also the main source of drinking water for many village communities during the dry season. The river's water is also used for making alcohol, dyeing cloth, cooking and other household work (laundry, cleaning, etc.).

The Tapoung River is an important cultural location for people living in villages along and in the vicinity of the river. During the dry season, people visit rapids and waterfalls along the river to relax, swim, and eat food that they bring themselves or purchase from local food vendors. During the height of the dry season (March-April), large numbers of people from many villages gather at the Sen and Sok waterfalls, located downstream of the Houay Tapoung Diversion Dam, including celebrating the Lao New Year in April. This cultural event and related tourism is also a profitable time for food vendors who also travel to these waterfalls to cater to the appetites of the celebrants.

Clearly, the diversion of the Tapoung River to supply the Xeset 2 Hydroelectric Project will cause severe economic, livelihood and cultural impacts on the people of the Tapoung River. 25 villages with 2,666 families and 12,540 people are situated along the river below where the diversion will take place.

Table 2: Communities located on the Houay Tapoung River, downstream of the proposed Houay Tapoung Diversion Dam of the Xeset 2 Hydroelectric Project

Village*	Number of households	Population	Ethnic group
1. Ban Dong Noi	105	630	Kouay/Souay
2. Ban Dong Nhay	92	520	Kouay/Souay
3. Dan Dong Lap	74	450	Kouay/Souay
4. Ban Mouang Xoum	57	210	Kouay/Souay
5. Ban Khayong Khek	96	550	Jrou/Laven
6. Ban Khoua	71	440	Jrou/Laven
7. Ban Meun Phak Di	190	740	Jrou/Laven
8. Ban Takit Nhay	180	730	Jrou/Laven
9. Ban Takit Noi	98	600	Jrou/Laven
10. Ban Non Deua	187	710	Lao
11. Ban Lao Ngam	210	840	Kouay/Souay
12. Ban Len	110	680	Kouay/Souay
13. Ban Dong Bang	78	280	Kouay/Souay
14. Ban Na Bone	97	430	Kouay/Souay
15. Ban Phalong	150	570	Kouay/Souay
16. Ban Nong Deun	65	240	Kouay/Souay
17. Ban Dong Souang	54	190	Kouay/Souay
18. Ban Phanai	87	420	Kouay/Souay
19. Ban Ket Pheung	78	300	Kouay/Souay
20. Ban Kang	67	250	Brou/Katang
21. Ban Na Mi Neua	110	700	Brou/Katang
22. Ban Na Mi Tai	95	570	Brou/Katang
23. Ban Dong Mone	60	300	Lao
24. Ban Na Pho	89	430	Lao
25. Ban Nong Boua	166	760	Kouay/Souay
Total	2,666	12,540	

*All villages located in Lao Ngam district, Salavan province.

Village people are aware of the impacts on their livelihoods should the diversion of the Tapoung River to supply the Xeset 3 project occur.

“When I go fishing I am successful every time. Then I can also collect some *pak kat* [Chinese lettuce] and *pak nam* to take home and make fish soup. If they the build the dam and stop the water from flowing in this river. I will be very sad. The river has been feeding me since childhood and into my old age.”

Woman elder, Khayong Khek village, July 2004.

“If the officials really dam the Tapoung, then in the future we will not be able to irrigate our fields.”

Woman farmer, Ket Pheung village, August 2004.

“If the Tapoung River dries up, our fish will all die and we will not be able to catch fish or raise fish in the future.”

Male fisher, Phalong village, July 2004.

“We have heard that the officials will dam the Tapoung River. They have not asked many people about what they think [about the proposed dam]. They did not ask, ‘Are you happy about this?’ We all just said, ‘Okay’. We dare not oppose them. We are afraid. If we do not agree, they might arrest us.

“They said that they would build a water supply system sufficient for us. But we are not happy, because using water from the river is very convenient.”

Group of people, Dong Lap village, May 2004.

The Tapoung – Xeset 2 Diversion Channel and Houay Pao

The planned diversion of the Tapoung River’s water would occur through a 1.6 km-long canal and 6.8 km-long tunnel to the Xeset 2 reservoir. The construction of both the canal and the tunnel would require the expropriation of local people’s agricultural land, including coffee plantations and cropland. Government officials have promised landowners “adequate” compensation for their loss of land but villagers are not confident that they will get what they deserve.

The Tapoung – Xeset 2 Diversion Channel would also capture and divert water from the Houay Pao stream (a large tributary that enters the Xeset River below the Xeset 1 Hydroelectric Project), with resulting impacts similar to the de-watering of the Tapoung and Xeset rivers downstream of the Tapoung diversion dam and the Xeset 2 and 3 projects. All of the villages rely on the Houay Pao as a source of drinking water and for irrigating their riverbank vegetable gardens. According to a group of villagers in I Leng village, “If they divert the Houay Pao we will be without drinking water and water for daily use, such as bathing and watering our crops. But our village has not yet been informed officially. We have only heard about this from other villagers.” Nine villages with 678 families and 3,256 people are situated along this stream below the proposed diversion.

Table 3: Communities located along the Houay Pao stream, downstream of the Houay Tapoung – Xeset 3 Diversion Channel

Village*	Number of households	Population
1. Da Sia Nhay**	230	1,300
2. Da Sia Noi	NA	NA
3. Done Dou	99	390
4. I Leung	65	230
5. Mouan Teup	25	128
6. Vang Peuay Nhay	87	470
7. Phanouan	90	420
8. Khanouan	34	130
9. Houay Pao	48	188
Total	678	3,256

*All villages located in Pak Song district, Champasak province.

** Da Sia Nhay is composed of three sub-villages (the people of which also utilise the resources of the nearby Xeset River).

Most people living in the communities along the Houay Pao are presently concerned about the loss of productive agricultural land to the diversion channel.

“The channel will go through five hectares of my coffee plantation. The officials say that I will receive full compensation for the damage. But I feel bad, because that land generates many millions of kip each year. I do not know, will they really fulfill their promise?”

Male farmer, Da Sia Noi village, June 2004.

“Twelve hectares of coffee plantation belonging of five households will be destroyed [by the diversion channel]. Many people will feel sad if the land really is lost, because in order to produce the coffee you have to invest so much energy – you almost die [because of the effort] to grow coffee. Even if you only lose one coffee bush, you feel pain.”

Male farmer, Da Sia Noi village, June 2004.

“I have been planting coffee since I was 18 years old. Now I am 67 years old. My coffee plantation is very beautiful because it is near the Houay Pao stream and I have worked hard. I am very worried because the officials say that my coffee plants must be destroyed to make way for the channel. I do not want any compensation, I just want to keep growing my coffee plants.”

Female farmer, Da Sia Noi village, July 2004.

“At present there is no more extra land to be cleared for fields and planting coffee. If the officials compensate us with money, we will soon have spent all that money to buy food and things we need. If we have our land, we will never use it up and will always be able to live.”

Male elder, Da Sia Nhay village, August 2005.

Analysis

With reference to the World Bank-funded Power System Development Plan, which was prepared for Lao PDR, it is noted that, “In the past, power planning in Lao PDR has been largely intuitive.”⁶ Perhaps the use of the term “intuitive” is ‘Bank-speak’ that can be translated as “haphazard”, “random” and “chaotic”. Indeed, the World Bank and the Asian Development Bank (ADB) are largely responsible for this situation.

For example, in its March 2004 press release announcing that it had signed the contract agreement 2 with EdL, NORINCO touted Xeset 2 “as one of the hydropower station projects suggested by the ADB.”⁷

The ADB-funded Power Sector Strategy Study, by the Ministry of Industry and Handicrafts and Lao National Committee for Energy, puts Xeset 2 and 3 in a different light,

“Not viable. Seasonal generation pattern out of synchronization with irrigation pumping load in the South. Project would force disadvantageous seasonal import-export. Justification of these projects by proposed co-operation with Houay Ho is not rigorous. H. Ho storage is already operated by EGAT [Electricity Generating Authority of Thailand] to firm up seasonal output from nearby Pak Mun HPP. “Deferment recommended.”⁸

The EdL Generation Development Plan excludes Xeset 2 and Xeset 3 for much the same reasons. Under the heading “Reasons given in the present study for exclusion from the recommended program”, EdL excludes Xeset 2 and 3 because of “Highly (wet) seasonal output inconsistent with (dry) seasonal irrigation pumping load in the South.”⁹ The impacts to the environment and local livelihoods are not emphasised, but they would certainly be very serious, as indicated earlier in this report.

Yet proponents of the projects repeatedly stress the need for more electricity generation, with more dams storing more water. The Xeset Project Assistant Manager Bounnong Bouttavong said, “The Xeset Electricity Dam 1 cannot provide enough power in the dry season [February to April] because of the water shortage, so we need to import electricity from Thailand.”¹⁰

According to a press release by the Embassy of Lao PDR in Bangkok, “Southern provinces like Savannakhet and Champasak will have a better power supply when the Xeset II and III Hydropower Projects in Saravane province come on line. The Xeset Electricity Dam I cannot provide enough power in the dry season (February to April) because of the water shortage.”¹¹

A quick examination of the plans for Xeset 2 and Xeset 3 indicate that these projects will not be able to increase dry season electricity generation by Xeset 1, and will themselves be generating little if any electricity during the dry season. The reservoirs of Xeset 2 and 3 are quite small and are on the same river as Xeset 1. Any water stored in the reservoirs would have flowed into the Xeset 1 anyway, and it appears that the small amounts of water from the Xeset 2 and 3 reservoirs will only slightly increase Xeset 1’s dry season generation. The only extra water entering Xeset 1 will be an unknown amount diverted from the Tapoung River by the Xeset 2 project. During the rainy season, this could be a fairly large amount of water. But according to local people living along the river, the Tapoung River’s dry season flow is very low and even stops flowing one year out of every three or four. Again, the diversion of the Tapoung River will do little or nothing to increase electricity generation at Xeset 1 (or Xeset 2 for that matter).

As noted by the Power Sector Strategy Study for Lao PDR, “This study also noted the ad hoc character of domestic plant development choices to date and EdL’s continuation of this practice with the development of the Xeset 2 and 3 projects, even though previous studies give priority to other domestic projects.”

It is difficult to understand the rationale for the construction of the Xeset 2 and Xeset 3 hydroelectric projects, but there are perhaps two reasons.

First, there is the increasing foreign investment in Laos by the Government of China and Chinese companies. As the March 2004 NORINCO press release noted, “The project is the highest contract price in the history of the economic and technical cooperation between China and Laos and will be built as a key project of the Lao government with the loans from China.”¹² Of the US\$135 million to finance Xeset 2, “Eighty percent of this sum shall be provided by the contractor through China Import and Export Bank.”¹³ In other words, the Government of China is paying a Chinese company to build a hydroelectric dam in Laos.

Second, the EGAT gladly accepts the low-cost electricity sold by Laos. In this way, EGAT receives a supply of electricity while the people of Laos suffer the social, environmental and economic impacts of these dam projects.

Conclusion

The rivers and lands of approximately 20,000 people would be severely damaged by the Xeset 2 and Xeset 3 hydroelectric projects, with the Xeset 2 dam causing the most severe impacts. The vast majority of these people are of ethnic minority groups whose livelihoods, economies and cultures are intimately connected to their homelands and the natural environment. These people have not been informed of the potential impacts of these projects, and many people have only heard rumours that the dams may be built.

The people also know about the experiences from other dams, both in Laos and in Thailand. They are especially familiar with the problems that have arisen with people relocated as a result of the Houay Ho dam, since that dam is located relatively nearby. They have heard of the broken promises of the officials who claim that dams will bring only benefits, that everyone will be compensated for any losses, and that everyone will be happy because of the development of the dams. They know that the benefits will go to others and that they will lose much. They know that compensation often disappears before it reaches their hands, and that money does not compensate the loss of land and crops, water and fish. They believe that dams do not bring happiness for those in the impact areas, only hardship. The Xeset 2 and Xeset 3 hydroelectric projects violate their customary rights to their homelands, and their basic human rights to livelihood security.

The Tapoung and the middle and upper reaches of the Xeset are healthy and productive rivers. These rivers and the landscapes they support are essential to the well-being of the communities that depend on them. The diversion of the free-flowing Tapoung River, which flows past the district centre of Lao Ngam district, and the tributaries of the upper Xeset are of particular concern, as diverting these rivers and streams will greatly increase the area and numbers of communities and people that will suffer the impacts of these projects. Yet the Government of Laos is evidently willing to sacrifice all of these communities for the sake of generating revenue for its budget by selling electricity to Thailand.

The Xeset 2 and Xeset 3 hydroelectric projects are excellent examples of ill-conceived development. Once again, the people of Laos – or more accurately, ethnic minority people of Laos – are paying the costs of hydroelectric dams while the government, a Chinese company, and the EGAT receive revenue, make profits, and get cheap electricity. The environmental, social, cultural and economic costs of the Xeset projects are being ignored, and at least 20,000 people will be victimised by this so-called development. Contracts have been signed, loans delivered, power purchase agreements negotiated, all in the absence of transparent and informed decision-making.

Yet it is only in the absence of a transparent and informed decision-making process – one that would ensure that local communities have the rights to decide how their natural resources would be managed and utilised – that projects like the Xeset 2 and Xeset 3 hydroelectric dams can be built. It is certain that if the people of the Xeset and Tapoung rivers were informed of the details of where and how these projects would be built and would be operated, they would be able to determine many of the environmental and social impacts by themselves. It is also a certainty that if provided the opportunity to make their concerns known to the Government of Laos, without fear of arrest and/or retribution, they would oppose construction of the Xeset 2 and Xeset 3 hydroelectric dams. It is clear that the potential negative impacts of these projects far outweigh their potential benefits, and it is certainly true that if all the social and environmental costs of the project were fully factored into the equation, these projects would not be viable and would not be built. Now, these dams can only be built because the local people are expected to bear the costs rather than those who will benefit from the dams.

Appendix 1

Brief Chronology of Recent News Media Reports regarding the Xeset 2 and Xeset 3 Hydroelectric Projects

Xeset Project Assistant Manager, Bounngong Bouttavong, was quoted as saying, “The feasibility study for the Xeset 2 and 3 projects began in November 1998, and was completed last November, with US\$1.8 million from the Norwegian Agency for Development (NORAD). The technical part was undertaken by Norconsult Company, Norway, and environment and social surveys were the responsibility of an Australian company. The surveys predicted that neither project would have a serious negative impact on the environment or agricultural production. It would not be necessary to move many people from the project area because the pond area will cover 10 and 20 hectares, and will run like a river, “he stressed.””

Source: Manichanh, “Southern dams arial [sic], Electrifying news,” Vientiane Times, 4-6 July 2000.

NORINCO(G) Signed Strategic Cooperation Agreement with SINOHYDRO
 “On April 8, 2005, a strategic cooperation frame agreement was signed by China North Industries Group Corporation (NORINCO(G)) and China National Water and Hydropower Engineering Construction Company (SINOHYDRO)...Under this frame agreement, NORINCO International Cooperation Ltd. signed the subcontract agreement of Laos XESET 2 hydropower project. This project was signed between NORINCO and ELECTRICITE DU LAOS in March 2004.”

Source: http://www.norinco.com.cn/c1024/english/newscenter/content_22.html

“Electricite du Laos (EDL) notified EGAT of its intention to develop Xeset 2 Hydropower Project with an installed capacity of about 76 MW as a run-of-river project and construct 115 kV transmission line connecting Xeset 1 and Xeset 2 to Houay Ho Hydropower Project at Pak Song Substation for the purpose of exporting electricity to Ubon Ratchathani II Dispatch Center.

“EGAT informed EDL of its pleasure to purchase electrical power from Xeset 2 Hydropower Project.”

[The article also noted that more discussions are needed regarding investigating the mutual benefits of joint operation of Houay Ho Hydropower Project and Xeset 1 Hydropower Project and Xeset 2 Hydropower Project connected to existing Houay Ho 230 kV transmission line.]

“On July 12, 2004, EGAT, EDL and HHPC [Houay Ho Power Company Limited] had jointly executed an MOU for Xeset 2 Hydropower Project.”

“...MOU based on the concept that the power purchase agreement of the Xeset 2 Hydropower Project should be arranged separately from those of Xeset 1 and Houay Ho projects...”

Source: <http://www.egat.or.th/fppd/English/progress-lao-Eng.htm>

“EGAT to buy more power from Laos”

EGAT signed an MOU to buy power from Xeset 2 Hydropower Project on 8 December 2004.

“Energy Minister Prommin Lertsuridej said that under the MoU, Laos will start sending power to Thailand by 2007, with the price set at 1.6 baht per unit during peak periods and 1.2 baht per unit during non peak periods.”

“The payment will be in US dollars, with half to be calculated from the current market currency rates and the remaining amount to be based on a 40 baht per dollar conversion rate.”

Source: Business Day; http://www.biz-day.com/read/energy/11_dec_04/ek5hv-2/egat_buy_more_power_laos.htm

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