

I Want to Eat Fish. I Cannot Eat Electricity:

Public Participation in Mekong Basin Development



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EarthRights International Mekong School

Preface

This volume is comprised of writings from three classes of EarthRights Mekong School graduates. EarthRights International's Mekong School is a training program for civil society advocates from the Mekong Region (Yunnan/China, Burma, Laos, Thailand, Cambodia, and Vietnam) whose work focuses on human rights and the environment.

The authors whose work is featured in this volume represent a wide range of communities along the Mekong, from its origins on the Tibetan plateau to the Mekong Delta, where the river completes its 4,350 km journey and flows into the South China Sea. Mekong School alumni speak a cumulative total of twenty-three regional languages (Brao, Burmese, Cambodian, Chinese, Jarai, Kavet, Khmer Krom, Khmu, Krueng, Lao, Lisu, Mon, Naxi, Palaung, Phu Thai, Pumi, Shan, Tai Lue, Tampuen, Thai, Tibetan, and Vietnamese), and are committed to the shared goal of strengthening environmental promotion and protection in the Mekong region.

The papers presented here take an in-depth look at the impacts of large-scale infrastructure projects, and how citizens are engaged in advocating for more equitable development in the Mekong region. In the first section, authors investigate community complaints regarding negative impacts from Asian Development Bank (ADB) and World Bank funded projects, and make recommendations to strengthen international financial institution safeguard policies. The second chapter examines the threats posed by the series of hydropower dams currently planned and under construction along the mainstream of the Mekong to migratory fish stocks, local livelihoods, and regional food security. The final chapter is a survey of problems related to resettlement in the wake of large dams, with a look at how civil society groups are advocating for policy reform.

It is hoped that the papers presented here will inspire further work towards greater public participation and transparency in development planning in the Mekong region.

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Map of the Mekong Region and Research Areas



International Financial Institutions

The ADB's Process for Addressing Grievances Regarding the Stung Chinit Irrigation and Rural Infrastructure Program (SCRIP)

By **Kunthea Keat**

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Introduction and Background

The Stung Chinit Irrigation and Rural Infrastructure Project (SCRIP) is a development project built on old infrastructure from the Pot Pot regime, located in the Santuk and Baray districts in Kompong Thom province. The project is one of Cambodia's large-scale projects, and uses modern structure and technology. It cost a substantial amount of money and involved many diverse stakeholders. The impacts of the project are not broadly understood yet, so we need to conduct extensive research. I would like to understand the local people's opinion of SCRIP and its impact, and in order to do so I pursued the following research objectives: (1) to review the history of the project, (2) to understand how the project is being implemented and who is involved, (3) to investigate how people are responding to the project implementation, and (4) to understand the social and ecological impacts of the project.

The Stung Chinit Irrigation and Rural Infrastructure Project (SCIRIP) occupies a gross area of approximately 46,000 ha and is located in the districts of Santuk and Baray in the Province of Kampong Thom (ADB 2000). Kampong Thom is located in the center of Cambodia, about 166 km from Phnom Penh. The province covers an area of 15,060 km² with a total population of 672,788 in 2003 (85% are farmers). The Chinit River is one of the tributaries of the Tonle Sap River, with a total catchment area of some 4,130 km², and a total length of 300 km.

The major economic activity of the project area is agriculture, characterized primarily by paddy cultivation during the wet season and supplemented by the production of livestock, fish culture and fishing. These activities occur both in the project areas themselves and on the nearby Tonle Sap River. To the east of the project area some remaining forest areas also provide supplementary incomes from firewood gathering, hunting, and collecting wild forest products.

The irrigation scheme on the Stung Chinit was originally built under the Pol Pot regime, and became dilapidated in the 1980s. The new project is a major irrigation development designed to increase agricultural productivity and stimulate the rural economy. The original plan targets 71,609 potential beneficiaries (of whom 37,251 are women) in an estimated 12,609 households in 80 villages (ADB 2000).

The primary project objectives are to raise agricultural productivity and increase farmers' incomes by providing irrigation and drainage for 7000 ha in the wet season and 2000 ha in the dry season, and to improve rural roads and markets in and around the project areas. The project will also (i) form and train water user groups to operate and maintain the irrigation system, (ii) apply cost recovery measures for roads and irrigation works, (iii) strengthen government staff at the central and provincial level, and (iv) conduct benefit monitoring and evaluation.

The project proposal developed by ADB (2000) argued that the main constraints to higher rice yields and crop diversification in Cambodia, and particularly in Stung Chinit are: (i) lack of irrigation facilities to tap groundwater and surface water resources, (ii) poor management and little or no farmer participation in the operation and maintenance (O&M) of existing irrigation systems, (iii) poor infrastructure for transporting and marketing products, (iv) limited capacity of public institutions to provide agricultural extension services, and (v) lack of research and development of suitable farm technologies. To be effective, investments targeting agricultural productivity will need to respond to all of these constraints in an integrated manner.

The total project cost is estimated at \$23.8 million, comprising \$9.6 million (40 percent) in foreign exchange and approximately \$14.2 million (60 percent) in total

current costs. The project is funded by ADB with \$16 million, AFD with \$2.6 million, the Cambodian government with \$4.8 million and local beneficiaries with \$0.4 million (in kind of labor).

The amortization period will be 32 years including a grace period of 8 years, with an interest charge of 1 percent per annum during the grace period and 1.5 percent per annum thereafter. The period of utilization is until June 30, 2006. The executing agencies are the Ministry of Water Resources and Meteorology (MOWRAM), which is responsible for the farmer community organization and extension, irrigation infrastructure and scheme management components, while the Ministry of Rural Development (MRD) will be responsible for the supporting infrastructure component. The agriculture extension components of the project are being implemented by Group de Recherche et d'Echanges Technologiques (GRET), who are working closely with a local NGO, Centre d'Etude et de Développement Agricole Cambodgien (CEDAC).

History of the project

Major historical events of SCIRIP

The SCIRIP is a pilot large-scale project with modern structure, which is expected to be replicated in other places throughout the country. Its irrigation component supports a general improvement of the rice production started 10 years ago. To understand the development process of this project, and in particular the role of water management in that process, it is necessary to carry out an historical review which could be classified with three periods.

Khmer Rouge period (1975-1979)

Before the implementation of Stung Chinit irrigation scheme, the area was covered by dense forest and the population was scarce. The first works began in 1975 during the Khmer Republic with an American budget. After the works interruption, the constructions restarted in January 1976 under Khmer Rouge orders. A total daily amount of about 40,000 to 100,000 forced labors from Kampong Thom and Kampong Cham was involved on these works (ADB 2000, Gret and CEDAC 2000, Joris 2004).

In the early days of this irrigation scheme, yields were good due to irrigation effectiveness and strict management. During this period there were no problems with management or maintenance, as the power of the authorities was very strong.

The Wet Season (WS) water supply was good at that time and DS rice was grown on most of the upper parts of the scheme. The large amounts of rice produced in WS and DS did benefit the peasants because the rice was sent to other areas.

Stung Chinit scheme degradations (1979-1986)

From 1979 (arrival of the Vietnamese) to the beginning of the 1980s, some rehabilitation work had to be undertaken due to degradation of the dike and canals. These works were financed by the central government through international aid. Meanwhile, the Stung Chinit irrigation scheme was kept without formal management from provincial and central authorities, and was instead directly managed by the Cambodian-Vietnamese armies based on the sites. District agricultural office and commune chiefs were in charge of the operation and maintenance activities. The agricultural work was organized under solidarity groups (*Krom Samaki*).

However, the collective management introduced at the time disappeared quickly. In 1981 the Water Resource Provincial Office became responsible for the dike and gate management through the chief of Tbeng Village. Their main responsibility was to prevent floods that could damage or destroy the paddy fields. When the peasants needed water, they went in groups to open the Tang Krasaing gates. Meanwhile, there was no regulation and organization, which meant that most of the water was often used by the upstream peasants, while those downstream had to wait. From 1984 onward, all paddy land as managed by individual and solidarity groups disappeared.

At the same time, a second rehabilitation was needed on the Stung Chinit weir, which was damaged due to gate mismanagement and “grenade fishing”. Because of problems in water management and rehabilitations of structures, dry season (DS) rice ceased to be cultivated in 1986 as the Chinit weir could not be used any more.

Before the recent project began (1986-2001)

No change occurred on Stung Chinit irrigation scheme from 1986 up to the project beginning and the structures were waiting for some rehabilitation work. So in the Wet Season (WS), the peasants used only water from another river, the Stung Tang Krasaing, because the gates of that weir were still operating. Water supply capacities remained low, because Stung Tang Krasaing has a small watershed directly influenced by rainfall. When droughts occurred during WS, irrigation became quickly unfeasible due to the decreasing river water level. The WS rice was more based on rainfall and floods than on irrigation facilities provided by Stung Tang Krasaing (CEDAC/GRET 2000 and Joris 2004).

The DS rice was hardly feasible except in a few places near the rivers and the ponds. Several villages' farmers tried to cultivate some DS cash crops, mainly watermelon, eggplants, string beans and cucumbers. Richer farmers who could afford to purchase petrol or diesel pumps used them to complete their irrigation requirements. In summary, before the project started, the organization of agricultural work and water management was completely individual and allowed villagers to produce rice in WS with medium results.

In 1993, Cambodia completed a peace agreement and the first national election was held with facilitation from the United Nations Transitional Authority in Cambodia (UNTAC). Since then, Cambodia has had more access to assistance from international financial institutions (Ojendal 2000), and many surveys of irrigation potential have been carried out.

In 1998, the government showed its willingness to implement a policy on water resources and it decided to reinforce its development policy in the irrigation sector. It created the Ministry of Water Resources and Meteorology (MOWRAM) in order to take over the work on water management-related activities where various laws had been developed by this institution.

Project implementation

The project is an integrated rural development project with substantial investments in water resource development, rehabilitation of rural roads and markets, training of farmers for long-term management of the irrigation scheme and development of water user groups to ensure the sustainability of the project.

The project is one of the larger irrigation development projects undertaken in Cambodia in modern times. Monitoring its implementation and progress (as well as its effects on the project area and on the surrounding areas) will give us information on the development process, the process of capacity building and training of local staff. It will also assist in building the capacity of the Ministry of Water Resources and Meteorology (MOWRAM) and the Executing Agencies.

Major components

The original project was to provide wet season supplementary irrigation to 7,000 ha, of which some 30% were to be provided with the dry season irrigation. The project was a rehabilitation of the existing irrigation infrastructure; the creation of

drainage infrastructure, and upgrading selected rural roads and markets to enhance conditions of marketing of the crops harvested.

The overall project implementation commenced in September 2001 and is expected to be completed in October 2007. The original project proposal documented that main benefits accruing from irrigation and agricultural extension include incremental rice production, yields of other crops and paddy fish. Road improvement benefits are estimated using two conservative methodologies: vehicle operating cost (VOC) savings and increased agricultural producer surpluses (APS). VOC savings result from improved road surfaces leading to less wear and tear on vehicles, and indirectly from reduced charges associated with higher vehicle utilization rates (due to reduced joinery times) and less expensive modes of transportation (ADB 2000). Farmers would produce more agricultural product such as vegetables to sell for their family income and have livelihood improvement.

The project layout

The irrigation rehabilitation has been designed by the Lahmeyer/SMEC Company and takes its inspiration from the former design. The project consists of a technical rehabilitation of the existing irrigation infrastructure (weirs, gates, main canals) and the creation of new canals and drains.

The project is to construct one system of irrigation, and a parallel drainage structure. The main canal is expected to function in continuous flow, and provide a permanent flow to all secondary canals (5 main secondary canals, currently with 48 blocks). This is a unique case in Cambodia. The 5 main canals were built mostly on the pre-existing infrastructure (built by the Pol Pot regime), with new drainage canals. Tertiary and quaternary canals have been built in order to ensure that all plots have access to the resource and can drain directly into canals.

The people's response to SCIRIP

Access to information

This section presents the local farmers' attitudes toward the SCIRIP being implemented in the area. These include their views on access to information, farmer's livelihood activities, agricultural production, and the adaptation of new agricultural techniques.

This first section will discuss people's access to information, including when and how villagers learned of the project, and people's level of awareness about the funding sources and parties involved in the project implementation.

The year that farmers learned about the start of the project

My interviews showed that among 30 farmers in Snoa and Kley Villages, many people do not remember the exact year when the project started and beside that they quote different years; at the earliest in 2001 and the latest in 2006.

How farmers found out about the project

The survey also showed that 17 farmers learned about the project when they joined the meeting to consult about the construction of the project (one farmer in Snoa said they were shown the irrigation model as a wood structure, 4 farmers knew when the project was being constructed, 4 farmers knew about the project when they were informed about land adjustments, 3 farmers knew from other villagers and village chiefs, 1 farmer knew from an NGO and 1 farmer knew when someone came to study the old structure.

Funding sources

30 local people were asked to identify the funding sources and project implementer. One farmer (from Kley village) said that the money was a loan from the government and that the implementer was a bidding company. Another farmer said that perhaps the money was from the French or Cambodian Governments, while he asserted that Gret/CEDAC, MOWRAM, and MAFF were implementers (he has been a guard at the Gret/CEDAC office since 2001). Two other farmers were not sure, and thought that the money was from the French or Cambodian governments. The other farmers couldn't identify the project's funders, but knew that the implementer was Gret/CEDAC or CEDAC and Lamayer Company.

The Kley village chief said he knew about the project between 1990 and 1992 when a meeting was held at the district office, at which the CEDAC staff and France asked for comments from the farmers. The purpose of the project was to restore the Chinit Scheme of the Pol Pot regime. But the chief of Snoa village said he knew about the project in 1998 when there was another meeting. The project commenced in 2002 when the tractors began their work.

The commune chief knew about the project in 1999 when there were studies conducted with the people. He first got the information from the district office

through messages and when the district officials came with the ADB representative to disseminate information about the project. The funding source was a loan from the ADB. The Cambodian government was the chief administrator of the work and company responsible for construction. The commune chief also revealed that, “The opinion of the local people is that they want to have the old model of the irrigation system from Pol Pot regime reconstructed, but the technical crews said they could not provide this, as they already have a new technique to divert the water.”

According to my interviews with village chiefs as well as some farmers, they previously expected that the project builders would follow the old structure built under the Pol Pot regime. As one farmer in Kley said, “In fact, the builders already had their irrigation system plan, but they came to consult with villagers just for show.” Still another said that he was first told that the project would follow the old system model, and so he agreed to provide his thumbprint to them (to signal his consent to the project). He now says that if he had known that the system would be built as it has, he and his fellow villagers would not have agreed.

Farmer Livelihood Activities

My survey of 15 people shows that most of villagers plant rice and have some other activities such as cutting and transporting wood or bamboo, fishing for sale and for family consumption, selling labor, growing vegetables (home garden), vendor, raising animals, teacher, husking rice, veterinarian, producing white wine, and renting speakers. According to the village chief of Sinoa 100% of the villagers plant rice, 15% climb and harvest palm trees, and 50% fish.

Agriculture products

Villagers in this region practice different rice cultivation techniques, including long, middle, and short-term. Through the interviews I found that, among 30 sample farmers, 19 said that their rice yield had decreased this year (WS 2006) because there wasn't enough water in the scheme. Others said that, following land adjustment, some of their land is too hilly for the water to reach. The paddy fields of 15 farmers at the upper end of the main dike (outside the scheme) were flooded, causing complete or partial destruction of their crop. One farmer left some hilly land unplanted as the land was just received this year after the land adjustment and could not be prepared in time for cultivation. Two other people said the secondary drain (SD) next to their rice field is too deep, making the water run off and leak from their paddy into the SD.

In this wet season, some farmers lost almost 90 percent of their rice yield compared to the yield before the new irrigation system operation. For example, one farmer in Kley village said she has 2 ha of paddy field in the scheme, from which she used to get 1152 kg of rice before the system was constructed. After the irrigation system began operation, she only got about 48 kg because of the level of her paddy field and insufficient water supply. However, 6 farmers of the sample said that their rice yields increased this wet season, because they had enough water, and the land adjustment provided them with low land as well as some land next to the irrigation canals, where the water can easily reach. Five farmers said their rice yield showed no change this wet season as their paddy fields are in the same condition as they were before the project.

Adoption of agricultural techniques

In the first component implemented by (Gret/CEDAC), the Agriculture Research and Development (ARD) sub-component's main goal is to disseminate new agriculture techniques to farmers living in this area. These techniques include System of Rice Intensification (SRI), cash crop planting, animal husbandry, and composting.

My interview with 30 people showed that 14 farmers don't know about the techniques being demonstrated by the project, while 14 other farmers are aware of the SRI techniques, 11 farmers know of the animal raising techniques, and 2 farmers know of the composting techniques. Meanwhile, 27 farmers haven't practiced any of these techniques yet because they have no money, are busy with palm-tree climbing and transporting wood upstream, or are not clear about the techniques. Only 3 farmers said they used the techniques to practice SRI and make compost.

Even so, some farmers who have paddy fields in the S5B1 and S5B2 (DS experiment blocks) wish to practice SRI in the upcoming dry season (2007), because they are happy about the rice seed that will be provided with by the project after registration for the dry season cultivation. Meanwhile, 2 farmers said that they do not want to register, instead preferring to wait to see if there will be enough water. A farmer raised the question "Will the project compensate if there isn't enough water?." Because they had insufficient water last rainy season, he doesn't believe there will be enough this season.

Community and Social issues

Water logging in selected villages

The villages were flooded in the last wet season because the canals and dikes made by the scheme prevented the water from draining and there was no drain canal. The flood destroyed villagers' fruit trees. Animals had no place to sleep and also suffered wounds to their feet and the water from the well and from toilets mixed. The village suggested that the construction company build drain canals to release water in the rainy season, but the villagers still wait to see what will be done.



Flooding in the village
Source: Photo by
Mr. Try Thuon, research
fellow for M-Power

Land issues

According to Try et al. (2006), the issue was including land within the reservoir, which has completely flooded since the irrigation scheme started its operation in 2006. The affected include 11 villages whose lands are inside the reservoir and who are supposed to be compensated by the project. Snao, Kley and Trapaing Pring Villages are the most affected as they have more land within the reservoir. So far, despite promises, there has been no compensation paid to them by the project.

My interviews of 30 farmers from Khley and Snao villages show that 12 farmers lost their lands in the reservoir and haven't been fully compensated yet, having only received compensation for the loss of one growing season during the year of the

construction of the reservoir. They are still waiting for compensation for the loss of their lands.

A similar issue is that some farmers have paddies situated above the main dike, which were flooded. These farmers expect to be compensated as well, and they have already complained to the village chief and to the project (GRET/CEDAC). At the moment, they are still waiting for compensation.

Meanwhile, some farmers complained about losing fields for feeding their cattle as those fields were inundated in the reservoir as well as they could not bring their cattle to feed at the scheme, according to regulations of the farmer water user community. Because of these issues, while their villages were flooded in the last wet season, some farmers had to keep their cattle in other areas where there was enough food. Meanwhile, 2 farmers in Snoa reported that 3 or 4 of the villagers' cattle died from lack of food. A few farmers in the same village said at a group discussion that at the time of flooding their village took their cattle to feed on tree leaves in another area far away from the village. They left in the morning and returned in the late evening, making their cattle thin and weak, and also causing their cows to frequently fall down while walking.

Land reallocation issue

Land reallocation has remained one of the hot issues for the irrigation scheme. The first land allocation and division was started after the Khmer Rouge regime, during which most of the good land had been taken by the village chief and local authorities. As a result, most villagers have different plots in different places, which makes land reallocation a big concern for those farmers whose land is scattered. One of the goals of land reallocation is to group these split plots into single plots with good access to water (Try et al., 2006).

Regarding this, some farmers interviewed raised the point that there are conflicts between villagers over land adjustment. After the land adjustment, some farmers who previously had good land (low land) have instead received hilly land with some small trees, upon which they cannot plant rice without much more time to prepare and level their plot. As a result they do not agree with the land adjustment when they receive such hilly land. The issue is facilitated by the project staff of the Tertiary Block Unit (TBU), but if the TBU cannot solve the issue, the village chief's help will be needed. For example, a farmer in Kley village who says he once had good land says that after the land adjustment, he received hilly land. He agreed to accept it because there are some palm trees on the land instead, but the previous land owner

has demanded that those palm trees be cut. The new owner refused and this case was brought to the village chief, but has not yet been solved.

Other community concerns

The inappropriate plan of irrigated areas

The project has reduced irrigated areas from 7,000 ha to 3000 ha under the current plan, which includes 25 villages. In practice, one village has been cut off and the target-irrigated area by the scheme has been reduced to 2181-2289 ha. The project was expected to have 2900 (not 3,000) and 711 ha from Banteay Yumreach did not participate. Even with the current irrigated areas of 2181 ha, there were 282 ha of wet rice that did not have enough water. In some blocks water could not reach as the land is higher than normal level (Try et al, 2006).

The irrigation scheme is very technical

The new irrigation scheme stays very close to the original design. The geographical design has been kept and the main infrastructure components have been rehabilitated, most notably the main canals and the Stung Chinit weir (now called the spillway). This kind of irrigation scheme is exactly the type of scheme described in the irrigation theory textbooks. And for the users, there is an introduction of new practices of this irrigation scheme: taking turns at the rationed water supply, important maintenance work (such as on the canal embankment in sandy soil), the use of drainage, and more. The most important questions revolve around whether this design is adequately adapted to the local environment and to needs of the villagers.

Lahmeyer Company presented its design by examining experiences with this kind of scheme in Pakistan (Try et al., 2006). In my interviews, some farmers also argued that this design is suitable for a foreigner's land, but not for the land in their villages. Farmers also claim that the foreigners have been trained in their own countries, so they're not experts on the land here.

Farmer's opinions on technical aspects of the project

The secondary drains

The Secondary Drains (SD) are too deep compared to the level of the paddy fields. The paddy fields must be flooded lightly during each growing season to a depth

of up to 10 cm in order to facilitate the planting and growth of the rice. But in the SCIRIP project, with inadequate dikes surrounding the paddy fields, this needed water runs from the fields into the drain canals. The water seeps down into the ground, and then into the drain canals as the soil quality is poor and provides no barriers to block the water in the SD. If the water level in the canal was higher, that would prevent the water in the paddy fields from seeping out. Some farmers created barriers to make the level of water in the drain higher, to protect their fields from losing water. For these reasons, some paddy fields next to the SD are almost fruitless.

Flume size

The flumes (the gates that allow the water to flow from the Secondary Canals to Tertiary Canals) are much too small at just 80 cm in diameter. Although during this past dry season, some of the flumes were repaired by SCIRIP's construction crews and enlarged up to 100 cm, farmers still do not expect that the flumes will provide enough water to adequately irrigate their paddy fields.

Some farmers note that the builders didn't make the flumes larger because they were afraid of future erosion of the canal. This has made people compare the current canals to those built by the Pol Pot regime, noting incredulously that "The old canals were built with simple equipment but are reliable and strong and now the new canals, built by machines, are of poor quality?" Another farmer claims that, "The project administrators are more afraid of damaging the canal than of damaging the farmer's rice."

Inadequate Pipes

The pipes that carry water from the tertiary canal (TC) to the quaternary canal are too small, so that not enough water flows into the paddy fields. Farmers have suggested that the pipes should be encased in concrete. Otherwise, erosion of the dikes could cause the pipes to wash away.



The pipes that carry water from the TC to the rice fields

Oxcart Paths

Some farmers complained that the oxcart paths caused difficulty in the last rainy season and are now still not smooth. Farmers blame construction that did not put the red soil on the oxcart paths as shown in the project design.

However after harvesting of the WS rice, the construction crews renovated the oxcart paths. One farmer in Snoa who is known as village representative said that the paths cannot be used for long because the dirt used to build the paths was of poor quality and was not adequately compacted. This ensures that in wet weather and with substantial use, the paths disintegrate.



The ox cart path situation before (L) and after (R) one season of operation showing severe rainy season damage.

Few Bridges

Farmers complain that there are too few bridges crossing the SC and SD. This requires much more time for farmers to go from place to place, particularly to their rice field. Farmers said that as they have faced these issues, they have complained to the project implementers, but the implementers have not addressed their complaints.

Farmers' participation in the project

The original project plan required participation from local farmers to make the QC, QD, rice paddy bunds. We will explore the farmers' attitudes towards participation. The interview of the 30 sample farmers showed that 26 farmers have participated in digging (QC, QD) and making rice paddy bunds, 4 farmers have participated in caring for the canal system, 2 farmers have participated in extension meetings, and 3 farmers have participated in learning the agriculture technique and practices.

Opinion of farmers about organizing the water user community

Farmer Water User Communities (FWUC)

The development of FWUC started in 2001 with various activities and consultation with stakeholders. This process took until May 30, 2006 to get official recognition from MOWRAM. The FWUC committee sent this Prakas (declaration) to 3 commune councils and 24 village chiefs. This Prakas was displayed on an information board inside each village along with concerns.

The FWUC committee of Stung Chinit irrigation system is made up of 5 chiefs of the FWUGs and was established in June 2005. Each FWUG is comprised of landowners using water from the same secondary canal. Each FWUG is led by the FWUG Committee, composed of one chief elected by all members of the FWUG committee, and three assistants. Village representatives are elected by villagers in each village (24 villages) and are responsible to participate in meetings with the FWUC and disseminate information to villagers, and report problems in the community to the FWUC. Block representatives are hired by the FWUC to monitor irrigation operations and observe the condition of the canal systems in each block. These representatives must report any problems with operation or the state of the canals to the FWUC.

In my interviews, half of farmers said that the FWUC is organized in order to control the canal, and open and close the water gates. One farmer said that the FWUC's purpose is to support the project and do extension work, while another said it is to provide solidarity for the maintenance of the canal system. The rest said that they don't know clearly. Taken together, these results show that the farmers still don't clearly understand the advantages of organizing and the role of FWUC.

The FWUC has internal regulations, which cover livestock management, fishing, and the Irrigation Service Fee (ISF). Under the FWUC regulation, farmers who own cattle are fined if their cattle damage the canals. Currently, the village facilitator from the farmer water user community organization (FWUCO) comes to every village to distribute leaflets with the relevant information to these farmers. A fine of 5,000 riel is levied for each cow in violation of the regulation.

21 farmers in our interviews said that they agree with the FWUC regulation on cow management because they think this is a necessary component of maintaining the canal. Even so they still worry that they will be unable to comply, because their herding practice is to set their cows free to graze along the canal – a practice which, prior to the SCIRIP redevelopment, was not forbidden due to lack of management. Some farmers are concerned about their calves, which have not yet been yoked and are difficult to restrict to smaller grazing areas. One farmer raised a concern that in case of rainstorms, often accompanied by thunder and lightning, villagers will find it very difficult and potentially dangerous to walk the longer distances to the bridges rather than just walking across the canal.

Regarding the Irrigation Service Fee (ISF), all farmers interviewed said they are willing to pay, provided that enough water will be available and the fees reasonable. Farmers don't know the cost of the ISF yet.

Environment and ecology concerns

The main environment concerns regarding SCIRIP are the potential impact of restored weirs on migratory fish, and the impact of the use of pesticide and fertilizers in the project areas. In addition, the logging and mining activities in the upstream watershed, if continued, pose threats to the whole river system.

The threat from upstream activities

The recent paper by Try et al. (2006) shows that forest cutting has remained a major environmental concern since the 1990s, particularly with the current trend of private companies resuming logging. The vegetation cover is changing as more and more forest is being cleared, altering the watershed's normal rates of water evaporation, run-off and storage, thus influencing the river's flow and the water available for irrigation. In general, these trends result in increased total run-off and reduced retention, which translates to a more pronounced dry season.

The study also reveals that the upstream used to be under a heavy logging concession and local people both from Baray and Santuk district used to be involved with these activities since the 1990s. Now, most villagers are still involved with cutting forest for fuel wood and other purposes and they also have their shifting farms within the upstream area as well.

The second concern is the restarting of the gold mining. Upstream excavation and gold extraction activities, the associated use of chemicals (cyanide and/or mercury), and construction of tracks, will influence the hydrological system and other aspects of the ecology of the catchments. In turn, this may have considerable negative impact on the profitability of the irrigation scheme and the health of local fishing activities.

Fisheries related issues

The other concern is the direct impact of the scheme itself on fisheries-related activities, fish populations, and fish migration both downstream and upstream. The construction of the fish pass remains one of the open questions, as its effectiveness in allowing fish migration is unproven. Success in this area is essential to the sound management of fisheries within the reservoirs and at the irrigated areas. (Try et al., 2006).

Before the construction of the fish pass started, there was a study on fish species diversity collected at the Stung Chinit and Tang Krasage Rivers, which was conducted from July 2003 to January 2004. The study was done through fishermen, local markets, and fishing lots. The study identified 79 species. This sampled diversity was unusually low, as the study's authors expected to find around 90 species within and migrating through the reservoirs (Try et al., 2006).

However, the result from similar studies conducted by the fish pass official at the fish pass during its operation from September 2006 to December 2006 discovered

only 53 fish species found migrating from downstream to upstream. All told, this represents a significant potential decline in fish biodiversity at the scheme site. During December, the fishing activities at the spillway declined in terms of fishers, fish species, and the quantity of the catch. The fish that were caught through the fish pass were also less with about 20kg/day as the level of water downstream was low and the flow through the pass from upstream much stronger than usual, making it difficult for fish to migrate up through the pass.

According to my interviews with 30 farmers, all of them said that the numbers of fish increased this year because there was enough water storage in the reservoirs, and fish were thus able to use this for their habitats in both the dry and wet season. Some people also said that fish numbers grew because fish could not migrate upstream, except for those which were able to migrate through the fish pass, resulting in rich fish populations in the downstream areas of the weir, while the upstream of the weir also saw dense fish populations because some species could not migrate downstream. Before the current weir existed, fishers could catch about 3.5 kg/day on average, compared to 5.5 kg/day since the project operations began. All farmers also said that fish were cheaper in 2006 than the previous year, before the project began.

One farmer in Kley Village said that this year's large fish populations attracted some people from other villages to fish near the reservoir. Another farmer in Sinoa said her family plans to make more *lob* (fishing gear). However another fisherman in Kley said that even though the fish catch has increased, the duration of catching more fish seems unreliable and the majority of the new catch are small fish. Some fishers said that they have had to change their fishing gear because the level of water at the upstream is higher than before because of the weir.

Some farmers also expressed concerns about some of the fishing gear which is being used within the reservoirs since the irrigation scheme began operation, especially electro-fishing gear used at night. Most of the big fish are caught within the reservoir, as they could not migrate downstream through the spillway. The fish pass does not allow the fish to migrate downstream, as it was made for upstream migration only. To deal with this issue, the fishery community will be established in each village in order to prevent illegal fishing and enforce community regulations for fishing.

Conclusion and recommendations

The current irrigation scheme hasn't provided adequate water as reliably as the previous irrigation scheme built during the Pol Pot years, during which rice yields were good due to irrigation effectiveness and strict management. The previous irrigation system had provided enough water and when more water was needed, managers could just open the water gate at the main canal and fill the rice fields in the scheme in just one day. The water management and regulation was so simple and easier for local farmers, who said "if we have enough water we can close the gate." Moreover the quality of those older canals, built by simple equipment, is better than that of the current canals, built by machines. The current irrigation scheme looks nice with its many parallel canals and roads. It dispenses water automatically to the rice fields, and can also be controlled from each gate (as well in the case of flood and saves a lot of water). However, it seems to be an awkward and inefficient system, because it needs extensive time to irrigate the fields and requires lots of labor and money for monitoring and maintenance.

The project is intended to increase agriculture productivity and farmer incomes by providing irrigation and drainage, and improving rural roads and markets in and around the project areas. However, its potential has reduced the irrigated areas from 7000 ha to 3000 ha with the current 25-village plan. In practice, one village has been cut off and the target irrigated area by the scheme has been reduced to 2181-2289 ha and in the first operation, there was 282 ha of wet rice did not have enough water. Water could not reach some blocks, as the land is now higher than the normal level.

An important aspect of the project is to introduce farmers to innovative ecologically-friendly agriculture techniques such as the System of Rice Intensification (SRI), raising animals, growing vegetables, composting and more. It looks like many people don't yet clearly understand each technique and also many people haven't adapted those techniques yet, so people still practice traditional techniques. Thus, increasing the rice yield product will occur and also reductions in expense of using chemical fertilizer might be the same as it was previously, so farmers might not experience any monetary savings, which will ultimately affect the environment -- the main concern of the project.

The farmers are still not certain about some aspects the project as they face many problems such as flooding in the village, flooded paddy fields outside of the scheme, a shortage of water in the irrigation scheme and some other problems related to the new technique. The paths in the scheme are still not very convenient for farmers due to their locations, while oxcart paths are not very easy to use due to their poor quality. One more issue is that there are not enough bridges crossing the canal,

causing farmers difficulty in traveling from place to place. Additionally, compensation for land lost in the reservoir and for the flooded paddy fields has not been granted on time. Despite the villagers' complaints about all these issues, there has not been much response.

The factors that have negatively affected the project implementation include: (1) the lack of participation from the local farmers to build the 4th canal (QC & QD) and maintain the canals, (2) the techniques and quality of construction and (3) the management capacity of the local people. The project design demands participation from local farmers, in particular, building and maintaining the QC and QD, but a lot of farmers have not yet participated strongly because they still follow their old habits and methods for planting rice, cutting wood, transporting wood from other areas (upstream) to sell in their village and at the local market or other money-making work. Some farmers make money to fund their rice cultivation and many of them just let rice grow and only wait for the harvest time.

There are significant social and environmental issues at the SCIRIP. If some of the local farmers derive most of their income from cutting wood upstream, they may not take good care of their paddy fields. Deforestation will also damage the water resources of the Chinit River by worsening soil erosion and accelerating rainwater runoff. In addition, the spillway wall, which divides the river into downstream and upstream sections, does not permit fish to migrate easily. This is likely to become a big issue in the future as well.

Attitude of local people

A MOWRAM official claimed that the reason that the fields have insufficient water in the scheme is that the people haven't constructed TC or the rice paddy bunds, thus preventing water reaching the hilly land and in turn flushing all the water into the drainage canals. He blames farmers for being lazy in this work and says that they only waited for the construction workers to complete the work. According to the official, if the farmers had finished the quaternary canals, they would have enough water. He also blames the Gret/CEDAC staff who he says disseminated project information urging people to make the canals and rice field bunds, and level farmers' land, but did not usually go to observe the scheme, thus serving mainly as a forum for villagers' complaints. Even so, he claims that there were also mistakes in the construction that could not be avoided. The official says that farmer's requests, if compatible with the general project design and available technology, will be accommodated. However, some requests, such as a barrier being constructed in the drain canal, are not suitable given the design constraints. Even some reasonable requests may be denied due to budgetary limitations, the official said.

When people were asked why they did not participate in the construction, local farmers said that it was because the land adjustment was delayed until cultivation time, leaving them without enough time to complete construction and still tend to their crops. Farmers also claimed that even after rice paddy bunds and QC had been completed, the water in the scheme would still be insufficient due to the weak water flow and low level in the tertiary canal.

In contrast, some farmers still said that others who didn't contribute to the scheme were otherwise occupied with making money for rice cultivation. Still more attributed the low participation to the simple laziness of farmers.

The Tertiary Block Unit (TBU) staff, who are responsible for the land adjustment program and distribute land titles, responded that farmers had no time to make QC, QD and rice paddy bunds because of the delay of land adjustment. Though this is true, farmers share some responsibility, as some of them did not participate in measuring their land for the land adjustment. Still other farmers did not agree with the land adjustment, as they lost their good land in exchange for hilly land. The facilitators need more time to resolve this problem. Another difficulty with the TBU is that some absentee land-owning families have not promptly participated in the project, forcing the Unit to wait for them. In some of these cases, the village will have to decide the apportionment of land, instead of the land owners.

According to village representatives of FWUCO, the reason that the farmers did not participate in making QC, QD or rice paddy bunds is because (1) They are used to practicing rice cultivation without QC, (2) the constructor destroyed their old rice bunds, making them disappointed, (3) they saw the bad impact to other rice fields when the incomplete irrigation system did not provide enough water during construction and (4) the farmers believe that they will not have enough water and remain disappointed. An experiment did show that when the rice bunds were made, the water could reach some of the hilly land.

Recommendations

The Stung Chinit Irrigation and Rural Infrastructure Project (SCIRIP), despite the \$23.8 million USD spent to build it, hasn't yet provided the benefits initially expected. This is due to many factors, which will be briefly listed here along with recommendations, both for this project and for others of its type.

The majority of local people are not satisfied with the project because the scheme was not built as expected, and because the project administrators disregarded their request to have the new irrigation system follow a design similar to the previous

system built during the Pol Pot regime. Many ideas raised by the local people were not considered, and those omissions caused problems while the project was being constructed. Even after problems occurred, other suggestions from local farmers were not followed due to budgetary and design constraints. Here, I recommend that all local people should be encouraged to participate during the project design period and should help supervise construction. The project should be officially selected to give them a role in supervision of the project construction. I believe that if farmers had been able to participate fully in the project design, the project would have been more effective than it has been, because it could blend modern technology with the farmers' strong familiarity with the local ecological context. In addition, if the farmers had really participated, perhaps there would have been higher satisfaction and fewer complaints, even in the event of problems, because participation would have fostered a strong sense of community ownership of the project.

When there are suggestions from local farmers, these should be considered and quickly responded to, because it is the farmers who receive the most direct benefits and bear many of the costs of the project. They are also responsible for operation and maintenance of portions of the scheme by themselves, so if the farmers receive more support in order to make their participation more convenient for them, the farmers satisfaction with the project should improve, making them more willing to participate in taking care of this common scheme. Otherwise, farmers will not think of the project as common property. My recommendation is that all reasonable requests from the community should be responded to and carried out in a (sufficient) time frame.

One goal of the project is that farmers will increase their agricultural production through natural means and thereby reduce the impact of chemical pesticides and fertilizers. However, we have seen that many farmers still do not clearly understand the new agricultural techniques offered, while others are not interested, and consequently they have not adopted the techniques yet. This failure threatens the goal of the project both economically and environmentally. I recommend that information on the new agriculture techniques *should be more widely disseminated and farmers more consistently encouraged to adopt the new techniques*. This has been one of the cornerstones of the project, and should be continued and strengthened in order to persuade farmers of the value of the new techniques being offered.

The project has caused many collateral problems such as inundated rice fields within the reservoir, making it impossible for some farmers to harvest at all. In addition, there are periodically flooded fields outside the scheme, and insufficient water within the scheme, causing daily difficulty for many farmers. These farmers

now worry about their livelihoods and food security in the coming years, and their only hope is to receive appropriate compensation from the project as soon as possible. I recommend that the project move quickly to compensate farmers negatively affected by the project, according to careful assessments of their losses.

One more recommendation is that *farmers should have improved access to information*, such as the data on funding sources and parties involved in implementing the project. In the event of problems, this will enable farmers to find the relevant actor to seek solutions, and so that the response should be directed to the ear of the farmers. Farmers I met are looking for someone who can respond to their requests, but after complaining to all levels of the government authority, nothing has changed. Farmers are now thinking of approaching the prime minister, who they think can help them with this issue.

Additionally, NGOs should get to know this issue better and help farmers by offering advice. These organizations have accumulated knowledge through their experiences with farmers in other countries who have had similar problems. This expertise would be very valuable for Cambodian issues like the SCIRIP.

I would like to give some recommendations to the local people as well, since development activities need input and participation from all stakeholders, in order to ensure meaningful and sustainable development. Here we have seen that some farmers did not participate during the land adjustment, causing some of the activities of the project to run over their allotted time. Many farmers did not participate in making quaternary canals, quaternary drainage, and rice paddy bunds - one major reason why there was insufficient water in the scheme. I recommend all farmers should make a commitment to meet all reasonable participation requirements, especially regarding making QCs, QDs and rice paddy bunds.

Another recommendation to farmers is that farmers carefully observe every step of the project and all the activities of the Farmer Water User Community. This would be extremely helpful for making project implementation more efficient and more effective, since farmers could recognize and help resolve potential mistakes before they happen. Farmers should also learn about the activities of the FWUC because farmers themselves are the members of the FWUC, which must work to increase the understanding of every stakeholder in the community.

Another recommendation for farmers is that they should pay more attention to the new agricultural techniques offered by the project, because this is an important way that people can save money and increase their agricultural productivity. If the people themselves do not think about this, and instead just follow their habits, their

standard of living may not improve as much as farmers wish, frustrating one of the key goals of the project. Farmers should also diversify their agricultural activities outside planting rice, such as by planting cash crops or beginning animal husbandry. They *should not cut wood upstream for sale*, because this will damage the water resources of the Stung Chinit River in the future.

I also recommend that *farmers should participate in taking care of their own paddy field and the irrigation systems in the scheme*, because in the future farmers themselves will have to maintain the system. This is important because if serious damage occurs as a result of inconsistent maintenance, the community will have to pay a lot of money for repairs - money which will come from the Water Service Fees (WSF) paid by the farmers.

The SCIRIP project is now nearly completed, with most planned segments fully constructed. All that remains to be done under the original design is some renovation and maintenance work on particular aspects of the scheme, such as the flumes and eroded portions of the canals and oxcart paths. In addition, new drainage canals may be built to drain water from the village and from the paddy fields outside the scheme, hopefully preventing severe flooding in the next rainy season. Additional work related to farmers' suggestions, such as building more bridges and barriers to block water overflow in the secondary drains, may not happen.

In my opinion, the project design looks good, though with some significant mistakes such as the lack of bigger bridges across the canals and the poor quality of the oxcart paths and canal embankments. More important, there are serious technical deficiencies in the SD that have caused droughts in some paddy fields, while inadequate drainage elsewhere has caused flooding in the village and the upper paddy fields outside the scheme.

I expect that next year, after some more renovation work, the situation will improve. The farmers' main demands are for more bridges and a barrier to prevent premature drainage from their fields. If these demands are satisfied, many local farmers' opinions will dramatically improve. Moreover, if the farmers take responsibility for building the QC, QD and rice paddy bunds, taking care of the canal system, and learning and practicing the new agricultural techniques, the project's goals will be achieved. If some of these key demands are not met, many farmers will remain unhappy, and their participation will remain half-hearted at best, hampering the maintenance and effectiveness of the system.

Social and Environmental Impacts from the Song Bung 4 Hydropower Project

By Ly Quoc Dang

Ly Quoc Dang is from an ethnic Khmer community in Soc Trang, Vietnam, where he single-handedly set up an environmental awareness project centered around the town's unique bat pagoda. He is currently assisting indigenous communities affected by the ADB's Song Bung 4 dam project to advocate for access to information and participation in planning processes.

Introduction

As Vietnam moves ever closer to its goal of becoming a middle-income rather than a low-income country, its electricity demand is forecasted to increase by 16 percent per year by 2010 and some 11 percent a year between 2011-2015.¹ As a result, plans are underway to build plants to generate electricity and support the country's economy.

On the hydropower front, the Government of Vietnam is developing two large plants (Son La and Nam Nhan) on the Da River, in addition to the current facility at Hoa Binh. Besides these large projects, the main focus is on medium-sized projects (typically 100-350 MW each). About 30 new medium-sized projects are under construction or are planned to enter construction over the next decade, providing a total of about 6,000 MW. The parallel impact of the hydropower projects is the

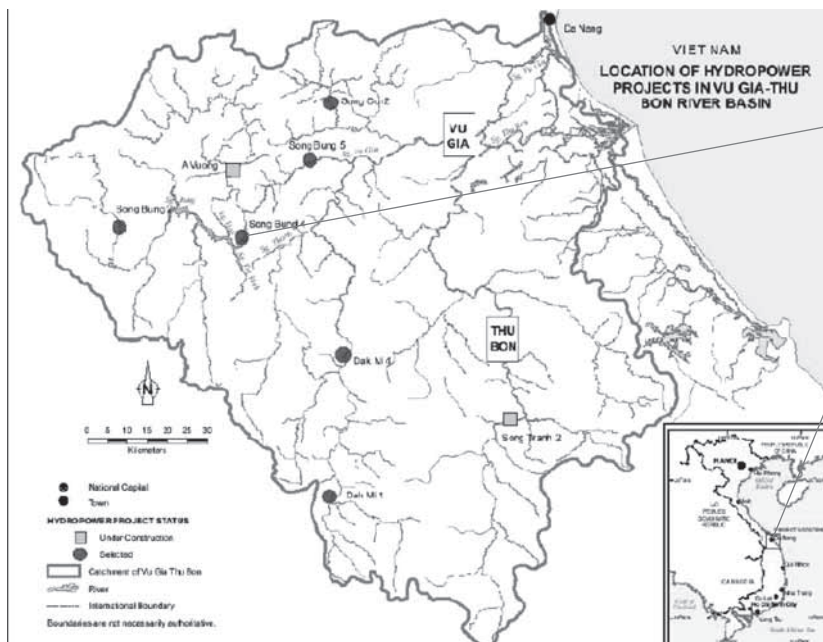
¹ P Taylor, Robert. Project Information Project Concept Stage. Read more at <http://estsearch.worldbank.org/servlet/Sitesearchservlet?q=Trung%20Song%20hydropower%20project%20>

displacement of local people and negative effects on the environment. Many people will lose land, livelihoods, and the environment in which they live and culture.

Vu Gia – Thu Bon Basin in Quang Nam province, is home to many hydropower projects and dams. One dam is just upstream from the next. There are so many that it was as if they built a stairway of dams. As a result, it has had a strong effect on communities and the environment of the region. Most of the locals are from poverty-stricken communities and ethnic groups.

Quang Nam is a province in central Vietnam. The terrain is mountainous and the rivers and streams are short but steep. This terrain is advantageous for building hydropower projects using stairway dams. These advantageous characteristics for medium and small hydropower projects are suitable for the fishbone form of hydropower projects, which share electricity nationally and locally.

The Bung River is a tributary of the Vu Gia River, upstream in Lao PDR and downstream in Thanh My town, Nam Giang district. From there it flows to meet Giang River and Giang River flows to meet Vu Gia River. Along the Bung River there are a proposed 6 small and medium dam projects, including, from upstream to downstream, Song Bung 2, Song Bung 3, Song Bung 3A, Song Bung 4, Song Bung 4A, and Song Bung 5 dams.



This basin has eight medium and small hydropower projects with a capacity of 1.154 MW 2.

Song Bung 4 Dam

The Song Bung 4 dam project is to be built on the Bung River, a tributary of the Giang River, which is a tributary of the Vu Gia River in Nam Giang district, Quang Nam province, in Central Vietnam (ref. figure 1.1). The project consists of a dam and a reservoir, and a 156 MW hydropower plant² and was funded by the Asia Development Bank (ADB) with a total project cost estimated at US \$254 million. The dam (120 meter (m) high, 360 m long and 340 m wide) will create a reservoir with a storage capacity of 621 million cubic meters and a surface area of 18.4 square kilometers (km²). The project started in 2008 and will be completed in October 2012².

The project is expected to uproot more than 200 families, belonging mostly to the Ka Tu ethnic minority group, from four (4) villages along Bung River in Zouil commune, consisting of Pa Rum A, Pa Rum B, Pa Dhi and Thon 2 village. Most of these villages also lost their farmland. The dam is being built in the name of national development and Quang Nam province electricity use in the future. The electricity generated from hydropower will add to the national electricity grid.

Local villagers are engaged in agriculture and they depend most heavily on their own home grown food, their farmland and their tools for building their houses. They use the water from the river, streams and springs.

The project will affect the communities because the villagers will be moved to a new location which is physically unsafe for them, where they cannot easily find food, which lacks in resources and which will make their lives more difficult.

Through this research and report I want to know the villagers' awareness level about the project, as well as their thoughts and opinions about the project. Also, I want to see what disadvantages come to them if they are displaced.

Research results

The purpose of this research project was to make a rapid assessment of how the ADB and its partners undertake the involuntary resettlement of indigenous people and whether safeguard policies were followed. Furthermore, it aims to understand the thoughts, opinions and awareness that villagers have in regard to the project,

² Information provide in a confidential document given to the author on August 26th, 2008 in Chiang Mai/via e-mail. Notes on Song Bung 4 hydropower project in Vietnam published June 24th, 2008.

as well as inform them of the potential disadvantages of being moved to a new location. Environmental impacts will be looked at as well.

The author discussed and talked with villagers in Pa Rum B Village, Zuoih Commune where the villagers will be displaced by the Song Bung 4 hydropower project, and the accompanying resettlement and compensation plan. The author also learned about the villagers' life via staying and working together with them, as well as visiting their farmlands, forests, rivers and streams.

Affected community

The Zuoih commune is the main community that will be affected by the Song Bung 4 dam project. The commune is classified as among the poorest communes to be supported by the national poverty reduction program or "Program 135." Pa Rum B village has 56 families with 256 individuals, including 55 families from the Ka Tu ethnic group, and one family of Kinh. The population includes 79 women, 101 men and 76 children (younger than 12 years old).

From my observation, local people make their living from growing up-land rice, slope-farm crops, the raising of cattle, pigs and chickens, sifting for gold, hunting animals in the forest, fishing, as well as some work for a road construction company. The villagers live in houses built in a circular formation with the *Guol house* -- a community house -- in the village center. The Guol house is used for entertainment, village activities, meetings and holiday ceremonies. The village is located in a small valley on flat terrain, surrounded by hills and mountains. The villagers are dependant on their forest for non-timber forest products to complement their income. They collect and save timber for building houses and cooking food. The villagers use rattan to make baskets for everyday usage on the farm.

The villagers live near the river and stream, making it easier for them to use the water for their daily life activities. Their houses are on flat terrain from where they can grow some crops, plants as well as raise some animals in close proximity. Their lives depend on the land, the river, the streams, the forests and farmland.

Pa Rum B has a primary school, a commune medical center, and a nursery school. All of the students study at the primary school together from the six villages in Zuoih commune. Most students stay in hostels when studying, and then return home on the weekends.

Once the dam is complete the villagers land will be submerged by the reservoir including their houses and farmland. The four most agriculturally productive villages will be resettled to new lands, which are a long and difficult four hours by walking away.

Affected Environment

Water

The villagers use the river from which water is used for washing, cleaning, bathing, cooking, drinking, and also for creating low capacity electricity. They also use river water for watering the irrigation. The villagers collect water from the river in bottles, sometimes spending the entire morning and afternoon retrieving it. At the school water is brought down from the mountains by a pipeline. Some families and all of the teachers use it.

Plants and crops

On the farmland, local people grow certain crops for eating all year, such as sesame, manioc, bananas, sugar-cane, maize, pumpkins, amaranths, papaw trees, pineapples and rice. They also grow some trees for fruits and wood, such as mangoes, star apples, custard – apples, guavas, Ta Vat (local tree), jackfruits and lat trees. Some food is gathered from the forests and used for eating, or preserved and used during another season, such as mushrooms, bamboo shoots, grasses for cows, rattan for making baskets and bridges, and also bamboo used in the making of bridges and houses. Villagers' houses are built out of wood, and leaves from forests, thus the trees in the forests are important resources to them. They gather enough wood from the forests once or twice a year for burning and cooking all year long.

Some families do not have enough food to last them all year, so they cook rice with corn and manioc. Their meals are poor nutritionally and they use produce that they grew and stored throughout year. Occasionally they buy food from shops, but only very small amounts as they have little money and few means of accessing it.

Animals and fish

Some families raise pigs, cows, chickens and goats. The government gives them loans so that they can feed the animals. Also, some families catch fish from the river and use it in meals. One woman said:

“My husband caught four to five kilograms of fish from the river and we sold it to the villagers.”

The situation of fish in the river and streams is presently not good due to mining companies in search of gold. Run-off from these mines enters the river and kills the fish. One man said:

“Dirty water goes into the river and kills the fish. I can’t catch anything.”

Comparing Involuntary Resettlement Policies

1) Avoid involuntary resettlement

The policy of villager resettlement is supposed to consider the safety and well-being of villagers, with primary concern going into minimum negative impacts on their lives. However, the resettlement site is not a good location for them due, among other reasons, to a shortage of food. The villagers said,

“There are no big or tall trees; most of them are small and short. That land was lived on by people already and they moved to another place because they had no food to eat, no things to use.”

Most of the villagers do not like the new location, but the project representatives continue to build houses for them and do not listen to villagers’ complaints.

“The villagers will not move there, they will move again to a place that has resources, water, river, and a spring, trees to use it for eating. We will move to Pa Pang village or Cong Don Village and build houses by ourselves. We will move there together. There are no animals or anything because villagers from Pa Rum A caught them all and used them up.” - man from the village.

2) Resettlement plans should be developed in consultation with affected people

It is true that the area where villagers live will affect them very much. The new relocation site is not suitable for growing vegetables, trees or rice.

“There is not enough water, no flat land and too much of a slope.”

Another woman said,

“I do not want to move to the new location. Here is a good place. I have lived here for over 10 years and the land grows everything well and we can find anything.”

They can grow anything in this area and they expressed satisfaction with their lives. The project cannot find a more suitable location for them than where they already live. If we compare between this area and that area, one villager said,

“The conditions here are better than there. I like staying here because it’s easier here, having a lot of trees, crops and is near the river.”

3) Affected people should be fully informed

Some villagers do not know the project in the village. When I talked with them and discussed with them, I found they did not know anything. They were very surprised that they would be moved as a result of the project and they did not like hearing that. One villager said, “I did not know that they will have hydropower here.”

If some villagers were aware of the project, they did not know when they would be moved to the new location. Each villager came up with a different time for the relocation. This is not good because it means that they cannot prepare for the move at the appropriate time. Several villagers said,

“I do not know when we are moving to a new location.”

4) Affected communities must be as least as well off economically and socially after the project as they were prior to the project

Representatives from the project talked to villagers about the effects on the environment, as well as economic and social issues that may occur when the project begins. However, the only help the villagers will receive is in relocating to the new village. The project only helps them in the short term with rice, though it should provide help in the long term. One villager said:

“The project is not conducted for villagers. I did not know that. The project is supposed to provide compensation support for three years, but like A Vuong hydropower, it only lasts for one year.”

The project helps villagers by providing a little food to eat, though it is not enough for them. One villager said:

“We get support in the form of 25 kilograms per eight people per month, one oil liter per eight people per month, one liter of fish sauce per eight people per month.”

The allotted amount is very little rice as well as everything else to eat in a month’s time. Twenty-five kilograms per eight people per month, that means 3.125 kilograms per person per month, that is very sure to be insufficient for the villagers.

Some villagers think that the project will support them for three years, or for as long as they require it. But most of them do not believe that because of what they have seen in A Vuong dam project.

Comparing Indigenous Peoples Policies

1) Initiatives should be conceived, planned and implemented, to the maximum extent possible, with the informed consent of affected communities

Up to now, the project still has not been conceived, planned or implemented with the consent of the villagers. The villagers do not like the house style in A Vuong resettlement, so they want to have some styles that they choose themselves. One villager said:

“The project planned to build the houses from concrete. The kitchen is supposed to be 5 meters and the bathroom five to ten meters from the house. These plans are in writing, but they have not been executed.”

Villagers want to choose their own house styles, but the project does not present suitable styles to them; they do not want to stay in houses made from concrete, or houses on stilts.

The project proceeds slowly and does not inform villagers of upcoming developments. They are worried about the time to move so that they can prepare things before hand. One villager said,

“Until now they do not know when they can move to the new location because the hydropower project is being executed slowly.”

Villagers' compensation

Compensation for trees

Right now the villagers still do not know the amount of compensation for trees, plants and vegetables on their farmland. They have lived here a long time and also they have grown a lot of things here; they collect things for eating every day. One villager said:

“I do not know about compensation of crops and trees.”

The villagers became worried about their crops and gardens when they visited A Vuong Dam. Although the project promised compensation for crops and gardens, the villagers still did not receive anything from the project. One villager said,

“In the A Vuong Dam site they did not compensate us for crops and gardens.”

There is a lack of clarity between the villagers and the project. The project must give them notice and tell them of plans, as well as how much for compensation so that the villagers can feel secure.

Compensation for houses

House compensation causes a lot of conflict and arguments between villagers and the project staff. In fact, they do not like the houses that the project will build for them. The houses are not like traditional Ka Tu houses. The houses are made by Kinh people and they do not know enough about Ka Tu culture to build them correctly. One villager said:

“The project staff will build our houses out of concrete and raised up on stilts, but we do not like our houses like this.”

In the past, their houses were on stilts, but now they prefer their houses to be built on the ground because it is safer and more convenient. One villager said:

“In traditional Ka Tu culture houses were built on stilts, but nowadays the villagers prefer their houses to be on the ground because they think the houses on stilts are dirty, dangerous for children and men when they are drunk.”

Villagers like to live in houses made from wood but the project still does not accede to the villagers' requests. They want to build the houses by themselves in order to design them the way they want and use the tools that they are accustomed to. But the project staff still does not agree. One villager said:

“Our houses are made with wood tools and materials the way we like them. We want to use those tools to build our houses, but the project staff does not agree with that.” And “Some families have received 70 million VND in compensation to relocate their old wood houses to the new site but the project staff does not allow it to happen.”

When the villagers talked with the project staff about money to build their houses, villagers told them that when they get the money they will build the new houses themselves, but the project staff does not agree. Ka Tu style houses have the main house located far from the kitchen, bedroom, as well as living room and bathroom. But the project builds everything very near by. When talking about money to build houses, one villager said:

“The compensation money for villagers is unreal. They will allow us 70 million VND in compensation money, but I think they use less than that. It only takes about 20 million VND to build a good house, but they use expensive concrete which we do not like.”

Their current houses are quite big and include a kitchen, bathroom, living room and bedroom as well as a court and a garden around the houses. But the project will build small houses that will severely reduce the space for activities. One villager complained:

“Compensation is 70 million VND per house and they will build the houses for the villagers, with each family getting 24 square meters.”

Land compensation

The project will give compensation to the villagers for the land the house is built on and the farmland, as well. Each family will receive 24 square meters, but most of the families have more than 5 people and their houses are much larger than the 24 square meters being offered by the project.

Each family in the village has a large piece of farmland that they use for growing trees, vegetables, plants and rice. Now there is not enough food to eat, so they still

use their farmland for agriculture. The project however compensates them with less than their current level of farmland. One villager said:

“Each house get 0.2 hectares per family for farmland.”

Villagers’ current houses are built on flat terrain and they are very happy to live there. But the new location is not good and on sloping terrain. It is very difficult to move as well as have daily activities. One villager said:

“There is not enough water, no flat land and it slopes.”

Nearby the new location there is some flat terrain but the project staff does not want to build in that area, as they think it will affect the project.

Examples from Another Resettlement Site

The villagers have seen the A Vuong Dam, which was built on the Bung and A Vuong Rivers in Dong Giang and Tay Giang district, Quang Nam province, Vietnam.

Right now the A Vuong Dam produces electricity but the project still has not compensated the villagers. When the villagers from Pa Rum B visited there they heard that:

“A Vuong hydropower project has electricity but they still do not pay compensation money to the villagers.”

The villagers in Song Bung 4 project site have since become worried.

Regarding the new houses in A Vuong hydropower compensation project, the villagers cannot stay because the houses fell apart and were not built according to Ka Tu culture. One villager said:

“A Vuong Dam project is still not finished but villagers’ house break down, the kitchen is nearby the bathroom and this is not acceptable in Ka Tu culture. Moreover, the villagers in A Vuong are not satisfied with compensation from the project.”

Most of the houses in the A Vuong resettlement site were built on the side of a hill. Most of the villagers do not want to live on that kind of terrain. One villager said:

“Some houses in A Vuong broke down. The houses are on a hill, not flat terrain.”

Also the villagers in Song Bung 4 project care about the compensation package and want to know about it. One villager said:

“I visited A Vuong resettlement by myself because I wanted to know how to the compensation worked out for the villagers?”

In the case of the A Vuong hydropower project, project staff told villagers that compensation would last for three years, but the truth was the project only compensated for one year. As a result, the villagers in Song Bung 4 project area are worried that they will face the same problem. They want the project support for three years but the project is likely to only support them for one year. That is not enough to time help them get established in their new location.

Currently, the villagers in A Vuong Dam resettlement site must move again to a new location because the reservoir is higher than expected and is reaching their houses. One villager said:

“In A Vuong resettlement site people are preparing to move to a new location again because the water is higher than originally thought and will be reaching the villagers’ houses”

CONCLUSIONS

This report was researched in Zuoil commune where I talked and discussed the situation with villagers. The villagers in Zuoil commune were disadvantaged a lot from the project but they were not made aware of any details. It is crucial that villagers affected by the project have complete access to relevant information, and that they are well compensated for their losses.

During these interviews I found that villagers were severely lacking in information regarding the project. Furthermore, project staff ignored villagers’ requests to find a new resettlement location, and villagers were not allowed to participate in the resettlement site selection process. The villagers also did not know which NGOs could help them when they move to the resettlement sites. Such information is extremely important for them as it has lasting effects on their lives.

The project compensates villagers for lost land, houses, trees and gardens though not for its true value. Villagers are still unaware of how much for compensation they are supposed to get for gardens and trees, as well as the actual cost of their homes. They do not like that the houses are made from concrete and they want to make houses by themselves, but the project will not allow for it. The project designs and builds houses for the villagers. The houses are built in ethnic Kinh style and made by Kinh people, while most of the villagers are from the Ka Tu ethnic group.

The villagers want the project to compensate them for up to three years after resettlement, but the villagers are worried that they will only receive one year worth of compensation, like the A Vuong hydropower project provided for villagers in its site. The project supports them with a rice stipend and a few other things every month, but it is still not enough. The project staff knows that at the new location there are few resources and poor quality land. But the project still intends to relocate villagers to this site.

The project also did not inform the villagers of changes in project development or relocation plans, making it all the more difficult to prepare accordingly. As of yet, they do not know when they can move and when they can receive compensation from the project.

Their lives in the resettlement site will be harder, as most of villagers do not like that area. Some families do not want to move there and they will find other places to live and do their farming.

After talking to villagers from the A Vuong hydropower project, Song Bung 4 villagers became worried that they would receive the same insufficient compensation, while having few chances to negotiate. They saw that the lives of A Vuong villagers got worse after the dam.

The Ka Tu ethnic group depends on forests because they get their main food from there. Forests around the resettlement site lack the products they use in everyday life, nor can they grow their own crops because of poor soil conditions. As of now, in their present village, there is not enough food, despite the good land for growing things. What will happen if they resettle? Also there is not enough water to use because the resettlement site has few rivers and springs.

The project will have effects on their culture, as well. By building houses that are not in the traditions of Ka Tu culture, villagers will lose some of their customs. Most importantly the project has no plans to build the highly important *Guol house*.

Pa Rum B village is poor, with most of families living in poverty. They need proper land for living and doing farm work as well. They cannot live in a place that lacks good land, forests for finding food, or Ta Vat tree for making local alcohol. But the new location has nothing; bad, sloping land, unsuitable for building houses; small trees and crops; it lacks water, has few animals and it is difficult to grow crops and trees as well. This is where the project will move them to. Villagers will receive a monthly rice stipend, but it is very little. They will receive some other food stipends, but not enough to feed a family. They will get houses made out of cement, built by Kinh people, unlike their traditional Ka Tu houses, and unlivable for them. As of now they still do not know how much compensation they will receive for such things as gardens, crops and trees. Without knowledge of such things they will have problems preparing accordingly, making their lives even harder and less predictable than they already are. They will suffer like those who were displaced by the A Vuong hydropower plant.

Resettlement: A Case Study of the Dachaoshan Hydropower Plant in China's Yunnan Province

By Fu Tao

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Introduction

The worsening of livelihoods and environmental degradation in resettlement communities due to Dachaoshan Hydropower Plant has been on going for many years. Through the struggle of the resettled people, the local government has made efforts to solve the problems but no fundamental changes have occurred.

Based on my field research, this report describes the problems facing the resettlement communities in the affected Yun County, and discusses and analyzes the root causes behind it, the community struggles and their interactions with local government.

The ADB, which funded the transmission line connecting DHP and Kunming, is an important stakeholder in this case. The report argues that the ADB should also be held accountable for social impacts of the DHP.

Finally, the paper gives policy recommendations to stakeholders, i.e. the government, ADB.

Background information about Dachaoshan

The Dachaoshan Hydropower Plant (DHP), built in the border areas of Jingdong County, Simao administrative region and Yun County, Lincang administrative region, is located 90 km downstream from the Manwan Hydropower Plant (which started operations in 1993) and 631 km from Kunming, the capital city of Yunnan province. Construction started in August 1997, and was put into full operation in 2003. DHP is the second of the 15 scheduled cascade dams along the Lancang River. It has an installed capacity of 1350 MW, annual average electricity output of 7020 kWh with a total investment of CNY 8870 million. The aim of DHP is to supply electricity to Kunming, and support the implementation of the Chinese government's strategy of developing western China by supplying hydropower to the more developed eastern China.

The reservoir that forms behind the 118-meter-high DHP dam has a surface of only 26.3 km². Reservoir capacity is very small in comparison with the annual flow of the river. Because of its geographical characteristics, technically it is deemed as a suitable place for hydropower development, as the number of affected people is relatively small. In the eyes of hydropower experts, the site of the project, with a steep water drop and sparse population, is ideal for such a large project. Statistics show people affected in 38 administrative villages, 6363 persons in total, among which 3620 persons were relocated in 2000 to two nearby counties (1757 in Jingdong County, 1863 in Yun County).³

Since the completion of the Manwan Dam in 1993 and DHP in 2003, hydropower has become a major source of income for the Yun County government, accounting for more than half of its annual tax revenue.⁴ By the end of November 2005, DHP was the top tax payer in Lincang city.⁵ In the year 2006-2007, VAT and consumer tax from the two hydropower plants accounted for 76.7% and 62.2% respectively in the county.

³ P45, Appendix 13, Project Completion Report on the Yunnan Dachaoshan Power Transmission Project (loan 1644-PRC), August 2005. In a document of Yun county government dated July, 2001, the number of relocated people in the county is 292 households, 1864 people.

⁴ www.lincang.gov.cn/Jrlc/Qxkx/Yx/200807/26605.html

⁵ www.ynyx.gov.cn/show.aspx?id=537&cid=9

The improvement of the local economy has made the local government more capable to allocate funds to solve the left over problems of DHP resettlement. While DHP has been contributing big tax revenues to Yun County, the resettled people are still suffering from impoverishment over the last 8 years since they were relocated to their current homes in Aihua Township, 100 km away from their homeland along the Lancang River, in the winter of 2000. The investigation was made regarding the problems facing DHP affected people in Yun county, not about those affected in Jingdong County.

In Yun County, 393 households, consisting of 1864 people from three townships (Dachaoshan Xi, Lishu and Houjing) were relocated to 4 places.

Problems facing the resettled community

Land

Land allocated to resettled people has been much less than promised. According to an orally announced policy, the farmers can get 1-1.5 *mu* of rice paddy, 2-2.5 *mu* of land, and 4.5-6 *mu* forestland, making a total of roughly 8 *mu* per person.⁶ But in Ganlanjing for example, the rice paddy allocated to each person is only 0.3 *mu*, vegetable land is 0.1 *mu*, stepped land is 0.65 *mu*, sloping land is 0.95 *mu*, forestland is around 2 *mu*, making the total land 4 *mu*, half of that promised before the resettlement. The problem was in fact recognized by local government in its documents.

In addition, there is no real usable rice paddy in Ganlanjing. Originally, some low lying paddy field was allocated but could only be used to plant corn, because there is no irrigation water. In the rainy season, fields are always inundated or washed away, while in the dry season, there is simply no water. This also applied to vegetable land down the hill.

Being aware of the acuteness of the problem, local government publicly promised to buy 125 *mu* of rice paddy from a nearby village to allocate to farmers in Ganlanjing, but it never happened.

As most of the land is on the steep, sandy slope, it not only makes it harder for farm work, but makes it difficult to contain water and fertilizer. Land slides are common

⁶ The resettlement policy was orally announced to villagers but not in any form of written document.

in the rainy season, while in the dry season, there is just a lack of water. The production of corn is only 700-800 kg per *mu*.

In addition, a lot of the land is far from the dwellings, it takes 1-1.5 hours to walk or 'climb' up to the site to work, adding more labor for farmers.

Water

Lack of water is another big problem here. There is no water for irrigation. As mentioned before, most of the low lying land allocated as rice paddy can only produce corn because of the lack of water in Ganlanjing. On the steep mountains the corn production depends only on rain.

Domestic water is collected from mountain streams through underground pipe lines, and is kept in water tanks then diverted into different residences. According to farmers in the communities, it is never enough in the dry season, when each family needs to go a long way down the hill to pick up and carry back water from ponds several times a day.

The drinking water quality is also a point in question. According to Ma Zhiliang, community leader in Upper Ganlanjing, people feel that the water quality is bad. For example, the bottom of a kettle used to boil the water will be covered with a thick layer of scale deposit only after 20 to 30 days. During 2007-2008, more than 40 people in Ganlanjing were diagnosed as having calculi by the county hospital.⁷ Some also said that animals got sick more frequently after drinking the water.

Mr. Zhou Tianwen, the Party secretary general of Lower Ganlanjing, is quite pessimistic about the possibility for fundamental change. In addition to the current government initiated water diversion project from 20 km away, another possible solution is to pump up water from the Luoza River right down to the hill directly for irrigation, but the initial investment and maintenance of the pump station thereafter would be quite high. The cost of electricity will also not be affordable to farmers. More than that, even if water is finally diverted up into the land, it will not be able to stay in the land but would cause landslides because the earth here is very sandy and cannot hold water.

⁷ Group interviews with Upper Ganlanjing villagers who were repairing the village road, in the afternoon of September 19, 2008.

Reduction of cash income

According to village and township statistics in 2004, the average annual per capita income in resettlement communities was only CNY 600-803. The figure remains at CNY 603 in 2007. Instead of living on home grown rice and selling the surplus for cash, people now need to sell corn to buy rice and other daily necessities. The rice bought with money from selling corn can only last for several months per family. Farmers need to do odd jobs to earn additional supplementary cash. All of this makes it more difficult for families to support kids to go to school.

In their former homelands, farmers have a lot of economic forestland, which helps a lot to generate cash. The diversified plantations include corn, rice, and economic forest with gum lak, mango, banana, bamboo, etc. Domestic animal husbandry was also very popular as there was enough open space and grassland to breed animals.

Take the original place of Mangbang village for example. The per capita rice paddy is more than one *mu*, with an output of more than 850 kg per *mu*. Average per capita land is around 5-6 *mu*, more than a dozen *mu* of forest. The water quality is good and sufficient for irrigation and drinking. It is very common for families to raise a lot of bulls, donkeys, sheep, pigs and chicken etc. Some villagers can also fish in the river. According to Li Shilong, the per capita annual income there was CNY 2,000. Each family could save CNY 3,000-4,000 in cash. This kind of livelihood structure helps to spread risks and provide a self-sufficient lifestyle for farmers.

Houses and associated facilities

Dwelling space

Similar to land, it is not rare that the size of a compensated house for some families is less than promised. For example, in the resettlement plan, a family of 3 people would get a one-story house, and families with 4-7 people would get a two-story house. For a family with more than 8 people, they were to receive two two-story houses etc.

The most extreme case is the family of Mr. Dao Faxin, a 70-year-old farmer. Dao has 4 sons who all got married. In the year of resettlement, his family has 12 people entitled to compensation (excluding the eldest son who is a teacher). According to policy, this big family should have gotten 3 two-story houses, but they got only one two-story house and a one story house. After some years, the family size has

expanded to 14 people. Because there is just not enough room, the third son, Dao Mingguang, had to move his own family out to Dachaoshan dock and do fishing in the reservoir in 2006.

This kind of arrangement is questioned by farmers. As revealed by the government, cost of house construction is CNY 11,400 per person, and the cost of one two-story house is CNY 54,000. But all families with between 4-7 people can only have the same one or two-story house. There is no differential treatment within this category. The Dao family raised a request for compensation for house space owed to them, but they were turned down by the resettlement office.

Associated facilities are another question. Each new dwelling is supposed to include associated facilities such as a sty for pigs and cattle, a homestead with a courtyard wall, gate and a toilet. But after arriving there, they found they still needed to spend money to build these facilities by themselves. In Lower Ganlanjing, there are just two public toilet rooms for 80 households.

Homesteads for each dwelling varied in size. It is quite a problem in densely populated Ganlanjing, in which some families have to build a pig sty on small homesteads quite near the main house, making sanitary conditions poor. Forty-two year old Yang Tianlong spent more than CNY 20,000 to build associated facilities. The conditions were so harsh there that he even thought about moving back in the first year of resettlement, but it is impossible because his land in the original place has been allocated to other farmers.⁸

“Before resettlement they told us they would provide sties for chicken, pigs and cattle for us, if we agreed to move. But if we didn’t, nothing would be paid for inundated land and rice paddies, and we would still have to pay agriculture tax as usual.” -A young male farmer, Green Watershed interview, August 24, 2004, Ganlanjing

Quality of houses

Houses are commonly low in quality. The wall and ground concrete cracks, the foundations sink and tile and brick erosion are common in Ganlanjing and Lianhuatang. In the main room of the second floor in Lin Youfu’s house, the crossbeam supporting the roof was nearly broken, and left abandoned after temporary

⁸ Interview with Yang Tianlong, evening of September 20, 2008.

measures were taken. The County Resettlement Office paid CNY 500 for the damage, much less than the total amount needed for a repair.

According to Mr. Ma Zhiliang, community leader of Upper Ganlanjing, 90% of the families' roof tiles eroded and leak water when it rains. Since the houses are constructed on steep slopes, they are subject to the threat of landslides. In Upper Ganlanjing in 2001, 4 families' kitchens fell down due to lack of protection facilities against floods or mudslides, and only 2 families got paid by the government to reconstruct.⁹

Villagers are worried about the quality of houses but the local government has taken no active measures to address their concerns.

Traffic, health and schools

Transportation is inconvenient in Lianhuatang and Ganlanjing communities. The road connecting the upper part of Lianhuatang to the national road at the foot of the hill is 11 km. The distance between Ganlanjing and the national road is 5 km. In addition, the road is steep with a lot of abrupt curves, and it is frequently damaged by floods. In some places it is very narrow and prohibits the passage of tractors.

Each year during the corn harvest season in September and October, the farmers need to mobilize themselves to provide free labor to repair the road, with a meager subsidy of CNY 1,500. But the repair work is repeated every year as the government has failed to invest more to make the road last longer.

Complaints were also made about the distance to school. It takes 1-2 hours for kids to walk one way to school at the foot of the hill. Normally they make this walk roundtrip twice a day, including going home for lunch. According to Li, in the original site, the kids in 6 communities of Mangbang Village all went to the nearby Mangbang primary school, which was only 10 to 20 minutes away.

The government has failed to keep its promises to provide public facilities like a good road, a clinic, a primary school, cable TV, an activity station etc for each resettlement community. Currently the primary school and health clinics are located at the foot of a hill by the national road, much less convenient than promised.

⁹ Interview with Ma Zhiliang, November 17, 2008.

Ecological degradation at the resettlement site

Massive flooding in the late 1990s prompted the government to implement a comprehensive logging ban and a systematic reforestation project in China. This has significantly reduced the scale of deforestation in the Lancang River Basin. But it has not wiped out all deforestation activities, among which are those encouraged by the local government's implementation of the resettlement plan.

DHP is a case in point.

'I went to the county forestry bureau (officer), who told me I can not cut trees, but township government (officials) said I can cut them, and that if I get fined, they will take responsibility,' said Yang Kailiang, a farmer who stays in the flooded area of Tianfang community, Mangan village told us. His house is located quite near the land slide line. In Lishu township the government encourages farmers who are not relocated outside to reclaim land from the forest.

Apparently there are conflicts of interest between the forestry and resettlement departments in the government, which failed to work out a coordinated policy toward this issue. But it was the resettlement office who ultimately won the conflict.

Deforestation could be much worse in the resettlement communities. There were 139 households comprising 654 people in Ganlanjing (official data in July 2001). Because there is not enough land for farmers, county government resettlement offices¹⁰ encourage farmers to reclaim cornfields from the forest with a quota of 0.95 *mu* per person, and promised to pay CNY 435 per *mu*. Li Shilong estimates that 70% of families reclaimed more than permitted, with a total of 1400-1500 *mu* of forest cleared in Ganlanjing.

The large scale deforestation in Ganlanjing will lead to serious negative impacts on the local ecology. In fact, natural disasters have been plaguing farmers for some years. It is true that the natural disasters are the main causes of loss, but the deforestation and vulnerable local ecological environment caused by human behavior are also to blame.

In addition to the problems of deforestation, a shift from traditional agriculture in the original place to 'modern' agriculture in resettlement places occurred.

¹⁰ Since 2004 the County government Resettlement Office was restructured into County Government Resettlement Bureau.

In the original place, it is very common for farmers to raise large amounts of domestic animals like sheep, pigs, cattle, and chickens etc on the spacious mountain slopes. This not only helps farmers to generate cash income, but also produces organic fertilizer for farm land. It was very common for farmers along the Lancang River basin to stick to organic farming. In resettlement areas, they are forced to use more and more chemical fertilizer and pesticides in order to have more output due to a lack of land and less productivity, as well as less animal manure from domestic animals. In addition, deforestation and the use of pesticides and chemical fertilizer are not only reducing the supply of water from the forest, but also polluting the drinking water.

Pollution from a cement plant

The Lianhuatang and Hongdoujing resettlement communities are polluted every day by heavy dust from a local cement plant at the foot of the hill where the community is located. This plant has been operating for 20 years. It emits smoke and dust 24 hours a day. It pollutes water resources, and has reduced the output of corn nearby fields. Children are subject to skin diseases. The situation becomes worse during the dry season in February and March.

Lianhuatang community has tried hard to negotiate with the cement plant and county environmental protection bureau. At the request of the county environmental protection bureau, the plant installed a dust wiper in January of 2008. But according to farmers, the dust wiper only works during the day time.

Other less visible impacts

Migrant work in order to make a living

There are more and more people in resettlement communities doing migrant jobs inside and even outside the province. In Lower Ganlanjing, where there are 81 households and 360 people, with one-third of working laborers currently go out as migrant workers. For people like Li Shilong who choose to remain as farmers, they still need to take odd jobs during the low season of farm work, as the corn field alone can not produce enough income for the family.¹¹

¹¹ Interview with Li Shilong, November 11, 2008.

As China shifts to an urbanized society, there has already been a trend for rural people to migrate to cities for jobs, the construction of the DHP and the large scale flooding pushed more people out. This kind of migration has reshaped people's relationships.

“People could help each other by exchanging labor on the farm in the past, but now, as most people leave to take migrant jobs, it becomes hard to find someone who can help when you are short of hands on the land.” - Yang Kailiang.¹²

Impacts on traditional culture and family social networks

According to 57-year-old Mr. Han Yuanchang, a well respected retired village schoolteacher, the ethnic Yi villagers here used to frequently participate in cultural activities, like collective singing and dancing for marriage ceremonies, and celebrating holidays together. But these traditions have all faded in recent years because people don't feel happy with the situation after their land was flooded by the dam, and uncertainties about resettlement kept perplexing people. Han belongs to a Dahei community in a flooded area which is still awaiting relocation, a victim of neglect and failure to be included in the resettlement plan by the government. The situation is similar in resettlement communities 100 kilometers away, as people have more pressure and less leisure time in life, and more and more young people leave the villages for jobs.¹³

DHP also caused disruption of family social networks. The resettlement site is 100 km away from the original village. Take Lao Li as an example- he must ask his two brothers in the village to take care of his parents who are now more than 70 years old. According to Li's estimation, among all the resettled people in Lishu township, around 40% of the families have been separated from their elders, leaving them attended by other relatives. On the other hand, even some elders more than 80 years of age were resettled in new places, and are forced to adapt to the new, harsh environment. The traditional harmonious relationships between villagers are overshadowed by tensions and conflicts. For the first few years of resettlement, conflicts were very common in the area. Families fought with each other for limited resources and benefits.

¹² Interview with Yang Kailiang, Tianfang community, Mangan village, afternoon, November 14, 2008.

¹³ Interview with Yang Tianlong, Ganlanjing, evening of September 20, 2008

Conflicts also were once fierce between resettlement and indigenous communities due to competition for resources. In Ganlanjing, a shortage of drinking water has caused many quarrels and even gang wars. In an extreme case each resettled family deployed one person to fight with the host community. It took some years of negotiation before these conflicts became less violent and died down bit by bit.

Restrictions on future development

Impacts on the younger generation have started to show. There are three primary avenues available for rural people to move up the social ladder: to serve in the army, to work in the local government, and to be admitted to universities with the hope of getting more chances to get a better job. According to Lao Li, during the last 8 years in Lianhuatang and Ganlanjing, young people got no such a chance. They were denied access to the army either because they could not pass the physical check, or because they did not have a high school education. The cost of education along with discrimination and bullying by students from urban families, as well as bad studying environments, partly contributed to high drop out rates for students from resettlement families if they go to Yun County to receive middle school educations.

In addition, it was easy for farmers to borrow money from the bank or credit agencies with a certificate of village committee for economic development purpose before the resettlement. But now access to micro-credit finance is a challenge facing resettlement people. Banks always turn down requests for loans on the grounds that borrowers in resettlement communities are not capable of paying them back.

Analysis of root causes behind the problems

The dam displaced people from fertile land to less productive places

In Yunnan province, agricultural land accounts for only 7% of the total land, per capita agricultural land owned by rural people is only 0.08 *mu*, all lower than those of the country average. Any reservoir in the Lancang River will flood the valley and flat areas and make large lots of fertile land disappear. The dam-affected people in flooded areas, once resettled, would probably be allocated much less productive land due to lack of land resources. As for the case of DHP, in the reservoir flooded area in Yun and Jingdong counties, the valley and flat low lands accounts for only 5% of the county area, making it more difficult for the relocated persons to maintain

their livelihood, let alone to improve the living standard as the general policy of resettlement states.¹⁴

‘Technical’ problems with the planning and budgeting-Government’s perspective

In the case of DHP, it is the first time in China that the dam developer has committed the government to implement relocation plans. On July 11, 1995 YNDCS signed a contract with the resettlement office of the Yunnan government to be responsible for the implementation of a resettlement plan, with a total amount of compensation approximately CNY 89 million.

In a research paper published by the provincial resettlement office, the Yunnan government lists several reasons for insufficient compensation paid to affected people. These reasons include: 1) the resettlement plan fails to allow enough space for sustainable development of people’s livelihood; 2) some of the expenditures were estimated too low in the budget during feasibility study stage; 3) surveying was done in 1991, but the construction of DHP was approved in 1997. The survey lags behind in reflection of the real loss to farmers in 1997; 4) construction costs of relocation work increased a lot because of inflation.¹⁵

Lack of transparency and public participation

In addition to the ‘technical problems’ which the government mentioned, lack of public participation and supervision on how these funds were to be used is another fault. Resettlement funds were at the total disposal of the government. The resettlement projects were also carried out by the government without the participation of resettlement people, which made resettlement people doubt it could be misused or misappropriated.

There was no consultation with farmers in the program making process According to research done by Green Watershed, in the planning stage in 1998-1999 when the house construction started, only the village leaders could go to make an on-site visit. But even the village leaders did not know any detailed information like specific relocation sites, and house structure etc. There is also a lack of professional support in terms of house value assessments, house quality checks and acceptance, and land measurement for resettlement people. People had to accept whatever they were given.

¹⁴ 云南省移民搬迁办公室,《在市场经济条件下大朝山水电站移民安置工作探索》

¹⁵ Same as 16

The local government started to mobilize farmers in 1995 through village meetings and home visits, while making a lot of offers including the promise of 5-10% increase in per capita net income within 3-5 years. This made people feel their life would be better after resettlement. But an official who made a home visit even told a farmer, ‘if you don’t move, no compensation will be made to you. You must support (the construction of DHP).’¹⁶

It is unfair to say the local government has done nothing useful to deal with the problems. For example, local resettlement bureaus helped to dig wells for complementary drinking water, but it is still limited in volume and contains a high content of scale deposit. Additional funds have been allocated by the government to deal with the left over problems, but there is no fundamental change.

A mistake in resettlement programming and implementation

In the original resettlement plan, there were 5 resettlement communities in Yunxian and 3 in Aihua Township. But during the implementation process, people who were supposed to move to Manlinshan were finally resettled to Ganlanjing after the land for immigrants was already acquired in Manlinshan. This change of plans made the resettled population in Ganlanjing rise from around 400-450 people in 90-95 households to around 650 people in 140 households, causing an increase in population density and adding much more pressure on local resources, such as land, homestead, house and water usage, etc.

The conflict of interest and lack of coordination at different levels of local governments in the drafting stage for land acquisition and the resettlement plans and implementation could be a reason for this change of resettlement plan.

Law and policy related to resettlement in the past

From above we see there is apparently a lack of real free prior informed consent. A restrictive policy environment in contributes to failure to safeguard the interests of dam-affected people. This is evidenced in the ‘Rules of Land Compensation and Resettlement in Large and Medium Sized Hydropower Projects’,¹⁷ issued by the State and enforced since May 1, 1991.

¹⁶ Interview with Yang Kaiwang, Lower Ganlanjing, Morning, September 19, 2008.

¹⁷ The translation of the contents is based on an article written by Dr. Yu Xiaogang, ‘The new development is calling for participatory social impact evaluation-case study of Manwan Hydropower Station’.

Article 4: The land compensation and resettlement of people from hydropower projects should follow the following principles:

- a) A right attitude should be held to deal with the interests between the state, collectives and individuals. The original places and resettlement destination places should follow the designs to ensure the overall benefits of the state;
- b) Combining the resettlement arrangements with project construction, resource exploitation, soil and water conservation and economic development, so as to ensure the livelihood of immigrants can **reach or exceed the level they had before resettlement** in a step by step way (It assumes that it is allowed to let the livelihood of the resettled people get worse off at the beginning);

With regards to the obligations of resettled people and punishment for violation of the rules, it states that:

Article 15: People who must be resettled according to the resettlement plan, should not resist or delay for any reason. People who have been relocated can not move back to their original places without permission of the authority.

Article 22: People who violate the rule, disturb the public order, and affect the normal implementation of plans and projects during the process of land compensation and resettlement, must be punished. Those who commit criminal offences will be held accountable accordingly.

As to other laws and regulations, it was only in 2003 when China's law on Environmental Impact Assessment was issued that public access to large project information and rights to be consulted were legalized for the first time (although its enforcement in reality is still questionable). It was in the same year DHP was completely finished. It is not difficult to imagine that in an environment in which the state interest is put before that of disadvantaged farmers, and there are not any laws or regulations safeguarding relocated people's rights, such kinds of serious problems can happen.

The situation is improving at the policy level. In recent years, some workable policies favoring the resettlement people have been issued. In May 2006, the State Council announced a new regulation ruling that post construction aid funds should be allocated in cash form directly to resettlement people as much as possible. If aid funds will be used to carry out development projects, the resettlement people should be consulted and agreed upon by a majority. The management and use of resettlement funds should be transplanted and supervised by the people. The

identification of projects should be democratic, and respect affected people's access to information, participation and supervision.

All of these specific rules, and the general move by the central government to reduce social conflicts, have provided a strong motivation and a favorable environment for the Yunnan government to take active measures to solve the resettlement problem in DHP. In some ways, the Yun government also has improved its practice in solving resettlement problems. For example, in the second phase resettlement of Manwan residents, and in a newly announced plan to relocate Tianba community for the second time in October 2008, relocated people are allowed cash compensation to build their own houses according their specific needs.

Community struggle

Petitions to upper level government

In the case of DHP resettlement, people have actively and repeatedly petitioned the upper level government. Since the winter of 2000 when they were resettled, numerous petitions have been made to county governments collectively or individually. Fighting against the local government for the rights and compensation of immigrants has long become one of the most important tasks in the community. The community leaders can only maintain their authority among villagers by leading them to 'fight' or confront local government for compensation. But the relationship between the county, township governments and resettlement communities is not always hostile. When some mitigating measures were initiated by the government to help to develop the household economy, villagers have been cooperative. They sometimes also received some funds from local governments for basic infrastructure construction in the village.

In a most extreme case in January 2003, nearly 1,000 villagers seized county government offices for 3 days seeking dialogue with the government, as the latter failed to show a positive attitude, some of the villagers went to block the national road for 18 hours, hoping to make the situation serious enough for the government above the county level to intervene. The villagers knew it negatively affected the local social order, but they had no other means to make the government take their case seriously.

Internal networking and strategy

In 2007, community leader Lao Li was elected representative of Aihua Township people's congress, China's legislation organ. Li was elected with a majority of votes from resettled villagers in the town, who thought he could lead them to fight for compensation.

Probably because the villagers in resettlement communities are significant in number, and local government needs to deal with them in an effective way, the positions of deputy village directors were filled by relocated people in the villages consisting of both relocated and indigenous communities. Members of the network currently meet every two months, sharing campaign information and discussing strategies. The work of this network was recognized by the police as legal, but they were warned that they should not do 'other illegal' activities.

Because they are aware that it is a long-term struggle, the network is trying not to take radical actions against the government, and restricts their activities in a legal framework. It also has connections with some local government officials who showed sympathy and provided information, partly because of family or relative relationships.

External support from outside NGOs

Before the Kunming-based environmental NGO Green Watershed (GW) got involved in resettlement issues of DHP in 2004, petitioning was the only resort for villagers. In February, 2002, GW conducted a social impact assessment on another previously constructed dam—the Manwan Dam. A report was delivered to the central and Yunnan provincial governments, and later on to the county government and the villagers. In 2004, Green Watershed conducted a survey for Manwan, Dachaoshan and Xiaowan dams on the Lancang River and delivered a report to the Central level. As a result, some county level officials were disciplined. In 2004, GW initiated a campaign by disseminating free cameras to resettled villagers who were trained with some research techniques and how to record problems facing their livelihood via photography. These villagers became resources for GW's research. GW also organized a study workshop for dam affected/would be affected villagers to pay a site visit to a village affected by dams. It organized several village representatives to participate in a UN conference on hydropower in Beijing to express their concern and demands. In addition, GW helped to update the central government's latest policy on resettlement issues to the communities.

GW is the only NGO which provides direct support to this resettlement community. In recent years, there are more and more cases of legal aid services offered to environmental pollution victims by some legal aid NGOs and lawyers, but there are still no such services for dam-affected people like those in the DHP. The less visibility there is about the social impacts of dams and sufferings of dam-affected people, the longer the period it takes to show the impact of dams compared with industrial pollution. Hydropower development as a national strategy to cope with China's energy demand (a major way to reduce emissions from coal consumption under global warming context) and the highly powerful background of hydropower companies have added to the difficulties for NGOs to challenge this issue.¹⁸ Currently, environmental NGOs in China mainly are focusing on the campaigns against the scheduled cascade dams being constructed in the two 'virgin' rivers: the Nu River and the Jinsha River, where there are still no dams on the mainstream. Lack of links and interactions between outside NGOs and the grassroots movement in China as a result of limited political space also leave the DHP community little access to outside channels and public support in the mainstream society.

Response of local government

Resettlement has long been a controversial issue on the Yunnan government's agenda. According to Lao Li, during the last 8 years since the completion of DHP resettlement, there have been 6 different officials in charge of county resettlement issues, making the position the most unstable one in the county government. A vicious cycle exists in which the new bureau director assumes office and makes promises to the villagers then moves on quickly after sometime because he is not capable of solving the problem and has no strong political will to solve them. It seems that currently the county government's strategy is to suppress the expression of villagers, preventing them from bringing the case to upper level governments or the public. **"Each time we appeal, they gave us some goods like 2 jin of rice."** While admitting the problem and legitimacy of appealing to action, they shuffle around and never have a deadline for the solution.

The conflicts of interest and lack of coordination at different levels of local government make the situation worse. For instance, the Aihua township government refuses to admit that it is officially accountable to the resettled community, claiming that the community was forcefully imposed upon the township government by county government without its consent, and it never fulfilled the handover

¹⁸ Interview with Yu Yin, MPOWER Research Fellow, October 16, 2008.

procedure with the county government.¹⁹ Aihua township government, however, still exercises administrative functions over resettlement communities in other issues. The land in Aihua township that was allocated to the resettled villagers was bought by the county resettlement office with the money paid by DHP under an agreement signed between the provincial resettlement office and the DHP. Whenever conflicts happen, the governments at the township and county level will blame each other and shuffle the responsibility. Similar situations exist between provincial and county level governments.

As a result of villagers' efforts and GW's work, some measures were taken by local government. It is true that continued investigations were made by local government, such as meetings being held to discuss the issues with villagers. In addition, some Jins of rice were given on an ad hoc basis, 2 sets of fertilizers and seeds per person were given free to villagers in earlier years. These seed and fertilizer grants, however, ended after 2008. Provincial government re-allocated CNY 60 million for the problem, among which CNY 37 million was made to Yun county, in which Lincang regional government provided a matching fund of CNY 10 million.²⁰ Since 2007, a monthly aid of CNY 50 per person was paid as the central government's policy to subsidize dam-affected people for 20 years. The fixed monthly aid can lose its value in the future if it is not adjusted for inflation on a yearly basis. Also, more money was allocated to fund development projects like water diversion in resettlement communities, but these projects failed to have any function, increasing villager dissatisfaction.

Differing from the very violent nature of some other conflicts between local government and farmers due to land acquisition in development projects, the conflicts in DHP are tense but limited in the level of violence. In an extreme case in 2003 mentioned above, according to Li Shilong, Yunxian county government did not dare to report this case to upper level government, but just tried to mediate and negotiate with villagers. After the dialogue broke up, they arrested 23 people (among which was a 12 year old child) but released them later. No more tough measures were taken. The local government responded to organized petitions by admitting its mistakes and making some small offers like giving some rice free, but failed to fundamentally solve the problem.

In addition, local government is quite sensitive to the communities' connections with outsiders, especially with journalists. Its main strategy was to cut off the external link that may be able to add pressure on them. They do not dare to be too

¹⁹ Interview with community leader, Li Shilong, September 11, 2008.

²⁰ Interview with Li Shilong, November 11, 2008.

tough on villagers with violent measures. There are several reasons that may provide some explanation for this.

Firstly, there is at least a common understanding about the resettlement problems in DHP among local government. It is possible that local officials felt guilty about what they have done to relocated people: they persuaded people to move by making big promises but failed to keep them.

Secondly, in Yun county and lower township governments, a certain proportion of local government officials come from local farming families, this may help them to understand more about farmer's difficulties in making a livelihood. Some of them may have personal connections or even blood connections with relocated people. Villagers can get inside information about resettlement, making them more powerful in negotiating with the government. This kind of inter-woven connection in a rural county like Yun makes the relationship between the relocated people and the local government not always 100% oppositional. In some ways, the government's power is checked and balanced by personal connections.

Thirdly, the government draws on some experiences from managing conflicts in the previously built and often troublesome Manwan Dam, which also caused frequent complaints and petitions and even a big collective protest in 2002. In that event local government did not take confrontational measures, instead they invited village representatives to dialogues, and tried to solve the problem step by step.²¹

Fourthly, the central government, being more and more aware of the danger of state and citizen conflicts, in recent years imposed greater pressure on local government to care more about harmony in social relationships and to keep the society stable.

ADB's accountability: DHP as associated facility

ADB's relationship with DHP

In November 1998, the Asian Development Bank (ADB) approved a \$100 million loan from its ordinary capital resources to fund the project. The ADB loan was earmarked for procurement of consultants, plant, and equipment for the project. The ADB also provided an advisory technical assistance (TA) grant to support the Executing Agency (EA) for the Project, YEPG (Yunnan Electric Power Group

²¹ Interview with Dr. Yu Xiaogang, December 25, 2008.

Corporation). The loan was closed on 14 January 2004 with \$50.8 million of the ADB loan utilized.

According to ADB's official documents, the specific project objective is to promote sustainable economic growth in Yunnan Province achieved by (i) supporting sector and enterprise reforms in the power sector of Yunnan Province, (ii) augmenting power transmission capacity by establishing additional 500 kV transmission facilities, (iii) providing related 110 kV and 220 kV transmission facilities, (iv) modernizing the load dispatch and communications systems, (v) connecting about 115,000 people in rural parts of the project area, and (vi) closing three old thermal power plants.

The proposed project is supposed to provide significant environmental benefits by avoiding the need to build a large coal-based power station in the populated and industrialized areas near Kunming, which are already experiencing serious levels of air pollution. Additionally, the proposed project will catalyze the closure of three existing inefficient coal-fired plants that are responsible for significant levels of pollution in the province and contribute to a reduction in the use of fuel wood in rural areas of Yunnan.

While DHP is not funded by ADB and is managed by a different Executing Agency, namely the Dachaoshan Hydropower Plant Company, ADB has a significant stake in it, as the transmission line is a key facility associated to DHP. Without the transmission line, the DHP is meaningless in terms of its function.

To what extent DHP complies with ADB's policy

Summary of the EIA of the transmission line (SEIA) reveals that the DHP's EIA was reviewed by ADB financial consultants. Their overall conclusion was 'that all the main environmental aspects had been taken into consideration, that the main impacts have been correctly identified, and that with a few exceptions, the appropriate mitigation measures have been formulated. They could identify no impacts caused by the DHP that would make it unacceptable from an environmental perspective. SEIA points out that 'the consultants' review of resettlement arrangements identified potential problems related to notification of project-affected people concerning precisely how they will be affected by the project, and the lack of detailed household surveys. The Bank has provided short-term assistance to the Government for purposes of gathering this information, integrating it into the overall Resettlement Action Plan, and providing advice on any other minor modifications that may be required in the Plan. But it thinks that none of the

problems identified are of a magnitude to call into question the advisability of financing the Project on social or environmental grounds.’

Nonetheless, some problems have been identified by ADB around the resettlement of DHP during the processing period, as written in ADB’s project completion report dated August 2005 (Appendix 13 ‘implementation of land and resettlement plan’).

‘ADB conducted due diligence for the associated Dachaoshan Hydroelectric Reservoir and Power Plant Project. During the project processing period, ADB found out that the resettlement plan prepared by Beijing Hydroelectric Power Design Institute in March 1998 did not meet the ADB policy on involuntary resettlement and indigenous people. ADB supplemented the existing resettlement plan by commissioning a socioeconomic survey in August 1998. That was followed up in November 1999 by another survey that included (i) an analysis of census data in the reservoir area; (ii) a Participatory Rural Appraisal for direct consultation on resettlement options with people affected, including ethnic minority groups; and (iii) a socioeconomic survey of the host communities that will receive the resettled people from the reservoir area.’ But this ‘follow-up survey revealed that the resettlement plan accurately identified the affected groups. The survey took into account the following factors and processes: vulnerable households, poor households, ethnic minority households, type of losses experienced, adequate compensation levels, consultation and participation processes, grievance processes, and income-restoration measures for resettled persons in both the reservoir and host areas.’

But ADB failed to effectively evaluate the negative impact and the implementation of resettlement plan after some years. In 2004 the ADB ‘received an informal letter raising concerns about issues such as access to safe drinking water, access to irrigation, road improvement, health care, and housing and land conditions. During the project completion review mission ADB brought the letter to the attention of the concerned authority, which should investigate and address the issue and take appropriate action.’²²

On September 10, 2004, Dr. Yu of GW and community leader Lao Li attended ADB’s conference on participatory poverty alleviation. They communicated with an official from ADB headquarters, who suggested giving some time to the government so they can solve the problem. (The rationale behind this is if ADB pressures the government on Dachaoshan issue, the latter could in turn impose pressure on the

²² P47, appendix 13, Project completion report on the Dachaoshan Power Transmission Project in PRC (Loan 1644-PRC)

villagers).²³ But now several years have passed and there is still no apparent change, Li delivered a complaint letter to ADB in October 20, 2008, and got a letter from ADB dated December 16 the same year. While the ADB promised to forward Li's report to the central and provincial government, it claimed that 'ADB did not provide a loan nor did it administer any such loan for implementation of Dachaoshan Hydropower Project. Therefore, it is beyond ADB's authority to mediate the resettlement issues with the local authorities for projects not covered by ADB's Accountability Mechanism'.

It seems that ADB has left the duty of DHP resettlement for the local government to solve and has not taken more active measures. It may claim it is an associated facility and it does not fund the project directly, but ADB's involvement in planning DHP's EIA and the resettlement plan, including technical assistance to the local government, makes it accountable for DHP's left over problems.

China's Environmental Impact Assessment Law was formally enacted on September 1, 2003, but DHP entered full operation in October 2003, leaving the latter's construction under no constraint of the EIA law. The vacuum of law makes ADB's role more important for the mitigation of DHP's social and environmental impact because when there are no strong local laws to ensure the protection of the environment and affected people's rights, ADB's safeguard policy is the last resort.

A question about one of the project outputs: closure of coal power plants

Providing support to achieve economic growth in an efficient, equitable and sustainable manner was the central theme of ADB's country operational strategy for China. The installation of new transmission lines led to the scrapping of plans for a new coal-fired power plant in the same region, thus improving air quality. In ADB's project completion report, three old and polluting coal-fired power plants at Panshuidong, Kaiyuan and Xuanwei were shut down as planned, reducing sulfur dioxide emissions by 12000 metric tons per year, and reduced suspended particulates by 25000 t per year. Workers at closed power plants were transferred to the new generating power plants.

But in fact while the three polluting coal power plants were shut down, more new coal power plants of much larger size were constructed.

²³ Interview with Li Shilong, November 11, 2008.

Since 2002, Yunnan has invested a lot to build coal power plants. In 2006, the installation capacity of total electricity generation reached 18543 MW, with hydropower and coal power accounting for 54.6% and 45.4% respectively.

Total installed capacity of coal power plants in Yunnan reached 9714 MW in 2007, nearly half of the total installed power capacity. The boosting development of hydropower has not effectively led to reduction of coal consumption in electricity generation.²⁴ The reason for the building of more coal power plants is partly due to the demand for electricity, but also partly due to the need to complement the generation of hydropower generation difference in the raining and dry seasons.

It was only from early 2007 when the State Development and Reform Commission released a policy to phase out old and small scale coal power plants in order to cut emissions and improve energy efficiency, that Yunnan started to close down more of these kinds of coal plants at a faster pace.

While another purpose of this ADB funded transmission line is to electrify 51 villages in the project area, the electricity price for villagers is very high in rural areas compared with those in the city. The price is beyond the ADB's control. It is a common phenomenon that the rural people in China pay much higher prices for electricity than urban people. There is a saying that the reason is because the transmission line is longer to distribute electricity to remote villages. It is not true because the fact is that normally it is the cities that are located far away from hydropower plants where the dams are constructed. It is more practical to think about this issue in Yunnan province, in which more than 50% of the electricity supply comes from hydropower in rural areas.

Policy recommendations

To the government:

1. Galvanize political will and take big actions for a fundamental solution

The government is more experienced and economically capable of solving these issues. Political determination and the courage to face its mistakes are needed to deal with left over problems in the case of DHP. Citing a lack of disposable funds as an excuse is not a persuasive explanation for inaction. It might be difficult for local county governments alone to solve the problem fundamentally,

²⁴ 《云南：火电撑起电力产业一片天》2008-9-26, 来源：云南信息报<http://www.tadercn.com/mtzx/xgxy/dl/43144.shtml>

so the coordinated efforts between the county and provincial level governments are very important. As central government has put high emphasis in solving social conflicts through pro-poor policies, it is time to take big actions.

2. Ensure public participation in decision making and transparency

As a way to improve the efficiency of resettlement funds, affected communities should be given more power to use the funds by themselves. The participation of people is a key to solve the problem and re-build the credibility of the government. An effective coordinating and complaint mechanism should be set up for the villagers.

In fact there have been some small efforts made by local government. With small grants from the county government, Lower Ganlanjing built a half-kilometer long cement road in the community and a cement basketball playground on which cultural and social activities can also be hosted. It could be a valuable starting point for the government to engage and expand community participation in the future. In the future, the local government should make bigger aid projects available for the people to manage. They know their own needs, and the pertinence of their interest will ensure the funds be used in a more sensible and effective way. An additional benefit is that if the project is not successful, the government won't be blamed.

3. Change restrictive policy toward NGOs, open more space for NGOs to start development projects in dam-affected and resettlement communities

Partly because GW revealed the resettlement problems to central government, local government adopted a suppressive policy towards GW. NGOs focusing on watershed management and the impacts of dams are independent social forces outside the official mechanism and 'equal partners' with the Chinese government in mitigating the negative impacts of dams and social conflicts. The bottom up work or even pressure from the NGOs is helpful to present a check on the power of government and hydropower companies, so as to reduce the social conflicts. There are also numerous needs within dam-affected communities to develop the economy and alleviate poverty, and NGOs are more than happy to move in to help. The government is obligated to support NGOs in that way.

4. Reflect upon and change the development model of DHP

In DHP development model, local government is contracted by and runs errands for the hydropower company to deal with resettlement issues. Due to the powerful lobbying capacity of hydropower companies, they are always the biggest winners. While local governments in water resource rich provinces benefit a lot from steep rises in tax income, they still have to bear the long-term

environmental and social impacts. Take DHP as an example, the resettlement people in Dachaoshan are excluded from the benefit sharing mechanism, accordingly impoverishment has led to repeated conflicts due to injustice and possible corruption. As governments at different levels play the game and shuffle the responsibilities, not only the relocated people suffer, the government itself also suffers from a heavy loss of credibility and weakened ability to manage the local administrative area. As petitions become a norm in local politics, local government should think twice and include long term social and environmental costs into the cost and benefit analysis before attracting hydropower investment.

To the ADB

ADB should be accountable for social impacts of DHP, and activate the reviewing process

It was in 2003 when China's Law on Environmental Impact Assessment was issued, in which public access to information of larger projects and the right to be consulted were first legalized. It was in the same year DHP was completely constructed. It is worth it to mention that in the case of DHP, when China's domestic law and regulations were quite weak, the way ADB's safeguard policy was enforced mattered much to the situation of resettled people.

ADB should start an independent review and evaluation procedure to investigate the issues in DHP about how its safeguard policy was enforced. Once the problems are identified, ADB should work together with the government for a solution.

It is important for the ADB to make sure its funded projects push up the safeguard standards rather than push down standards in its host counties. DHP is one of ADB's earliest loans made to associated facilities in its GMS initiative. How DHP issues are settled and how ADB is portrayed will have direct effects on its credibility in other Mekong counties, in which ADB has been carrying out its GMS initiative for many years.

The International Finance Corporation's Performance Standards, Focusing on Land Acquisition and Resettlement Planning: A Case Study of Sihanoukville Airport Construction

By **Nov Piseth**

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Introduction

This research describes the outcomes of a loan provided by the International Finance Corporation (IFC), an arm of the World Bank, which has had huge impacts on two villages in Cambodia. The airport in question was built by the French company Societe Concessionair de l'Aeroport (SCA). All the impacts on the people of Sihanoukville will be presented and an analysis of the project performance made to see whether the World Bank followed its own performance standards and safeguard policies, as well as national laws, international regulations and treaties. Recommendations will be given to contribute ideas for local villagers, civil society organizations, and shareholders to improve the situation.

This research should provide a new perspective because it not only examines national and international laws, but also IFC Performance Standards regarding affected people and the project implementation process. Increased awareness of the

affected people will be attained and solutions found if all the share holders and other related actors follow the recommendations provided here. Their voices will be used to create a solution by working out a new path through the Inspection Panel of the World Bank. In addition, people can use this research as a basis to make complaints to higher institutions in Cambodia and at the World Bank in order to pressure local authorities who have not produced results.

Background

In recent times, the Royal Government of Cambodia has been granting land concessions in the form of both Social Land Concessions and Economic Land Concessions. Local and foreign investors are the key persons involved in the concessions from the government, which are being made in order to follow the Poverty Reduction arm of the Royal Government of Cambodia's Strategic Development Plan. Rehabilitation of infrastructure is also popular and is being implemented in different parts of the country. For instance, the Sihanoukville Airport Construction Project.

This airport project is located in Sihanoukville, also known as Kompong Som, Cambodia's premier beach resort and seaport. With the number of tourists increasing every year, the government decided to renovate the old airport which was built in 1960, and gave the contract to a French company called Society Concession Airport. The Sihanoukville airport is an old airport located in Sangkat Reim in Sihanoukville. This airport is surrounded by rice fields, tidal wetlands, residences, and a national park.

In Cambodia, Economic Land Concessions (ELC) have led to many issues and huge numbers of people have been affected. People have been evicted and resettled to remote places, far from the city. Resettlement is still one of the main issues in Cambodia and state, international and local companies try to relocate people from their native areas without fair and just compensation or/and standard assistance to help people make up for their losses. Obviously, those people will not be able to use many facilities including a pagoda, market, and state public services which they had previously accessed very easily. Reim and Bet Trang are the two communities that have been affected from the Sihanoukville Airport Construction Project project.



Project Information

The company undertaking the project is Societe Concessionair de l'Aeroport (SCA) in a joint venture between Vinci Muhibbah Materon Cambodia, a special purpose company that holds a 45 year concession (from 1995) from the Royal Government of Cambodia (RGC) to the Phnom Penh International Airport (PPIA) at Phnom Penh, The Siem Reap International Airport (SRIA) at Siem Reap, and Sihanoukville Airport (SIA) at Sihanoukville. The Sihanoukville Airport, located 15 km from the city center, was built in the 1960's and remains a small airport with limited facilities. SCA's airport concession was modified to include the development and operation of the Sihanoukville Airport in March 2006 by the RGC. SIA, which had been closed in May 2006, reopened in January 2007.

IFC has provided loans to the SCA to implement the airport construction in Sihanoukville with the purpose of developing and operating the airport. IFC is one of the private sections of the World Bank with the objective to give loans to the private sector in developing countries with the goal of helping to reduce poverty and improve people's lives.

Project sponsors and major shareholders

SCA is 70% controlled by the Vinci Group (VINCI) from France and 30% by a local holding company, Muhibbah Masteron (Cambodia) company limited (MMC is 70% owned by Muhibbah Engineering Berhad and 30% owned by two local Cambodian businessmen, Mr. Okhna Kong Triv and Mr. Okhna Hann Khieng. The

Vinci group is listed on the Paris stock exchange and is one of the largest companies in the world that operates in the field of construction, energy, concession, and production of materials and related services. Vinci concession, one of the four business units of Vinci group, is active in airport management and ground services. Acting alone or in partnership, Vinci concessions manages 5 airports worldwide.²⁵

The main objective of the Sihanoukville Airport Construction Project is to develop, renovate, and operate the Sihanouk Airport in a planned area of about 682 hectares.

Profile of Affected Communities

According to the project summary, there are two communities that will be affected. One is Ream Commune (Thmor Thom, Ong, and Ream Villages) which comprises 343 plots (79 residential and 264 agricultural) over 251 hectares. The other is Bettrang Commune (Koh Ki and Chamnot Ream villages), which comprises 162 plots (23 residential, 139 agricultural) over 201 hectares. The Ream National Park is also going to be affected by the project based on the extension zone in the master plan (Zone 3: 197 hectares for Cargo terminal 2010).

In this report, I examined all the impacts that people faced during the Sihanoukville Airport Construction Project. Also, I will analyze the project's compliance with IFC performance standard and policies, international laws, and national regulation treaties.

Economic Impacts

Most of the villagers in the affected area are farmers, fishers, non-timber forest product collectors, and workers. In Ream and Bettrang communities, people's income has played an important role in helping them to make a better living. However, upon the arrival of the SCA Company, they lost a huge amount of their income due to loss of land, livelihoods, and residences.

Daily Income: According to the formal and informal meetings I had with villagers, I found out that people have lower incomes than before the project. Their livelihoods depend on their rice fields, jobs, forests, and the businesses in front of their houses. Before construction started, they were able to grow rice during the rainy season

²⁵ <http://www.ifc.org/ifcext/spiwebsite1.nsf/2bc34f011b50ff6e85256a550073ff1c/bf534109ee259f5e85257297007ecd9b?opendocument>

and the output could support their family for a whole year. However, since the SCA Company came, they cannot grow rice as easily as before, and in some places they cannot grow it at all. Some of the villagers' land was taken and a boundary put around it by the company, who announced that "it is just for helping people find the right direction and to make it easy to give compensation to people."

Loss of Livelihoods: Most the people in the area are farmers and they have grown rice in that area for a very long time. Fishers, crab and shrimp fishers, non-timber forest product collectors, vendors, and others who work for wages to support their families have all been negatively affected.

Loss of output and production: As 70% of people in Cambodia are farmers, rice is the main product that they count on. In Ream and Bettrang it is the same; the villagers have their rice fields in the site that the company seized, or in the expansion area of the airport. The loss of all the food and income will certainly affect people's living.

Social Impacts

Loss of livelihood and culture: The local people have gotten used to the area that they have lived in and they will lose everything if they are forced to move without fair and just compensation. They have jobs that they have had for a long time and are surrounded by a rich variety of natural resources. They have schools, hospitals, pagodas, local markets that they have such easy access to. Furthermore, they settled there since before the Khmer Rouge period and they have lived peacefully in the community. They have gotten used to the jobs they have and all the beliefs they hold.

Migration: Because there is not much in terms of jobs in the resettlement area, people have to move out to find jobs in order to get money to support their families. Some people try to find jobs in the city and some people try to find jobs in distant areas. They can only come to meet their families twice a year, while sometimes they just send the money for their families without making visits.

Environmental Impacts

National Park: According to the airport construction plan as well as what has been reported by locals, the Ream National Park is going to be affected by the project plan. Normally, in all the countries around the world, national parks are untouchable sites and no concessions are granted. In the project plan, however, some parts of the Reim National Park are going to be affected.

Pollution: Based on what villagers mentioned, before the company came to the site, their community was peaceful and rich in natural resources. However, everything has since changed. They heard a lot of noise from the planes and cars coming in and out of their area. People who live next to the fence of the airport have been seriously affected by the noise of transportation. Furthermore, water pollution is another issue that has occurred at the site. Since the company started to enlarge the airport, the waste from chemicals used for the project was not properly accounted for. In the peoples' understanding, water pollution has surely affected them.

Land Acquisition: Since the SCA came, the company started to grab land from the city. In some areas company representatives erected fences to bar the people from entering, and in other places they erected signs to mark the company's site. Furthermore, the company has told villagers that they tried to measure and to put down markers to make it easy to determine and provide compensation to affected people. Actually, people have not heard anything since they finished measuring. People just waited and waited until they were no longer allowed to enter the land like they used to.

Food Security

As the amount of rice production is reduced, the villagers' standard of living and their food security is reduced, as well. They need to find another way to get more income to fulfill the needs in their families. If not, they will have to borrow money to support themselves. In addition, some of the villagers' land was part of the boundary with the company, so they have been barred from growing rice there, while other portions of land have been left idle because villagers think the negotiation is going to be finished soon.

PROJECT ANALYSIS

The project has violated IFC performance standards, some policy procedures, national law, and international regulations.

Violation of IFC Performance Standards

1. IFC is a part of the World Bank and it has its own goal and mission of trying to promote sustainable private sector investment in developing countries, helping to reduce poverty and improve people's lives. In fact, the money that was loaned by the IFC to the SCA company was done so with the hope that the

company would apply these policies. Instead of following this policy, the project caused many impacts to villagers, including the loss of their lands, houses, food security, water and leading to relocation.

2. In the PS5 it is stated that the project has to find a way to avoid or at least minimize impacts on local people wherever possible by exploring alternative designs. But in reality, SCA has not mentioned a better solution to avoid the impacts of resettlement, nor have they shown any willingness to negotiate with affected people. Instead, people were told to move from the land where they had lived prior to the Khmer Rouge Regime and they have long been accepted by the local authorities as well.
3. The PS5 mentions compensation for the loss of assets when resettlement occurs, as well as the obligation to properly inform affected people of resettlement plans. However, compensation and proper public information distribution to villagers did not occur. In fact, the way that the state and the company came to do the feasibility studies, most of the local people did not get any sense of what they were doing and why they were doing it. The results were not shown either.
4. Other provisions stipulate that the company needs to improve and restore the livelihoods and the standard of living of displaced people, and adequate housing with security of tenure needs to be provided. Contrarily, at the affected site, the government had not paid any attention to land tenure security for local people prior to the land concession and SCA has not mentioned any relocation site or compensation. So for sure, people will face huge impacts if they are forced to move. Because they have been ignored by both the government and the company, they will not have any ability to restore and improve their livelihoods to the way it was in previous times.
5. One of the most important commitments made under the Performance Standard was to require clients to carry out Free Prior Informed Consent with the communities expected to be significantly affected by the project. However, the people have not gotten any kind of that information and they don't know what the company is doing.
6. Under the disclosure policy, IFC is committed to disclose data and information about development projects, specifically so all the interest groups and related shareholders can request documents or request a meeting or discuss problems. Contrarily, NGOs and affected people cannot access those kinds of things, though the IFC has its own disclosure policy.

Violation of International Regulations

- a) Based on the Universal Declaration of Human Rights (UDHR), some articles address the right to own property and the right to have a standard of living and adequate housing. *“Everyone has the right to own property alone as well as*

in association with others.” And *“no one can deprive this right from them.”* However, people affected by the airport construction in Sihanoukville have not been given rights to them at all even though Cambodia is a member of the United Nations and has ratified the UDHR. As a nation state the Royal Government of Cambodia has to fulfill and follow this universal law by providing a better living standard to affected people. In general the government has to show concern by putting the people first, by giving priority to getting security of land tenure to the people who live legally within the site and abide by the land laws of Cambodia. Furthermore, home ownership is also a main element that is provided for in the constitution of the country.²⁶

- b) There are two articles²⁷ which mention the right to have free determination and social security. As can be seen from people’s stance against relocation, people really don’t want to move from the place that they had settled for so long. This shows that the self-determination of the villagers has not been provided for.
- c) The general comment No. 4 mentions adequate housing, which has added additional laws to those which already exist. General comment No 4 of the UDHR briefly mentions the right to adequate housing. In reality, since the people have not yet been forced to move, we cannot see whether the State or the company has followed international regulations or not. In the area that people live nowadays, surrounded by all the facilities such as pagoda, hospital, local market, school, and the close proximity to the town, it will be difficult to find such a prime location all over again.
- d) Affected people at the site have not been given Free Prior Informed Consent, while most of them had not known about the studies or the purpose of the people who came down to inspect their place. This means that there is no transparency and limited public space to give comment or to get informed properly.

Violation of National Laws

1. Some of the articles of the Cambodian constitution address the right of the people individually or collectively, to have the right to ownership. Only Khmer legal entities and citizens of Khmer nationality shall have the right to own land²⁸. Also, the State shall protect the environment and the balance of abundant natural resources²⁹. The people in Ream and Betrang communities have lived in the area since before 1975 and they moved when the country was faced with the civil war. They resettled in the area again in 1980 with the understanding and consent

²⁶ Article 44 of constitution of Cambodia

²⁷ Article 1, 9 of International Covenant on Economics, Social, and Cultural Rights

²⁸ Article 44 of Constitution

²⁹ Article 59 of Constitution

of the chief of the commune and Sangkat. They have not been given any right to seek ownership over their land following the Cambodia Land Law of 2001.

2. The State has a duty to protect natural resources, especially where the project will encroach on some parts of Ream National Park. This is further proof of the violation of the law. Furthermore, an Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) must be done on every project.³⁰ Although they have been done for this project, they were not done in a proper way, nor were they shown to the people and people have not been informed about what the company and their team are doing. The state also has not done any proper EIA or research to see what impacts have occurred and how to deal with those problems. Normally, EIAs must be made public, but according to what people said they don't know about the EIA.

Conclusions

SCA borrowed money from the IFC to develop not only the Sihanoukville Airport but also two other airports in Phnom Penh and Siem Reap. SCA did not respect the people's rights and did not follow the IFC's Policy and Performance Standards. Many people got affected in the two communities and they are hoping for a solution. Affected people are willing to get involved with the Royal Government of Cambodia (RGC) to develop the country but they also need fair and just compensation which can assist them to restore their livelihoods. Furthermore, resettlement is not always a viable choice for reducing poverty and the government has to make a clear plan to avoid the impacts that occur after concessions are granted.

I encountered many problems and difficulties during this research project. First, I found it hard to get access to information from the IFC website. I also found it hard to get information, or ask for more documents from both the WB/IFC staff and SCA. For instance, until now I have not gotten any reply from the staff of the IFC after sending my last letter. SCA rejected the meeting I proposed with an NGO team to discuss their project. The IFC say they are planning to reduce the poverty of the country and improve the living standards of people in developing countries. However, they are not very transparent nor did they fully disclose information in accordance with what they state in their policies. The IFC and SCA have not given any space for affected people go give comments, participate, or freely give their consent to the project.

³⁰ Article 7,8 Law on Environment and natural Resource Management (1996)

Recommendations

There are several ways for the shareholders to increase their participation in the project:

- Conflict Resolution Committees need to be more progressive and accountable, with fairness to all parties through trying to deal with the land issues about which complaints have been submitted. If the state can make these committees more functional and provide hope to affected people related to their land issues, perhaps the problems can be solved. The independence of the committee also plays a very crucial role in the resolution of the land disputes.
- Cancel concessions: Many problems were created by the non-property EIA, SIA, as well as impact studies made by the company and the state. The concessions can be granted after the law of land ownership has been appropriately addressed. Then concessions can be dealt with. Any improper EIA and SIA will necessarily lead to a failure of concession grants.
- Land titling: Giving ownership and land title to the affected people or the people who have lived and followed all the criteria of the land law. Land law will help to resolve all the problems and will help increase the land tenure of the people in the province. This is part of a government project in which they received money from the World Bank to register all the land titles in Cambodia.
- IFC Inspection Panel is the last choice to deal with the issue. When a project violates IFC policy and performance standards, affected people and relevant stakeholders can submit complaints and claims directly to the Inspection Panel of the IFC. They also need proof that they have already exhausted all ways to deal with it in their country.

Following are some more recommendations all stakeholders to make improvements in the future:

- Ensure the proper implementation of EIA and SIA and enforcement of the laws with transparency and public participation. National Park law has to be enforced, while concession notices must not violate the national park law and environmental laws.
- If relocation cannot be avoided, fair and just compensation must be provided to affected people so they can rehabilitate their livelihoods and regain their losses. Negotiation must be conducted by all involved parties without any unjust influence or pressure.

- To gain trust and support participatory development, IFC should demonstrate openness and accountability by proactively sharing information. All guidelines and project information must be exposed to all shareholders. Public comment has to be set up and all comments taken into serious consideration.
- To reduce poverty, the government should avoid resettlement wherever possible.
- The government of Cambodia should approve the “National Resettlement Policy” as a sub-decree and then introduce it for implementation with standards that apply to all projects.
- Relevant shareholders must seek feedback and be more accountable with good will to disclose information and be transparent.
- IFC should set up a team to investigate alleged policy violations and monitor projects, including follow-up after project implementation, and ascertain whether or not performance standards have been followed.
- Information must be disclosed in advance regarding plans to ensure that infrastructure and public services will be provided to support the basic needs of the people at the relocation site.

ADB Involvement in the Mekong Power Grid Transmission Line Project at Tasang Dam in Shan State, Burma

By **Shining Som**

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Introduction

The Tasang Dam is the primary hydropower project and source of electricity to be exported to Thailand through the Mekong Power Grid. The site for the Tasang Dam is on the Salween River in the Southern Shan State of Burma. Tens of thousands of local people have already been affected and are suffering, by order of Burma's military dictatorship, at the site of the proposed Tasang Dam and its reservoir. The ADB is participating in the Tasang Dam project indirectly by channeling finances for the power transmission line through Norconsult. This would give legitimacy to the Tasang Dam project and open the way for increased involvement by Export Credit Agencies (ECAs), commercial banks and private companies. "The Bank was now able to take up numerous dam projects for electricity generation³¹." "The institutions that are involved in the Mekong Power Grid are the two leading multilateral banks, the ADB and the World Bank, the bilateral development agencies and overseas development programs of rich countries³²". Many projects supported by the ADB

³¹ Wilson, Dick. A Bank for half the World: The Story of the Asian Development Bank. 1966-1986. (1987) ADB

³² Mekong in Danger, ADB's involvement in the GMS

are proceeding on the basis of feasibility and environmental impact studies that ignore or dismiss all major impacts of these projects on national economies, rivers, forests and local communities.

The Salween River is the longest free-flowing river in Southeast Asia. The Burmese military regime, or SPDC (the State Peace and Development Council), is one of the worst human rights violators in the world. The citizens in Burma have no chance to claim their rights. The Tasang Dam project will result in increased militarization. The extension of the military in the Shan State has already intensified since the proposal to build the Tasang Dam. Increased militarization is clearly linked to violations of human rights and environmental abuses.

This report provides information about military rule in Burma, preparations to build the Tasang Dam on the Salween River, potential social and environmental impacts of the development project, and the proposal to be implemented for the two transmission lines in the Southern Shan State. I wish to alert readers to the violations against people who live along the Salween River in Burma due to preparations to build the Tasang Dam. Previous actions by the Burmese military show that construction of the Tasang Dam and the transmission lines will lead to further human rights violations and environmental abuses. Tasang Dam is an important power source for the Mekong Power Grid. Without the Tasang Dam project, the ADB's Greater Mekong Subregion program would not be involved with the Burmese Government. I hope that this report will inform and strengthen the awareness of local communities, empower them to speak out, and strengthen the growing local and international movement to oppose harmful development projects in Burma. I hope this report is part of the gateway to ending the people's struggling and suffering.

The relationship between the ADB and Burma in the GMS

The Greater Mekong Subregion (GMS) is made up of six countries; Burma, Thailand, Cambodia, Vietnam, Laos and the Yunnan province of China. The ADB administers the Greater Mekong Subregion (GMS) economic cooperation program. Thus, the ADB is linked to Burma through its involvement with the GMS. Since 1986-87 Burma has not been given any monetary support from the various International Finance Institutions (IFI's) or the ADB. However, the ADB has been supporting Burma in many different ways, most notably through its support for the GMS economic cooperation program³³. One of the main programs that the ADB is

³³ Multilateral Development Banks and Burma A Resource Book from the Bank Information Center October 2004

currently supporting was announced in 2003, and is known as the Mekong Power Grid (MPG). The MPG is part of the ADB's 10 year plan to develop a power system in the area. Under this planned system the power will be generated in Laos, Burma, and China, and exported for use in Thailand and Vietnam³⁴. "The decision to make a Mekong-wide power corporation started in April 1995, in the sole call Inception Meeting, in Rangoon, Burma". This meeting is evidence of the relationship between the ADB and Burma.

Why Tasang should not be in the Mekong Power Grid:

The Tasang dam, located in the Southern Shan State of Burma, is a very important source of power for the MPG project. It will have the highest energy capacity of all the dams in Southeast Asia. For this reason, the Tasang Dam is necessary for the MPG under the ADB's plan. The Tasang Dam is an important power source for the power line from Burma to Thailand. The project, however, will lead to many negative social and environmental impacts at the dam site and along the transmission line. This project under the Burmese military dictatorship will result in massive human rights violations. If ADB is going to support the construction of the dam and transmission line, it seems the ADB is ignoring the human rights violations of the Burmese military³⁵.

"The Mekong Power Grid will result in the further damming of the Mekong River and some of its tributaries³⁶".

Tasang Dam on the Salween River

There have been many plans to dam the Salween River at various locations. Those projects will result in huge electricity generating plants being proposed by the Thai companies EGAT and MDX. Of the many proposed dams to go on the Salween River, the Tasang Dam in the Southern Shan State in Burma is the largest one. The

location of the proposed dam is 40 kilometers north of the Tasang River crossing and about 130 kilometers from the Thai-Burma border³⁷.

³⁴ ABD GMS Flagship Initiative www.adb.org/GMS

³⁵ Multilateral Development Banks and Burma A Resource Book from the Bank Information Center October 2004

³⁶ INTERNATIONAL RIVERS NETWORK / 1847 BERKELY WAY, CA 94703/ 510-848-1155/WWW.IRN.ORG

³⁷ Report from Warning Signs by Shan Sapawa Environmental Organization 2005

The Thai company MDX and the SPDC signed an agreement to do more hydropower development projects on the Salween River. It is not clear, however, whether MDX has the necessary funds because the company has been in financial crisis since 1997 and the project will cost USD 6 billion. This project is especially beneficial to the Thai Government, private companies, and the military of Burma, and not to ethnic people who live and rely upon the natural resources thereabouts. The main purpose for the Burmese military's agreement to cooperate with the Thai company is to increase foreign income to fund its continued grip on power and extend its dictatorial policy, as well as to clear the opposing armed forces from that area and spread further oppression toward ethnic people.

Relocated people do not receive compensation. Instead, they are sitting targets for continued extortion by the authorities and military. They are both particularly exposed to demands for forced labor and particularly vulnerable to this burden, since they have had to leave their fields and become wage laborers³⁸.

“In my view most of the military’s development projects were built by our tears. They are parasitic because they got benefits by taking profit from us by forcing us to work without pay. We have no way to avoid their abuses and deception. We aloeas as soon as they announce plans for a big project on the Salween River. If that project is coming up, in the future I can’t imagine what the river and our life will be like.”

Although only in the planning stage, the project is already causing massive human rights abuses in Burma in Shan State³⁹. The people who live along the Salween River in Burma have already been the victims of violence by the Burmese military. This violence against the people through forced relocation, forced labor, extrajudicial killings, and intimidation will increase as a result of the proposed dam project⁴⁰.

“My home, land and river surrounding where I was born is heaven for me. A person with as much idealistic love as me, I was overcome by a sense of hopeless to come back home and find the door of life’s progress has been closed upon to me by the forced relocation of Burmese military.”⁴¹

³⁸ <http://www.dams.org/kbase/submissions/showsub.php?rec=SOC057>

³⁹ dam-ILS: Burma Dam—Forced Labor & Japan Connection Sat, 24 Jun 2000

⁴⁰ Interviewing form head villager 23.11.2006

⁴¹ http://www.Salweenwatch.org/dam_site.html

In 1996, when the Tasang Dam project was proposed, the situation in the Shan State intensified, resulting in forced relocation at higher levels than ever before. In total 1,400 villages have been relocated in the Shan State since 1996, pushing 300,000 people from their homes, 100,000 of whom fled as refugees to Thailand⁴². In most relocations, villagers had only 3-7 days to move. In other cases there was no warning at all, and villages were burned down with people still in their homes. The military government gives no compensation to the relocated people, and instead uses them for forced labor.

The construction of the Tasang Dam would both further harm the local people's way of life and destroy the natural flow of the last major free flowing river in Southeast Asia. Upstream of the dam, hundreds of kilometers of land will be lost due to flooding. Problems will also occur downstream, such as preventing fish from migrating up the river. This will result in the extinction of many fish, which will harm the environment and the livelihood of the fishermen who depend on them. Supporting the project in Burma will also mean supporting further human rights violations and environmental destruction.

Conclusion

The ADB claim that they are not involved in any projects in Burma, but the Tasang Dam project in Burma is included in the Mekong Power Grid plan, which is one of the flagship initiatives of the ADB's GMS program. Civil society organization campaigns face many difficulties in describing the potential impacts of the project. This is due to limited access to official documents, while local people have a lack of knowledge concerning the building of the dam as a result of the dictatorship and military rule. The tendency of development projects in Burma is increased militarization. To fund the Tasang Dam and the power transmission line would mean further legitimization of the brutal military regime in Burma. As long as the Burmese junta governs as a dictatorship, our Shan ethnicity will disappear from Shan State. By getting foreign income, the Burmese junta has more resources to continue its grip on power and extend its dictatorial policies. They will also continue their oppression of ethnic peoples. In the case of militarization, there has already been massive human rights abuses and harm to the environment.

I would like to urge media to cover the local people's suffering and struggles and raise regional and international awareness through presenting at conferences. Don't

⁴² The Asian Development Bank and Dams by Arturo Nuera, NGO forum on ADB Guidebook Series November 2005

damage our lives! I would also like to ensure the Salween continues to flow freely, deep and wide, as it does naturally.

Recommendations

- Stop the process of militarization in Burma
- Curb corruption & other abuses of power by an unaccountable military
- Call on the ADB and Thai companies (MDX and EGAT) to take into account human rights and the right to a sound environment before implementing any project, especially in Burma
- Demand that the ADB and other investors stop providing support, grants and or loans to the Burmese military dictatorship.
- Urge investors to withdraw all of their investment in order to stop extending power to the military dictatorship, which continues to cause harm to ethnic minority groups and the environment.
- Ensure local involvement & the right to participation in any project.
- Give rights to communities to manage and conserve their land and forests
- ADB should consider alternative ways of sustainable development in the Greater Mekong Sub-region.

Mainstream Mekong Dams

Hydropower dams on the Mekong River and its tributaries



Key existing and proposed large hydropower projects in the Mekong basin (updated July 2008).

The Sambor Dam: Potential Impacts of Relocation on Island Communities

By Chhuon La

Chhuon La is an Advocacy Coordinator with Oxfam Australia, and is responsible for developing and leading an advocacy program for Cambodia that promotes people's rights in regard to their livelihoods and environment.

Introduction

Cambodia is the poorest country in Southeast Asia with a GDP per capita level of USD\$297 (UNDP 2004). In 2003, Cambodia's population was approximately 13.8 million people. It is estimated that the population will reach 16.6 million by 2010 and surpass 20 million by 2020. 85% of Cambodians live in rural areas with subsistence agriculture as their main occupation. 36% live under the poverty line.

In Cambodia less than 9% of rural households have access to electricity, and those who do depend mainly on connections to the Electric Du Cambodge (EDC) distribution grid (where available) and isolated diesel power stations. Rechargeable batteries are commonly used in rural areas for basic lighting and powering radios and television (TV) sets. Cambodia's electricity demand is forecast to grow from 244 MW and 946 GWh in 2003 to 991 MW and 3,478 GWh in 2020.

Cambodia's economy

Cambodia's economic progress in the last decade has come mainly from the industrial and service sectors. In particular, expansion of the garment and tourism industries has contributed largely to the overall GDP growth. Strong economic growth has

been associated with poverty reduction. The World Bank report in Cambodia found that the percentage of people living under the poverty line has been reduced from 47% in 1993 to 35% in 2004. Average economic growth between 1999 and 2006 was 8.9% after the country secured complete peace through the win-win policy in 1998. Between 1999 and 2003, average growth was recorded at 4.5%. In 2004, growth was 10% rising to 13.4% in 2006.

The Mekong in Cambodia

After the Mekong flows through Lao PDR, it joins the Sekong River at Stung Treng provincial town. Then it passes through Kratie, Kampong Cham and Kandal Provinces, and Phnom Penh before meeting the Tonle Sap. The confluence of the Mekong with these tributaries accounts for about 19% of the Mekong River's annual discharge, and produces vast natural resources for local communities, in addition to providing habitat for about 1,200 fish species, including the Irrawaddy Dolphin.

Tonle Sap Basin

57% of the Tonle Sap's total water is from the Mekong and the rest from other tributaries surrounding the Tonle Sap Lake. About 1.7 million people from 6 surrounding provinces depend on the Tonle Sap for fishery-based livelihoods. In the dry season, the Tonle Sap River drains into the Mekong and Bassac Rivers near Phnom Penh and then flows into Vietnam's Mekong Delta. When the Mekong rises with the monsoon rains, the Tonle Sap's flow reverses to the northwest into the Tonle Sap Lake, raising its level by up to 10 meters and increasing its area from 3,000 km² to 16,000 km². This unique hydrological cycle generates vast areas of seasonally-flooded forests with intense biodiversity, and provides Cambodians with 40–70% of their protein intake in the form of fish.

Fisheries in Cambodia

Fish in Cambodia have contributed to 10-12% of GDP and fish resources have provided a lot of opportunity for family income and food security. Fish catches in Cambodia are fourth in the world and the total yield is around 400,000 tons annually, of which around 67% comes from the Tonle Sap. The value of fish catches combined with other aquaculture is about USD\$233 million per year⁴³. There are different

⁴³ CNMC, World Fish Centre and DoF the impacts of built structures on Tonle Sap and related parameter 2007

figures about the Cambodian fish diet, such as 13.5-40 kg per person per year (Kim Sour and Hav Viseth et al 2004) and 65.5kg per year compared to Laos with 42.2 kg per year (Van Zallinge et al. 2004).

Cambodia and Chinese cooperation

One of the world's most significant and fastest growing economic powers, China, lies north of the Mekong Region. Nowadays, Cambodia has indicated that most of the infrastructure projects, including the hydropower projects countrywide, are licensed to Chinese investment companies. Not only the infrastructure and hydropower projects, but land concessions for tree-plantation projects have also been licensed to Chinese. A concrete example is the Tamak Bridge located on the Mekong, with a construction budget of USD\$43.5 million which was signed by China Eximbank and the Cambodian Government on January 22nd 2007. There are 7 projects (annex 1) related to hydropower plants that have signed MoU's to conduct feasibility studies. Among the 7, there are 6 with Chinese companies. In Sambor, there are 6 land concession companies, (annex 2) that are also Chinese with Cambodian businessmen. The pre-feasibility study of Sambor Dam was done by a Chinese firm, namely China Southern Power Grid Company. The government of Cambodia has recognized the big Chinese contribution and that the People's Republic of China (PRC) is one of the close friends of Cambodia and has provided much support, not only for rehabilitation and infrastructure buildings, but the PRC has also encouraged their investors to invest in industrial, agricultural and tourism sectors in Cambodia. These investments have helped to push economic growth and generate employment for Cambodian citizens, thereby contributing to poverty alleviation in Cambodia.⁴⁴

Hydropower plans on the Mekong

In 1994, the Mekong Secretariat (the pre-cursor to the Mekong River Commission, or MRC) prepared a plan for a cascade of nine "run-of-river" dams for the Lower Mekong mainstream. The proposed dams would produce a total of 13,350 megawatts of electricity and displace an estimated 57,413 people. The study was widely criticized by civil society at the time, who claimed the MRC study downplayed the environmental and social impacts that would result from the dams, especially to the Mekong River's fisheries, water quality, and impacts on the Mekong Delta, all of

⁴⁴ Sam Deach Hun Sen (Prime Minister of Cambodia) at the Opening speech of the Construction of the NR 76 from Snuol to Sen Monorom of Mondulkiri, dated 14 February 2007

which would negatively affect the riparian communities dependent on those natural resources directly, as well as the population of the Mekong basin more widely.

Situation of hydropower in Cambodia

With an insufficient electricity power supply to meet rapid economic development and private investment sector needs, the Royal Government of Cambodia (RGC) has initiated, promoted and rehabilitated several potential, existing, and proposed domestic hydropower dams in the country.

At present only two mini-hydropower plants are in operation: (1) O Chum II mini-hydropower plant with the installed capacity of 1MW has been constructed and operated since 1993 in Ratanakiri province and (2) Kirirom I hydropower plant with 12 MW, was rehabilitated and has been operated since mid-2002 by CETIC, a Chinese company under a BOT agreement for 30 years, together with the 120 km 115 kV transmission line to Phnom Penh. A Kirirom 3 hydropower plant will be constructed in September 2007 with a budget of USD\$47 million and this plant will provide 18 MW⁴⁵. At the present, the country exploits only 13 MW of capacity, which contributes merely 5% percent to the total power generation, while 92% are using oil and 3% have other energy sources. Kamchay is another hydropower plant under construction in the Boukor National Park, Kampot Province. The Chinese construction company Sinohydro, will install capacity of 193 MW under Build Operate Transfer (BOT) for 44 years.

Master plan of hydropower study in Cambodia

The total potential domestic hydropower of the country is estimated at 10,000 megawatts (MW) of which 50% is generated from the Mekong mainstream, 40% is received from its tributaries and the remaining 10% is from the southwestern coastal area outside the Mekong River Basin. On the other hand, about 60 possible domestic hydropower sites of small to large⁴⁶ projects have been proposed to be constructed in the whole country (MIME, 2003).

⁴⁵ Raksmei Kapuchea news issue 4365, date 17 August 2007

⁴⁶ The definition installed capacity on hydroelectric power is divided into micro, mini hydro, small hydro and large hydro. The classification varies from county to county. According to International Energy Association are as follows: Micro hydro installed capacity lower than 100 kW Mini hydro- installed capacity in the range of 100kW to 1 MW Small hydro- installed capacity in the range of 1 MW to 30 MW Large hydro - installed capacity of over 30 MW.(Source: Electrical and Mechanical Services Department, China-Hong Kong, 2007

According to the Public Investment of Cambodia for 2007-10, there are several hydropower projects that will be studied with assistance from other countries. A MoU was signed between MIME with the Japanese International Cooperation Agency (JICA) in April 2007. Based on the MoU, the JICA team conducted surveys on 29 potential sites throughout Cambodia and then whittled these sites down to 10.

Dams are being built in many locations within the Mekong Basin, most notably in China, Laos and Vietnam. All such construction projects will affect downstream water regimes, agriculture and fisheries. Presently, Cambodia does not have any medium-size or large hydropower dams; however, large numbers of Cambodians have adversely suffered impacts from neighboring dam developments, including loss of aquatic resources, natural flow and ecological balance changes, and the threat of flood and drought from neighboring countries.

Background

In early November 2006, the China Southern Power Grid Company announced that its subsidiary, the Guangxi Power Industry Surveying and Design Institute, would conduct a new feasibility study for the Sambor hydropower project. China Southern Power Grid Company is considering two design options both first identified in 1994⁴⁷. A larger scheme, proposed by the Mekong Secretariat, would see a 10 km long, 54 meter high barrier blocking the Mekong River to create a reservoir of 880 km² and generate 3300 MW of electricity. Alternatively, a smaller scheme would result in a reservoir of 450 km² and generate 465 MW of electricity. The MoU was signed with MIME at the GMS Expo in Nan Ning on the 31st of October 2006⁴⁸. The Ministry of Industry, Mines and Energy has announced that the company will study two different types of dams; one, called a run-of-river dam, would block river traffic. The other is a chamber lock design which has fewer impacts. An inter-ministerial committee with representatives from the Ministries of Industry, Agriculture, and Environment will review any proposal for actual dam construction⁴⁹.

Issues of concern

NGOs active in Sambor District report that the company has already commenced its geological and water survey. Villagers, however, have not yet been fully informed of the potential impacts of the project, although some have been told that if the project

⁴⁷ Chinese Firm To Study Possible Mekong Dam Site, *Cambodia Daily*, 5-6 May, 2007

⁴⁸ China Southern Power Grid to build ASEAN electricity highways, *Guangxi Daily* 9 November 2006
http://www.gx.xinhuanet.com/ca/2006-11/09/content_8468809.htm

⁴⁹ Cambodia daily news dated 5-6 May, 2007

does go ahead, those requiring resettlement would be relocated on the mainland about 20 km from highway No. 7. The poorest families, elders, children and women are categorized as “vulnerable groups”. So there are many kinds of impacts to them including social cohesion, environmental, livelihood, cultural and so on. The vulnerable groups face the most impacts from development projects, including natural calamity, compared to other community members, in general. For these members, the gravest impact would be on the food security component.

Findings and discussion

Nowadays in Cambodia, decentralization is the latest concept and practice of the development paradigm. The second commune council (CC) election was held on the 1st of April 2007. CC is an extremely important body for development, because CC is developing their own “investment commune development plan” in three-year terms and monitoring the project with technical support by concerned departments and consulting with the SEILA (Stone) program, which is funded by the UNDP in order to mainstream and implement development’s bottom-up approach. This is a strategy to delegate power from the central government to the local government. Each year all NGOs and development agencies have to negotiate an Integration Plan in order to reduce overlapping projects and increase the accountability and transparency of projects. Currently a pilot project for designing district development plans (inter-commune) has been initiated and it is now being implemented at some districts -- Sambor among them⁵⁰.

Sambor District overview

Sambor means “plenty”; and the district is located along the Mekong River with a total land area of 3,737 km² 40% of Kratie Province’s total land area. The north borders Stung Treng Province, the south borders Prek Prosop District, the west borders Kampong Thom Province and the east borders Mondulhiri Province. The district is divided into 10 communes with 52 villages. There are 10,725 ha of agricultural land while 964 ha is dry season rice land with 8 small reservoirs and 233 ha of irrigable land.

There are 9,689 families with an indicated 391 families that are vulnerable. The total population is 49,277 including 24,870 women, while 30% are indigenous groups namely Phnong, Kuy, Mil and Thoue. 80% of the people are farmers while 2% are

⁵⁰ Mr. Hul Tong Sambor District chief, personal discussion , 21 Sept 2007

governmental officers, 3% are businessmen and the rest are carpenters and other skilled and unskilled laborers. The average daily income is 5,000 Riel (US\$1.25) and they are dependent on rice yields, fishing and non timber forest products (NTFP).

- **Education:** There are 54 schools from the primary up to high school with 71 buildings and 264 rooms, and 327 classes with 302 teachers including 99 women. The total number of pupils is 12,268 including 5,899 girls.
- **Health Services:** There are 3 health centers, 4 health posts (smaller than health centers) with 14 health officers. There are 23 temples, and most of the people in Sambor are Buddhist. There are a small amount of indigenous people (Phnong, Kuy and Mil) and from day to day all of them face difficulty and are vulnerable to development projects (Sovan et al. 2005).
- **Fisheries in Sambor:** According to observations and experiences in Sambor, there are 7 illegal depots (operated by middlemen) to buy fish from fishermen and sell to other provinces. In the wet season, one depot sells about 150 kg per day to other provinces. Those depots are illegal, but the depot-owners have paid bribes to the provincial fishery office in order to get permission to run the businesses. In order to reduce illegal fishing in Sambor District, the provincial government has made a declaration that it is not allowed to stock and sell fish to other places, but only use for local consumption.
- **Land concessions:** There are six investment companies and 56,813 ha of land that are licensed to plant and process teak, and one company that plants rubber and cassava. It could be said that these companies are originally from China in joint ventures with Cambodians.
- **NGOs in Sambor:** There are several NGOs that are operating their programs in Sambor such as Oxfam Australia (OAus), which is working on integrated community development and disaster risk reduction projects; Partners for Development (PFD) works on community healthcare in the community and school; World Education (WD) works on education and scholarship for the poorest pupils. OAus is the longest running significant NGO playing a role in integrated community development projects with the government. A fisheries and dolphin conservation project is among those project and OAus has been working in Sambor since 1997. All the projects are undertaken by secondary staff from the government and have positive impacts and contribute to change for local people in terms of livelihood and capacity in order to manage those projects when OAus is phased out. OAus believes

the triangular strategy (government, community and OAus) can contribute positive changes.

Potential dam impacts in general

There are 26 villages in six communes in Sambor District upstream from the dam-site. In total, there are 4,951 families with 25,501 people, including 12,972 women. Among these villages some are located on a riparian island. It has been indicated that if the dam was built with the same capacity as estimated, these communities would be directly affected and submerged. In those target areas, there are schools, pagodas, graveyards, and other infrastructure and small projects such as road rehabilitation are being undertaken.

Interdependence between the Mekong and villagers

Cambodia's 1993 Constitution, Article 32: Every Khmer citizen shall have the right to life, personal freedom and security.

Interviewees revealed that the Mekong is providing water for drinking, household use, transportation, fish and fish breeding zones. Moreover, wildlife such as squirrels, rabbits, turtles, snakes, antelope, honeybees, wild pigs and others can be hunted on the island. Villagers can hunt and now they are conserving wildlife while still practicing their hunting traditions. They can collect bamboo, vegetables, medicine and other herbs from the forest, which is not so far from their houses. They said that if they have no Mekong River, they do not know how they will survive.

Villagers are dependent on the Mekong and we collect fish, use it for transportation, drinking water, irrigating our paddy field, medicine and herbs. We believe in the water-forest spirit, and collect natural vegetables and water products ...the Mekong is our life – 10 villagers of Samphin and Koh Phdao.

- **Samphin Village:** was resettled 1932 and is located at the end of Koh Rogneve. The width of the village is 1.5 km and the length 5 km. There are 242 families with 1,246 people including 744 women. 95% are farmers and also subsist on fishing. There are 157 families of medium income, 41 poor families and 44 families are living in abject poverty. The remaining villagers are small merchants and fishermen. Villagers are 100% Khmer and Buddhist. There is a pagoda in the village which has two monks. There

is a secondary school (one building with 5 rooms) and primary school (10 rooms) in the village.

- **Koh Phdao Village:** Connected in the north of Samphin village, this village was resettled in 1932 and the villagers are all Khmer. The width of the village is 2.5 km while the length is 3.8 km. 99% of the villagers are farmers and 100% of the villagers are Buddhist. There are 139 families with a population of 738, including 364 women. Villagers estimated that 38 families are the poorest of the poor, while 76 families are poor and 26 are better off⁵¹.

Samphin's villagers are using rechargeable batteries for about 40% of lighting, radio and black and white television, while 60% are using tree resin for lighting. It is very expensive to use rechargeable batteries, about USD\$45-55 for each battery and USD\$1 per recharge. 10% of Koh Phdao's villagers are using rechargeable batteries while 90% are using resin for lighting. All villagers are using firewood for cooking which they are able to get from the forest in the village. They have secondary jobs like raising chickens, ducks and cattle. Some people sell their seasonal labor for crop cultivation such as rice planting, harvesting, clearing land for paddy fields and collecting bamboo to sell.

At Sampin, 99% of villagers are farmers practicing cultivation on 159 ha of land. While in Koh Phdao Village, 96% of villagers have paddy fields consisting of 71.33 ha of land. All paddy fields are rain-fed. The average rice yield is 2.25 tons per ha. During village discussions it was indicated that in Samphin, 50% of villagers experience food shortages for 1-3 months; 20% for 3-6 months and 10% for 6-9 months and 20% have a surplus. Koh Phdao villagers reported that 30% of villagers have food for 1-3 months, and 20% of villagers have food for 3-6 months, while 10% have food for 6-9 months.

Rice is a daily food for local communities and there is not any food that can replace it. In the village study, it was found that some families even lack rice, but villagers are able to borrow rice from each other and they can compensate for this after the harvesting season. A village's rice bank with local regulation was created in order to manage the community's rice supply, with support by OAus and other NGOs. This practice has provided lots of benefits to vulnerable groups in both villages and reduces the debt from the middlemen in communities.

⁵¹ Participatory Rural Appraisal by Oxfam Australia in 2004

Role of Fish in Local Livelihoods

My family eats at least 1-2 kg of fish per meal, 25 days a month. I eat more fish in the dry season, if the water is full in the Mekong. By building the dam at Sambor, I will find it very hard to fish for my food, but this is not only me; all of the villagers will have the same problem. - Villager in Kang Deysor Village, Stung Treng Province.

All of the interviewees said that “we want to eat fish and we cannot eat electricity”. They added that, “fish are not so plentiful and the price is going up.” Villagers eat fish at least 20 days per month. Fishermen can sell fish, and catch them using traditional fishing gear like fish-traps, through-nets and hooks. In the wet season villagers can catch fish, crabs, frogs and snails from small streams and paddy fields and can fish in the Mekong River. Surrounding villages are in dolphin conservation zones, and are not allowed to use gillnets, so villagers can fish freely by using legal fishing gear. They added that this year fish produced a very good yield even in the wet season, because they were able to fish from the paddy field and fish migrate to the Mekong when the tide water is down in the dry season. In relation to the dam at Sambor, they are concerned because the dam will block the river, depriving them of large quantities of fish.

It is indicated that in Sambor District, villagers are dependent on fish as a source of daily food that provides lots of protein. Even though fish catches have declined recently, fish is still cheap if compared to other provinces in Cambodia. Related to the dam proposal, only a few villagers have any idea about the migration of fish in the Mekong and Tonle Sap throughout the year. They come to lay their eggs and the dam will halt this and will cause major impacts to the Tonle Sap. They think that if the Mekong is flooded all the time, villagers will find it difficult to fish. Some people from the Tonle Sap area are extremely concerned about the fish and the future impacts to all of the Tonle Sap people, with a current population of about 1.7 million.

Environmental Issues

There are a lot of potential environmental impacts to the river which are linked to the daily lives of the people. Interviewees report that the river has lots of violet algae which is toxic for the fish and makes it difficult to travel in the dry season. In the rainy season, they could not see the algae because the water current is strong. Last year, there were 6-8 dolphins that died, possibly related to toxic algae in the river. The toxic algae started about 7 years ago and there is a lot of algae in the dry season because the water velocity is not strong. There will be more algae if the river stores

water for the reservoir. They told me that in the wet season, there was no algae, but in the dry season, there was lots of algae in the river in Kratie and Stung Treng Provinces and this made it difficult for traveling and fishing. Some people said that a scientific study indicated that the algae will seriously impact human health for a long time.

Local Communities and the Dam

In a discussion it was identified that if the dam is built there are several key impacts on peoples' lives such as fishing, rice fields and crops, culture and beliefs, dolphins and wildlife, flood relocation, health, water pollution, algae and disaster if the dam breaks.

Over the past few months, we've seen the Chinese survey water levels in our village and they've talked about the dam. In the wet season we face floods and our lives are very difficult. If the dam is built at the end of the island, my house and paddy field will be flooded. We will be relocated to other places and we do not know where. We are so concerned about the dam. We might die because we have no rice to eat and we have no boat to move from the flood, so we are very scared about the dam. We really want to oppose the dam, but sometimes, we can not speak out with very strong words because some leaders will be angered by what we say. - 3 Women at Koh Pdao village

I will ask people to go to the dam site and break it down. If some people come to discuss building the dam, I will ask the villagers to not allow the company to build it. We do not need heavy floods that make fish confused about the seasons. Of course we need to use TVs and lamps, but we can use rechargeable batteries. - Woman in Damrey Phong village

They confirmed that information about the dam is undisclosed and no one talks about the dam in the whole district. Villagers saw officials from the Chinese company studying water and geology by boring the riverbed for about three months from June-August 2007. Not only villagers, but some of the local authorities also did not know the exact location of the dam site. A government officer said that the dam could be located north of the district town and pass to Koh Roghnev and the dam length is 15km. They do not believe the dam will be built because it needs a lot of funding. No one knows officially where the resettlement location is because 67% of Sambor District will be submerged and all the land has been made as concessions to Chinese to plant teak⁵².

⁵² Mr. Vanna Mean Deputy Sambor district governor personal discussion on 14 Sept 2007

They revealed that the government should openly discuss the pre-feasibility study with local communities in order to reduce fears. Most of the interviewees are concerned about the dam and they have prayed because they thought the dam will directly affect their life. Only one man said that if the government builds a dam the government will announce information via TV. He added that the government wants to build the dam because now in Kratie and Stung Treng the electricity is bought from Vietnam and Laos. In some areas at Thailand's border including Siem Reap Province, the grid is linked with Thailand⁵³.

Perspectives of People Potentially Affected by Resettlement

I believe that the government has never constructed the dam without people. That means that the government needs people rather than dams
- a man in Koh Phdao Village, Sambor District

95% of interviewees mentioned that they spent about 20 years to clear their land after the Pol Pot era, and now they have a surplus of rice yield and most of the villagers continue to clear more land for their children because some years they have faced food shortages. Most of the villagers told the Chinese researchers false information because they think that the Chinese will build the dam at Sambor. They added that the Chinese researchers asked only the depth of the area including the paddy fields surrounding the villages. Only two people believe that the dam will not be built, because throughout their lives, there were many dam-studies.

Two women said that villagers on the eastern riverside will be resettled to Pres Mea Mountain, where there is jungle about 15 km from their village and there are no water resources. A concern for all interviewees is paddy fields, fish, drinking water, floods and their health, because that area is a malaria zone. A lady said that she heard that the compensation is only 50% of actual costs and she said that if the government compensates her to the amount of USD\$1000 she will not agree because she has spent about 20 years clearing the land, growing fruit trees and building a good wooden house and now cannot find any high quality wood to build new houses. People facing direct impacts will be compensated by the dam builder.

⁵³ Mr. Non Chum, Kampong Cham commune, Sambor district in during village meeting 14th Sept 2007

Local People and Floods

So if the Chinese block the river the villagers will be like the living dead because we are dependant on the river and we do not know where we are going to live if there are heavy floods for a whole year. So, people in my village and villagers in surrounding villages are afraid and concerned about the dam. Villagers are so concerned about their livelihoods that they have developed mental and physical problems, because mentality and physicality are interlinked to each other - 10 people of Koh Phdao and Samphin villages.

Interviewees revealed that previously their village rarely flooded, maybe once every ten or twenty years. They remember that there was flooding in 1978, 1984 and 1996. However, since 1998 there has been a flood every year. Some villagers decided to abandon their rice paddies near the river and move to areas further away to escape the flooding. Moreover a heavy flood from 2001-03 caused such impacts as the destruction of paddy fields and other crops, the outbreak of animal diseases, human diseases like typhoid, malaria, dengue and other gastrointestinal diseases. They added that during a flood, there were very many difficulties for women, children and older people. Women are very concerned about children drowning, the spread of disease and that the oldest people can not find places for defecation. Sometimes, there was family conflict, which often included neighbors, because of lack of food for cattle. This was due to the fact that cattle destroyed some of the crops.

Interviewees said that if they are resettled because of the flood, they do not know where they are going to live and also that it will be very hard as well if they are living so far from the Mekong. They need school for their children, a hospital and market. The new area will be faced with water problems for drinking, household use and agricultural purposes. They said that they cannot find out if it's a highland area, and malaria is also a key concern. During a workshop, they found it very difficult to talk directly about the dam and hard to compare to other situations. On the other hand, from the experiences of flooding in the past, it can be compared to the situation of villages studied during a flood if the dam is built.

It can be concluded that villagers lack knowledge about the dam's impacts, but they have many experiences of flooding. Interviewees identified that women, children and older people are more seriously impacted during flooding because women need rice, firewood and water for food. Moreover, women have to cook food, while men look after cattle and go fishing. They also have concern for the oldest people who cannot access the pagoda, as well as great concern about children being drowned by flooding.

Compensation Experiences at Sambor

Article 39 - Khmer citizens shall have the right to denounce, make complaints... state body.

My hand-pump well was replaced by a new one and the amount of water is less than the old one. The committee has compensated to my cattle cages- so there were not any problems - A man in Sretreng Village-Sambor District

In Sambor district, there has been no trouble regarding resettlement by development projects yet. Recently, only a road reconstruction project, financed by the Chinese, has been undertaken. This road connects Kratie Road to Laos Road No 13. Compensation was given to affected people in the forms of cash or assets. According to the discussion with an affected villager on road No. 7, it was revealed that the inter-committee did house-by-house investigations and the committee had a standard format for compensation, but public consultation in the whole village was not held. Two men said that there is not any problem about compensation in Sambor because the land price here is so cheap, but if this road has lots of people like other places it might cause problems. Most people in Sretreng Village are from the Phnong ethnic group, so they are dependent on rice cultivation and the collection of NTFPs, needing enough opportunity to forage. Other sources confirmed that villagers got a lot of compensation compared to the actual price.

It is quite good compensation for this family in terms of money and assets. A key issue is that public consultation was not done. Compensation documents in Khmer were made available, but most of villagers could not read and write Khmer. Public consultation with the whole community gave people ownership and reduced internal conflicts or, in other words, it gave the project accountability, responsibility and transparency. Investigation without wide community participation destroyed the local cohesion because affected people were jealous of each other, and unhappy with unfair appraisals of those assets. Public participation does not mean only finger-pointing of affected people.

The Right to Speak

Article 41 - Khmer citizens shall have freedom of expression, press, publication and assembly.

All interviewees in Koh Phdao and Samphin Villages confirmed that villagers cannot openly discuss the dam. Moreover, during Samphin Village's meeting a man said that villagers were violated if they wanted to discuss the dam. Surprisingly, communities at Stung Treng were able to freely discuss the dam. When the dam began to affect people, there were 12 people from Ratanakiri Province who were not allowed to participate in the forum held to address these issues. Not only is the dam an issue, moreover the land concession for teak tree plantations is also a sensitive issue.

Based on the local situation and political context, especially rural communities like Sambor, where the information is not widely accessible, it is very hard for local people to be able to speak out about their concerns. Sometimes, local people are violated, especially prior to national elections, although it is against Cambodia's constitution.

Dolphin conservation and ecotourism

Article 59 – The State shall protect the environment and the balance of abundant natural...wildlife, fish and aquatic resources

...this region is the area for eco-tourism ...including fresh water dolphins in Preak Kompy in Kratie province that can attract national and international tourists - Sam Deach Hun Sen (Prime Minister of Cambodia)⁵⁴

Our young generation will see only the dolphin's statues if the dam is built! Why has the government planned to build a dam at Sambor District, while lots of NGOs and governments are spending resources to restore and conserve the last dolphins in the Mekong - a man in Sambor District.

The Irrawaddy Dolphin is one of 7 river dolphin species in the world and lives in salt and fresh water. It has a wide tropical distribution but there are only 3 exclusively riverine populations: in the Mekong River (Cambodia, Laos) Mohakam River

⁵⁴ at the Opening speech of the Construction of the NR 76 from Snuol to Sen Monorom of Mondulkiri, dated 14 February 2007

(Indonesia) and Ayeyarwady River (Myanmar). These populations are all listed on the IUCN Red list as “Critically Endangered”.

In Cambodia, permanent habitats of the Irrawaddy dolphin are now limited to six areas along the Mekong. In Kampi alone, a survey in October 2006 indicated a population of 25 dolphins, up from only 17 individuals in 1997. Overall, about 130 dolphins are believed to inhabit Kampi, another two areas in Kratie and three areas further upstream in Stung Treng Province.

A record of the Kratie tourism department showed that the number of visitors to Kampi jumped from 7,612 visitors in 2005 to 10,844 visitors in 2006 and 7,751 visitors during Jan to July 2007 and the Irrawaddy dolphin is a key element to attract visitors. In Koh Phdao Village, there are 10-15 dolphins that appeared in the dry season, because those locations have deep pools and fish that are food sources for dolphins and both of them are interlinked.

Interviewees revealed that the dolphin is an animal of national heritage and the government has spent lots of resources to conserve it from Kratie up to Stung Treng Province. All fishing nets in this area are banned and will be collected by the river guard group. They have confirmed that this is a good approach to protect the dolphin. They still wonder what will happen to the dolphins if the dam is built and blocks the whole river. An easy indicator to identify is if the dolphins die which means that the Mekong’s water is polluted.

Many jobs have been provided to Kratie people by ecotourism activities. In Kampi during past dry seasons all dolphins have appeared. A number of motorboats are used to bring visitors to see the dolphins. Small handicraft shops are growing to produce dolphin statues to sell to visitors. Moreover, there are jobs for women selling many things like soft drinks for visitors.

There is lots of revenue to local people from ecotourism in Kratie and Stung Treng. Dolphins are a key animal to attract tourists to come to Kratie. It is quite clear that the government understands the significance of dolphins and ecotourism for local people. If a dam is built dolphins might disappear, along with local revenues and local business from ecotourism. Therefore a dam study must include all the aspects in order to provide the right direction for decision makers in order to take a balanced approach to development.

Conclusion and Suggestions

Conclusion

This research has provided views and perceptions of local people regarding the proposed dam project and how those villagers are deeply concerned and fearful about it. Moreover, the research found that all interviewees have considered how their livelihoods will be impacted. Many feel they have not had enough information during and before this study. Research found that the food security through crop cultivation and fishing and their health are the most important factors and they are concerned about the graveyards of their ancestors for local communities. Research found that electricity is important for the government, but more significantly, electricity is not so important for local people who are content to use rechargeable batteries as alternatives. They want to protest the dam and set up a local voting process to gauge the level of village opposition to the dam. This study has provided a link between hydropower dams and land concessions for tree plantations in Sambor by bringing irrigation to plantation areas. Moreover, the research found that the experience of compensation in Sambor District related to the road rehabilitation under loan by the Chinese government was done well and could be strengthened and improved as a practice for other development projects in the study area.

The research has concluded that no single person is happy with the resettlement, even with good compensation. They are scared to be resettled. A few interviewees do not believe the dam project will happen in their village, because they have spent their entire lives on the island. It can be very difficult to sum up all of the assets and their values, because villagers are expending all their effort to survive by clearing the land for their crops. Moreover, the value of local people's culture, community cohesion, including sources of raw natural resources for their daily life such as forests, water, and paddy field, will disappear if they have to resettle because of the dam project. This research also compared the key articles of Cambodia's constitution related to the rights to life, belief and environmental conservation. All of this is a responsibility of the government to deeply consider before any final decisions are made for development projects. Those articles have emphasized the role of all people to participate in the process of project design. It could be reconsidered from all aspects, especially indigenous cultures and concerning direct potential impacts to communities.

Suggestions

These suggestions are based on the local context and can be appropriated to the key players such as communities, civil society and local government in Sambor District

in order to clearly understand the communities' perception and their concerns and fears about the dam project at this stage.

Community needs:

- Know and learn more about the dam impacts, experiences at the country level and regional level if possible
- Learn more about the regulations, laws and constitution in order to use those laws as leverage to talk with the government by using their own rights.
- Learn the ways to analyze the long-term potential impacts in order to discuss with the government and get a fair compensation if the dam is built
- Link to other villages, communes and the upper level to share information in order to talk with governments and dam builders
- Voice all concerns by showing evidence to outsiders like researchers from the government, development agencies and media in order to give a clear picture to decision makers
- Document all important information as baseline data for fisheries and other NTFPs in order to help the government and key players to deeply understand how local livelihoods are dependent on natural resources

Civil society needs:

- Build up the communities capacity on law and regulation in order that communities are able to use it in a proper way
- Build up the community's capacity via learning the experiences by exposure visits, workshops, training and others.
- Build up the capacity for local people in order to voice through media systems such as news, radio and public forums to discuss the dam's potential impacts
- Monitoring the dam process and sharing clear information with good explanations and mobilize local communities to use those pieces of information effectively
- Work with key players like governments, academics and civil society to set up a joint research project in order to more easily lobby the government before a final decision is made for any project
- Produce understandable training materials for local communities
- Strengthen the networks from the country, regional and international levels by sharing information

Local government needs:

- Provide clear information about the potential impacts, such as a concern for local people, to the upper levels of government in order to consider different options for the dam project.

- Share information about the dam's feasibility study before or during the study times in order to reduce local people's fear of the dam
- Listen and bring all local people's voices on negative and positive impacts to show to other levels before a final decision is made
- Lobby the study team (Chinese and JICA) and the government at the upper level, such as provincial and national, in order to deeply consider a second option
- Provide a chance for communities to voice their perception related to dams, in accordance with the country's laws and regulations

The Proposed Ban Kum Hydropower Dam and Mekong Villagers' Ecological Knowledge

By **Tanasak Phosrikun**

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Background of the Ban Kum Dam Project⁵⁵

In 2005, the Department of Alternative Energy and Energy Conservation, Ministry of Energy, Thailand, employed Panya Consultant Company Limited and Mahanakorn Consultant Company Limited to conduct a feasibility study of the Mainstream Dam projects on the Mekong River. The result of the feasibility study was a proposed 7 hydropower dams that could provide benefits for the economy: Nam Khon Falls Hydropower Dam (Laos), Ban Kum Hydropower Dam - 2,175 MW (Thailand-Laos border), Xayyaburi Hydropower Dam (Laos), Pha Mong Hydropower Dam (Thai-Laos border), Luang Prabang Hydropower Dam (Laos), Pak Beang Hydropower Dam (Laos) and Sambor Hydropower Dam (Cambodia).

In 2007, the Department of Alternative Energy and Energy Conservation, Ministry of Energy, Thailand, again employed Panya Consultant Company Limited and

⁵⁵ Translated from Public Hearing Platform: Ubon People, Thai Society and Ban Kum Hydropower Dam 6th September 2008 at Ubon Ratchathani Cultural Centre, Ubon Ratchathani, Thailand (Document) : www.mssrc.la.ubu.ac.th/2006/admin/Conference/23/BanKumDamTalk_project_final.doc



Proposed Ban Kum Dam Project

Macro Consultant Company Limited to conduct a “Pre-feasibility Study and Initial Environmental Study” for Pha Mong Hydropower Dam Project and Ban Kum Hydropower Dam Project (afterwards, the project names were changed to Pak Chom Hydropower Weir and Ban Kum Hydropower Weir), finished in March 2008.

In an Initial Environmental Study, the March 2008 edition shows that “Ban Kum Hydropower Dam will be located near Ban Tha Long Village, Tumbon Huay Pai, Khong Chiam District, Ubon Ratchathani Province. The reservoir can store 2,111 million cubic meters of water, running 110 kilometers along the river from Khong Chiam District to Khem Ma Rat District. The model dam is a run-of-river dam with 22 gates, a ship elevator and fish ladder located beside the dam, and a 1,872 MW generator with a capacity of 375 MW (20% of generator capacity). The project budget is about 120,330 million Baht (about 353.91 million USD, as of 3 September 2008).

The Ban Kum Hydropower Dam impacts are the following: the reservoir will flood 98,806 rai of the river bank, including areas which the people use to cultivate crops. The reservoir will flood 1 village on the Thai side — Kun Tha Kwian village — and flood 3 villages on the Laos side. There will be a negative impact on fisheries on the river mainstream and the tributaries in the upstream of the dam, because the dam

will block fish migration, the water level and rate of water flow in the downstream of the dam, proving detrimental – it will affect the Thailand/Laos boundary.

On 25 March 2008, Mr. Noppadon Pathama, the Thai Ministry of Foreign Affairs Minister, signed a Memorandum of Understanding (MoU) with Mr. Thongloon Seesulid, Vice Prime Minister and Lao Ministry of Foreign Affairs Minister. Both agreed that the Italian-Thai Company Limited (Public) conduct Ban Kum Hydropower Dam Project's feasibility study within a 15-month timeline. It will be the first dam located on the Thailand-Laos border in the Lower Mekong River Region and has the cooperation of both countries.

Afterwards, on 25 May 2008, Mr. Samak Sundaravej, the former Thai Prime Minister, spoke on the talk show, "Son Tha Na Pra Sa Samak", saying that the "Thai government signed a feasibility study already and will support the rapid start of the project; this isn't a dam, but it is "Check Dam" or Meaw's Weir (Hmong ethnic group's weir), meaning that it is not a big dam, but rather, a small dam like that of a Hmong ethnic group's weir.

Information from the local NGOs who monitor the issues stated that the impacts from Ban Kum Dam affect not only the villages on the river bank, but also villagers in more than 50 villages near the Mekong River on the Thailand side who also go to the Mekong riverbank to catch fish, tend riverbank cultivation and get many other benefits from the river. The initial impact assessment roughly evaluated village dependency on the Mekong, excluding villages on the Laos side, as NGOs in the area could not go to the Laos side and inform the Lao people about the project. The project did not inform the people for them to agree to it, and Panya Consultant Company Ltd. conducted a pre-feasibility study quickly and quietly. Mr. Kraisaak Chanhawan, a Democratic Party member, said the government's signing of a MoU with Laos on the construction of Ban Kum Dam in Ubon Ratchathani province may violate the constitution.

Research questions, objectives and methods

The main interest of this research is to learn how the people use the river's ecosystem employing their local knowledge, and how they manage their natural resources by themselves. What is the ideology of the local wisdom? What kind of technical local wisdom and natural resource management local knowledge do they use? Finally, what will happen to the people and river's bio-diversity when the dam is built?

The field research data collection took place over 1 month (October 2008) in the village. The methods used were interviews, photo documentary, participation in NGO work and focus groups. One limitation of the research was that it could not view the villager's year-round activities.

The findings of this research

Kun Tha Kwian Village is located in a mountainous region close to the Mekong River and was established more than 200 years ago. The area around the village includes shale, cliffs with poor soil, a nearby stream and the mighty Mekong. Due to these conditions the villagers have expertise in mountain forests and in the Mekong River, as they have used these ecosystems to survive for a long time. Furthermore, they are able to identify 11 different ecosystems, broken down into the following classifications:

1. Phou/Pha (mountain): the highest ecosystem in the area. Its height is more than 150 meters above Mean Sea Level (MSL) and includes Phou Pha Deang and Pha Kon Voi.
2. Kok (the land along the riverbank): characterized by land and forest area with a height of a little bit more than 115 meters above MSL.
3. Ba (rocky land): characterized by rocky areas with a little bit of soil. It is found at a height of about 115 meters above MSL, though some parts of this ecosystem are lower than 115 meters above MSL such as Ba Bok Kung and Ba Nam Tiang.
4. Riverbank: there is an abundance of soil and sand along the Mekong River and the elevation is under 115 meters above MSL.
5. Huay/Hong (stream): flows from the mountains to the Mekong River.
6. Khun: these are the rapids formed along the riverbank and extend out to the middle of the Mekong River at an elevation less than 115 meters above MSL such as Huay Hin Poon and Huay and Huay Sao Khae.
7. Keang: these are rapids in the middle of the Mekong River and can cause the river to flow in a circular way called "Khun." Keang are lower than 115 meters above MSL, such as Keang Hoo Zun and Keang Yang Kood.
8. Bung (pond): ponds occur in the dry season (October-April), when the rocks around them separate from the mainstream of the river. The ponds are lower than 115 meters above MSL such as Bung Phae and Bung Ya.
9. Dorn (island): the villagers describe the islands as "the land located in the river, surrounded by water, and lower than 115 meters above MSL" such as Dorn Ma Kharng and Dorn Kun Khao.

10. Thum (cave): the caves occur during the dry season (March-April), as they are located in the rapids and rocks of the river that are submerged during the rainy season. They are lower than 115 meters above MSL such as Thum Sae and Thum Khum Ming.
11. Wern: this ecosystem is within the mainstream river. The ecosystem of the wern is more diverse and abundant than any other river channel. In the dry season there is one Wern Yai.

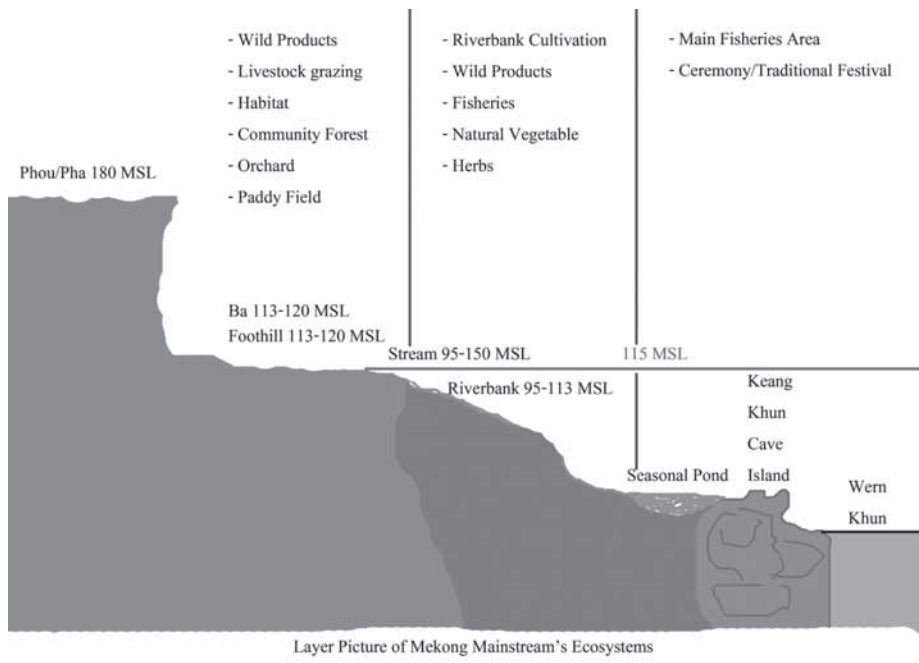
The different ecosystems in the river inspire the need for different tools and the invention of methods to get benefits from each ecosystem. Villagers' main income is from fishing and riverbank cultivation during the dry season, but that does not mean they do not get any benefit from other methods or sources. Briefly, their many uses of natural resources in Ban Kun Tha Kwian village are catalogued as follows:

1. Wild products, such as bamboo shoots, mushrooms, natural herbs and wild animals. Almost all of the wild products can be found in the ecosystem known as "Kok" as well as on the mountains.
2. Conservation Forest: villagers have set up the conservation forests on the mountains which they manage themselves in cooperation with NGOs. This entity has been established because the government declared the forests to be "National Parks" and prohibited villagers from using anything in the forest.
3. Paddy fields: a few families in this village have paddy field. They grow rice in the rainy season and harvest it in October. The rice they grow is not enough to last all year, so they have to bring other products and exchange them for rice with other communities on both the Thai and Laos sides of the river.
4. Plantations: Along the riverbanks they grow many plants such as cashews, bananas and cassava. These plants are grown for economic purposes and are sold to the middle men.
5. Riverbank cultivation: this cultivation begins in October and the harvest is in March and April. The crops are cotton, corn, sweet potato, black bean, soy bean, among others.
6. Fisheries: they can go fishing year round by employing different methods and fishing gear according to the ecosystem, season, and fish species.
7. Energy: the villagers use the wood from dead trees from the forest and riverbank for firewood and use it for cooking food and everyday life tasks that require heat.
8. Natural Vegetables: from my research I found villagers are able to get about 20 natural vegetables and 7 natural herbs from the ecosystem within the Mekong mainstream.

9. Local boat landings: they use the river bank near the village for binding their boat to wood pillars. This is important because they use the boat for fishing and every Thursday they hold a market, where people from across the river in Laos come to sell and buy products. Boats can be fastened to the wood pillars.
10. Ceremonies and Festivals: the villagers use the 2 docks of Tha Baan to set up “Lai Rua Fai” (Flow Fireboat), “Loi Krathong” Festival and Haad Malor for the “Songkran Festival” (Thai New Year)” every year.

Conclusion

The flood number at 150 meters above Mean Sea Level is important because this number means that the land will be flooded, and therefore the villagers in Ban Khun Tha Kwian Village will lose their natural resources on the Mekong River mainstream. Despite this, the Environmental Impact Assessment (EIA) done in the past did not accurately represent the villager’s livelihoods, but it did support the project’s implementation. It can be determined that the past EIA ignored the people’s knowledge of their ecosystems in favor of an assessment that benefited the mega-project. Potential environmental impacts from the dam are listed as follows:



Potential environmental impacts from the Ban Kum Dam project

As previously mentioned, 11 distinct ecosystems can be found around Ban Khun Tha Kwian Village and the nearby Mekong River. The ecosystem includes the relationship between all living and non-living things in the area. These relationships create a diversity of animal species and create benefits for the villagers, especially with the available abundance of fish and fresh water animals. The proposed Ban Kum Dam Project will be built at 115 meters above MSL.

According to my fieldwork, 10 out of 11 total ecosystems including Ba (shale land) and Kok (foothill) will be flooded in the project area (please see the picture above). Only the mountains will not be flooded.

Economic impacts

Some villagers' incomes are from the Mekong mainstream's ecosystem. An example is Mr. Triam Raknate, whose livelihood depends on the Mekong River's ecosystem throughout the year. His income per year includes:

1. Wild Products: 4,000 Baht/year
2. Peanuts: 20,000 Baht/year
3. Cotton: 14,000 Baht/year
4. Sweet Potatoes: 12,000 Baht/year
5. Corn: 1,300 Baht/year
6. Rice: 30 bags about 1,500 Baht/year
7. Cashews: 5,000 Baht/year
8. Cassava: 9,000 Baht/year
9. Snake beans: 5,000 Baht/year
10. Fisheries: 67,500 Baht/year

From this example, we can see that the total income of one household is approximately 140,900 Baht/year. In Ban Khun Tha Kwian Village, there are 120 households. This means that the community has a combined income of at least *16,908,000 Baht from natural resources along the Mekong mainstream*. Furthermore, additional uses of natural resources on the Mekong were not and cannot be adequately estimated economically-- such as ceremonies, herbs, and some wild products and vegetables.

Social impacts

The social impacts of this project cannot yet be fully understood, because the project has only been proposed. However, Thailand has learned many lessons from past and ongoing dam projects. With these experiences in mind, I asked Mr. Chan Khumphoumi “If the dam is built and the reservoir floods the Mekong River mainstream all year, what are you going to do?” He said:

In everyday life we have to fish, and plant crops to provide income and use for survival and sell the crops to buy rice to eat. We don't know where we will live if the Ban Koum Dam is built, because around the village there is mostly shale and it will be difficult to adapt ourselves to these new places.

We don't want the dam, because we have seen the impact of dam projects on people who depend on the Moon River. They can't catch fish and have to migrate to other provinces to earn money, and their communities have collapsed.

This quote from the villager shows the disasters arising from development projects in Thailand that are conducted without awareness and concern for the people's livelihoods. Examining the state's actions, we find that many development projects in Thailand are still not transparent and largely benefit urban dwellers at the expense of Thailand's rural communities.

Cultural impacts

The definition of culture is very wide and covers many things in people's livelihoods. This research conceptualized the Ban Khun Tha Kwian Villager's livelihoods as relating to their usage of the Mekong River ecosystem in 4 categories. Aspects of culture that the villagers of the Mekong River's ecosystem risk losing include:

1. **Local Knowledge:** Natural resources inform the people's wisdom and knowledge of how to use their environment. The knowledge of the people has to be passed from older to newer generations. If the proposed dam is built at 159 meters above MSL, that means that the source of much of the villagers' knowledge of natural resources, such as fisheries and riverbank cultivation, will be lost.
2. **People's Networks, Kinship, and the Exchange of Goods and Labor:** The Ban Khun Tha Kwian Villagers do not have enough rice to eat every

year. They have enough rice to eat only because they exchange riverbank products and fish with their friends and relatives in nearby localities, especially in Srirachaungmai District, Kemmaraj District and some villages on the Lao side. Furthermore, the people coexist in the village peacefully because they help each other when they have to grow many different kinds of crops on the riverbanks.

3. Ceremonies and Customs: The Mekong River is not only used by villagers to get material benefits, but the people also use the Mekong River to sustain their spirituality and beliefs. Every year, the people have a ceremony to apologize to the river and they have some regulations for praying when they are fishing. Mr. Chan Khamphoumi said that, “When we want to go down to the river, we have a magic massage to tell the Naga to protect us and to help us catch fish and be lucky.”
4. Ideology and Power to Negotiate with People Outside of the Community: As we know, the people of the community use natural resources, but there is more to it than that; the people of the community can actually use their relationship to the natural resources to present an image, or an identity, of a sustainable and peaceful lifestyle to outsiders considering and debating their cause. Given the social struggle in which they must engage for their rights and their land, they need to have a unified image to present to the outside world. Non-governmental organizations (NGOs) and independent bodies can use this positive identity to help them fight for their rights and to add power to the social movement. This is a common strategy among NGOs and other supporting groups.

The lessons from many dams in Thailand and around the world are still ignored by many of the decision-makers. The International Law on Political, Cultural, Civil and Environmental Rights is still unenforceable, and even the domestic law is still unenforceable for the grass-roots people, since it favors the rich and those with capital. Politicians and upper class people still utilize the benefits from natural resources without accountability. A final comment is that the leaders of the Greater Mekong Sub-region countries should improve their accountability to their respective societies, and respect the diversity of the region’s natural resources and cultures. Only when they do this, can the countries in the GMS form a “Sustainable Development Region” and the new generation will tell the next generation to be peaceful and loving towards their homeland.

Ban Koum Dam and the Untold Story of Mai Sing Sam Phan Village, Champasak Province, Lao PDR

By Tang Say Nam Ou

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Introduction

Currently, dams are the biggest source of foreign investment in Laos. Laos currently has a combined installation capacity of about 670 MW from 11 major and 40 medium-sized hydropower plants generating energy for domestic and international markets. They generate approximately 3.5 billion kWh per year, of which approximately 2.2 billion kWh are exported to Thailand. By 2020, Laos hopes to be capable of energy generation with an installation capacity of 30,000 MW from hydropower projects currently being built or planned along the Mekong River and its tributaries. 2

Lao dams support the energy needs of Thailand, yet the lack of government transparency makes this potentially beneficial undertaking a burden for many ordinary Lao citizens. But Lao government officials claim that the country needs the revenue from these projects in order to meet its development goals. Khammany Inthirath of the state-owned Electricite du Laos stated, “According to our surveys, there is room for the development of 70 more hydropower dams in the future, with a combined capacity of 23,000 MW,” in an interview last year. “But we need to protect the environment by conserving our forests, particularly in watershed areas so that hydropower project will have enough water to produce electricity. We have

already committed to exporting 5,000 MW of electricity to Thailand by 2015 and we have to work hard to fulfill this commitment,” he added.

Ban Koum Dam

In 2005, the Thai Department of Alternative Energy Development and Efficiency and the Ministry of Energy hired Pan Ya Consulting Company and Mahanakhorn Consulting Company to study the potential sites for a fish ladder and hydroelectric dam on the Mekong River. After the study it was determined that there are seven potential hydroelectric dam sites that fit the engineering and economic needs. Ban Koum dam (located on the Lao-Thai border) is expected to produce 1,872 MW of electricity. There are other planned dams including Xayabouri Hydroelectric (Laos), Pa Mong dam (Lao-Thai border), Luangprabang dam (Laos), and Sambor dam (Cambodia).

Later in 2007, the Department of Alternative Energy Development and Efficiency and the Ministry of Energy hired Pan Ya Consulting Company and Macro Consulting Company to study and report on the “pre-feasibility and environmental initiative” of Pa Mong dam and Ban Koum dam. The study was completed in March 2008.

A huge potential effect of Ban Koum dam is that the reservoir could flood about 98,806 rai of the Mekong River bank. This is a very important agricultural production area for local communities in both Laos and Thailand. It will flood Khun Tha Kien village on the Thai side, and three villages on the Lao side – Hang Don Koum in Champasak province, Kham Tue, and Khan Thoung Xai villages in Saravan province. Fisheries upstream from Ban Koum along the Mekong River and its tributaries will be affected because the dam will block all fish migration in Mekong River, impacting the water level in the Mekong River and the water flow to downstream.

On the 25th of March, 2008 Mr. Noppadon Pathama, the Thai Minister of Foreign Affairs signed a Memorandum of Understanding (MoU) with the Lao Minister of Foreign Affairs, Dr. Thongloun Sisoulith. Both sides agreed that an Italian-Thai joint venture company from Thailand would conduct research and a feasibility study during a 15 month period. This will be the first mainstream dam on the Mekong River between the Lao-Thai border.

On the 25th of May, 2008 Thai Prime Minister Samak Suntaravej appeared on the television talk show “Son Tha Na Pra Sa Samak”. He mentioned the Ban Koum dam project between the Thai and Lao governments, stating that it had already been agreed upon and would be built as soon as possible. He added that people should

not call the Ban Koum dam a “dam,” but rather referred to it as a small “check” dam or “maew weir”.

One of the reasons stated for building dams in both countries is to help secure economic development and to help the plight of the poor. Yet both governments have failed to inform villagers about the project or to include them in the decision-making process.

Hang Don Koum and Mai Sing Sam Phan Villages

I conducted my research in 2 of the villages that will be affected by the Ban Koum dam. Hang Don Koum village has been separated from Soula village for 20 years. Previously, the village was a soldier’s camp for patrolling the border between Laos and Thailand in the war era. Villagers from Soula village have since separated and resettled in Hang Don Koum village. Many villagers from Saravan province have also moved to the village and live there to this day. There are 31 households with a population of 156 people that will be directly affected by the dam, meaning more than a hundred people will be relocated. The people in this village are farmers, fishermen, and gardeners by trade. Most villagers’ lives are dependent on locally available natural resources and the Mekong River. If they do not have food to eat, or are unable to catch fish during the day, they utilize forest up on the mountain to collect bamboo or mushrooms to make soup for their meals. It is very simple food and easy to get from their village. Villagers can collect food, wild fruit, vegetables and natural medicine throughout the year.

Hang Don Koum village is the poorest village in this area if compared with other villages in the vicinity. It has no electricity, water supply, health center, or toilets. The primary school has only two rooms for five grades; grades 1, 2, and 3 study in the same room with three different black boards separating the curriculum, and grades 4 and 5 study in another. There is only one primary school for the entire village.

Mai Sing Sam Phan villagers claim to have faced downstream impacts from the Pak Moon dam in Ubonrachathani, Thailand. It is home to 136 households, 148 families, and a population of 716 people. The total village land area spans 3,145 sq km. This village was established in 1968 and is a mixed community of many different people from different places who settled there -- which explains the origins of the village’s name: “New Unity Village.” In the past this village depended mostly on fishing in the Mekong River. Villagers could catch many fish and earn a sufficient amount of money from fish sales. But now it seems these villagers are mostly engaging in rice farming, riverbank gardening, and trading in conjunction with fishing. This is

largely because the village is now quite developed, and sits opposite to Dan village on the Thai side, which holds a market every Tuesday, Thursday, and Saturday. People from both sides can cross the Mekong River by boat for trade and traveling. Fishing livelihoods in this village were gravely affected by the Pak Moon dam, the details of which will be further explained in a later section.

These two villages are located in Sanasomboun district, Champasak province in the southern part of Laos. The people are lowland people from the biggest ethnic group in Lao, known as Lao Loum. Their traditions are the same as Lao in the big cities or townships, holding festivals based on the Lao calendar and practicing many customs and traditions passed down from generation to generation. They are practicing Buddhists. Their livelihoods are 80 percent dependent on natural resources.

The Lao Government's Official Response to the Villagers

No matter how big or small, the project will be approved and conducted as the Lao government and investors have agreed upon. The villagers in the project area, however, have not been informed as to the stakes – what they are going to lose or the problems they may face in the very near future. According to the country's policy and law, dams are very good for Lao citizens. But since the state's policy is not transparent, it is quite difficult to protest or make group complaints, as local people have little or no influence over the projects which can affect their lives. Laos, like its neighbors China and Vietnam, is run by a communist government, proving strict in terms of government rule. All forms of media, including newspapers, TV, radio, and the internet are all under governmental control; particularly in Laos, people do not have much freedom regarding media or news from the government. During my research I learned from villagers that government officials do not inform the villagers before the start of a project. Only officials from the ministerial, provincial and district levels of government are informed, while those who face the most serious consequences are neglected. After approval by the government, the company researcher will come to the village with the government official's signature or stamped document to show the head of the village all they have done from the past until present. The villagers do not even know the future of their land's natural resources because no government official has ever come to explain to them future plans for their land. Having very little formal education, about 70% of Lao people living in rural areas are illiterate (source from World Bank). Often times the government officials look down on low-income citizens, considering them unworthy of help:

“Before I used to get 500 baht per day driving a boat for Thai people who worked for the Italian-Thai Company and came to do surveys in our village. But last time the Lao official came with them and they did not help poor villagers like us; they even bargained the price down to only 300 baht per day. So we had no choice, we could not refuse giving them boat rides because they are from the government” – Boat operator, 38 years old

Italian-Thai Company Tactics

A photocopy was made of the family registration book belonging to the boat operator who drove representatives from the Italian-Thai company on his boat. The representatives were sent to survey and mark the water level along the Mekong River, though they did not disclose their agenda.

“I don’t know why they asked for a photocopy of my family registration book, but they said that they have to make a photocopy of the book to show the company and get money to compensate the boat drivers. If they didn’t have family registration books they couldn’t withdraw money to pay us. After that we had to sign the document to get our wage.” – Boat conductor, 37 years old

“What are they going to do, build a dam or mining project in our village? They came 3 times to our village, the first time just to survey for building a dam. But later they came to survey about mining and minerals, or something like that up in the mountains. They asked a soldier to take them there. We don’t understand them. They confuse us.” – Farmer, 65 years old

Community Participation in the Decision-Making Process

This dam project violates the villagers’ right of Free Prior Informed Consent (FPIC). Despite their right to participate in the project plan before it starts, villagers do not know about this, or the other rights they have. Some villagers simply do not care about the huge impacts on their lives, while others do not even know what a dam is.

Villagers learned about the dam first from Thai villagers on the Thai side because they often cross the Mekong River to visit each other. They are so similar culturally that even their accent is the same – I could not distinguish who was Lao from Thai.

12 people including Lao government officials and Thai representatives (from the Italian-Thai Company) came to the village for the first time to mark the dam area up to the mountain and down to the river bank. They hired 10 villagers to go with them and offered them a wage of 200 baht per day. The second time there were 11 people; 2 from Laos, and 9 Thais who measured the water level along the area where the dam will be built. When a villager asked, “Will it flood our house? Do we have to move? What about the new houses being constructed?” the Champasak provincial government official did not answer and told villagers not to ask those questions because he was afraid a “third party” might be listening.

One official continually lied to villagers about future plans. At the same time officials kept on telling villagers that they would build them houses and told them that building the dam would help the poor. I asked one villager, if he could speak with the government what would she say? Her response:

“I would tell them to stop the dam, I don’t want it; most of the villagers here don’t want it, either. They accept their poverty. If the dam comes they will lose everything they have now, but I’m scared of the government. If the government tells us to move off our land we have to move. It all depends on the government.” – Female, 40 years old

Potential Impacts of Ban Koum dam

Dam construction may cause serious harm in its impact on the villagers’ environment and ecosystem, food security and water quality.

“Fish! We eat it every day! My husband can catch a lot of fish every day and sell them to Thai merchants every morning. On average, we can earn about one thousand baht from selling fish per day” – Female merchant, 30 years old

People living along the Mekong River bank cultivate it to grow vegetables such as cucumber, sweet potato, long green bean, corn, chili, eggplant, onion, garlic, and cotton. Villagers in Hang Don Koum village grow the same vegetables as well. Some families grow only for their own consumption, while others grow for sale to Thai consumers. On average, just by growing sweet potatoes, one family can earn about ten thousand baht a year.

If the dam is built in the area, there will be no more Don Koum Island in the Mekong River or on the map. This island is used by more than one hundred people for fishing

purposes and twenty people for growing rice. But not only villagers in Don Koum village use its resources – some villagers from Soula village also cultivate rice in the area. The total area of Don Koum Island is 3 km in length, and about 1.5 km wide, most of which is used for growing rice for consumption. Don Koum Island is in the middle of the Mekong River and divides the Mekong River into two channels, making it easier for villagers to go fishing. In the dry season there are more than one hundred *boung* (small ponds), where villagers can catch fish, a time especially good for women to collect snails and small shrimp. If there is an excess of snails and shrimp, they will sell it to Thai people. People in the village can earn money every season from the Mekong River.

“Dams will block fish migration and create an unnatural situation for fish, but dams can also provide protection from flooding, store water during the rainy season for use in dry season agricultural activities, and produce electricity.” – Acting MRC Communication Officer, Aiden Glendinning

“Meanwhile, you have to share the benefits. That means not only benefits for people near the reservoir, but you have to plan for the sustainability of hydropower and consider ways to help people who live downstream to benefit as well.” – Aiden Glendinning.

Ban Koum dam will affect the fisheries not only in the two villages on the dam reservoir and one village where the dam body will be built, but more than 15 other villages on the Mekong downstream, even though it will be located on a run-off-river with 22 gates and with a fish ladder which can help fish navigate the dam. An excellent example is the Pak Moon dam in Thailand, a World Bank funded project that proved an embarrassment for the Thai government.

It seems the Lao and Thai governments are pushing the Ban Koum dam to be the first Mekong mainstream dam, although both governments are presumably well aware of the huge impacts that will affect villagers in both countries. All this while the dam will produce at only 20% of its electricity producing capacity of 1,872 MW, an amount equalling 374.4 MW.

Ban Mai Sing Sam Phan and the Downstream Effects From Pak Moon dam

The Pak Moon dam was completed in Ubonrachathani province, Thailand in 1994. It was built by the Electricity Generating Authority of Thailand (EGAT) with direct funding from the World Bank. The dam was intended to produce electricity for consumption in Thailand. There was widespread opposition to this dam throughout its planning and construction phases, and since its completion, the dam has caused problems that affect villages in Laos, such as Ban Mai Sing Sam Phan.

Ban Mai Sing Sam Phan was established in 1968 and is now home to a population of 716 residents from 136 households, 148 families, and a total land area of 3,145 sq km. In the past, villagers grew cotton and tobacco. By fishing alone during the rainy season, villagers used to get 9-10 million kip per family. Since 1995, the villagers here have become victims of downstream affects from Pak Moon dam and lost everything: houses, land and gardens because of soil erosion since the construction of the dam.

Accordingly, the release of water from the Pak Moon dam reduced villagers' fishing options in each season. Most villagers, in the past, based their livelihood on fishing, and damage to their fishing gear due to water release forced them to spend significant amounts of money on new gear. Some fisherman went bankrupt from buying new fishing gear every week, because they never know when Pak Moon dam would release water. The village is located on the Mekong River at the mouth of the Moon River, so it is downstream from the Moon; when water is released it runs with a fast and strong current.

“I used to go fishing every day before the Pak Moon dam was built. But since it was built I have a very big problem fishing because when they release the water it damages my fishing gear, causing a big hole sometimes, even though I maybe just bought it one day ago. Then I have to buy a new one again and combined with fish declines, I can't earn as much money as before. Now I can catch fish only for eating, not for sale as in the past.” – Fisherman, 58 years old

“In December of 2000, our family had a nightmare of a situation. In the middle of the night our house fell down into the Mekong River. At that time we did not know what to do so my husband shot 3 times from his gun to call the villagers who live around there to come to help. We lost everything, you know. We had just invested in a small village gas station and our house had estimated damage of about one hundred

thousand baht. In the evening of that same day the river bank was falling down to about 80-85 meters. Until now I didn't want to talk about it, like there was something stuck in my throat. Daughter! Please help us because we had asked for help and sent letters to the government and MRC as well, but we didn't get any answer or compensation. Even if they did care how we suffered in the village, we got nothing!"
– Husband and wife

There are 66 families who were affected downstream by the Pak Moon dam by way of the loss of land, gardens, trees, houses, fishing gear, and boats, amounting to a grand total of 17,827,150 baht in damages. This estimated figure was produced by the villagers, who have since given this and document to the governor of Champasak province and the MRC in Vientiane as well. The letter has been sent three times already, but the villagers have yet to receive any reply.

If Ban Koum dam is built the same things will happen to villagers again, just as with the construction of Pak Moon dam. The villagers will be affected with the same problems because it is located downstream, and will not have enough fish to eat. For this village, the old problem hasn't been solved yet, and then they will be faced with another huge 22-gate dam upstream.

Resettlement

Because of the dam there are more than one hundred people in need of resettlement.

"Where should we go or move my house to? My house costs more than one hundred thousand baht, and is under construction now. I put everything I had into my house, hoping that I would have a very nice place here in the village. All that I have, all that had, I used to pay for my house! I don't even know what I can do if the dam built, so I decided to leave it like this in case the dam really does come. Who knows! Will I lose it all? I built a new house but I haven't even stayed there yet." – Village woman who feared the dam so much that she halted the construction on her house halfway through its completion.

"More than 5,000 resettled people from Nam Theun II hydropower project still have many problems and change was for the worse for villagers there. Some got new and better houses, but without a clean water supply, food security, and most importantly, no way to make a living after they lost their agricultural land to the flood waters. These

were the staples in the village and it is hard to find other work as most people there have very little education.” – www.Internationalrivers.org

“I don’t know, daughter! If the dam project really comes -- and its development is planned by the government -- I can’t say anything. If they tell us to move we have to move because we are their children and this land belongs to them. If I had another choice I don’t want the dam, I would rather accept the poverty I have now much more than to move to another place, where we have to start from zero, even if we do have electricity, a health center, or high school for our children.”
– Male, 60 years old

Compensation

“We don’t know! If the government doesn’t want to give us compensation we won’t say anything because we are not bold enough to say anything. Moreover, the land we are living on here belongs to the government, too. When the government orders us to move we have to move. We don’t know where. Maybe move up to the mountain or go to another mountain over there.” – Female, 58 years old

“We heard from Thai people that they will get at least one million baht per family. They will get a lot, but for us it depends on the government. We don’t know how to say anything or argue against government development plans. I am not daring enough to go against the dam project or the government as I am afraid I will die. Who can go against them? They are our fathers.” – Male, 60 years old

Many people have been waiting for compensation from the Nam Theun II Hydropower Project in the central part of Laos. I spoke with a friend, who works for the Social and Environmental Department in Nam Theun II, and asked her whether all those resettled had received all their compensation yet. Her answer was in the negative. Now it is clear what is happening with the affected people of this project, how these people who were not given their compensation are living their lives without land for farming, gardens, and rivers with which to fish. If we analyze the government’s stated reasons for building the dam – to help the poor by providing jobs for local villagers and to increase state revenue, which can in turn be used to create more jobs – all that is evident is that the people are becoming poorer and poorer.

Villagers' Thoughts Regarding the Government

Supposedly, children love their parents and will sacrifice their lives for them. However, this is not always the case in reality. A child who is scared of his or her own father and mother does not dare to ask of anything from them. They accept what their parents give or receive nothing at all.

“The government is our father, our mother. We believe that it won’t let us die from the development project. If it leaves us to die, we will die. We are not brave enough to go against it.” – Male, 61 years old

“Daughter! Dad attended a meeting in Soula village because the head of the district came to visit villagers there. As you know, our village is the poorest village around here, so I asked, “When will we get electricity? Look! Electricity belongs to us but it is only light on the other side of the Mekong River, why?” Then the Head of the district kept quiet and couldn’t say anything.” – Don Koum villager, Male, 60 years old

“We want a high school for our children because now we have only a primary school and when our children finish they want to continue to high school and university. But how can we do it? Our village is very far from the township and we don’t have road access in the village. If we let our children travel by boat to go to school every day it’s too dangerous and impossible for them, especially in the rainy season when the water in the Mekong River is very high. 2 months ago there was a boat that sank in the Mekong River and 2 children died. This made us worry a lot. I pity my son because he will finish primary school this year and he really wants to continue studying, and wants to be a teacher in the future.” – Female, 32 years old

“It is very difficult for us to live here with no health center. When we get sick or our children are sick we have to ride a boat across the Mekong River to the Thai hospital in Ubon. That’s very dangerous in the nighttime with no electricity, but what can we do with children that get seriously sick? We can’t sit around without doing anything. So we have to go, even if the hospital fee is very expensive. Sometimes we don’t have enough money to pay the fee and medicine. Unfortunately we are looked down upon from Thai people, like, “If you don’t have money why do you come here and why don’t you go to your own country’s hospital?” How can we go with no road access and such a long distance?” – Female, 38 years old

There are also some, though very few, who favor the dam and its potential benefits:

“The dam project is government-planned to secure the country against poverty and make our country developed. Then we will have electricity and road access in the village. You know, our village doesn’t even have any bicycles, a health center, or a high school. After the dam our village will be developed. It’s okay if we don’t have natural fish from the Mekong River, we can breed fish along the Mekong River because I believe that our government won’t let us die in front of it.”

– Male, 61 years old

Conclusion

I spent almost one month with the Ban Don Koum and Mai Sing Sam Phan villagers completing my field work. The village has no electricity, road access, health center, or toilets. People’s lives there depend on the Mekong River and the surrounding natural resources for such things as fishing, cultivating rice, riverbank gardens and collecting non-timber products from the forest.

It seems villagers in Ban Don Koum village will be facing very big problems in their lives in the near future because the Lao and Thai governments have agreed to build Ban Koum dam, and the dam body will be built in their village. This means the villagers will be flooded and will lose everything.

Dams are not new for villagers in Ban Don Koum anymore as they have heard about them many times and know of them already from their Thai brothers and sisters across the river. However, they are not sure about the details of the project because the government officials do not inform them. They are still confused as to whether or not it is true that the government will build the dam by their village. They want to know about the dam impacts. Even though they have asked Lao government officials and Italian-Thai Company representatives conducting a survey or feasibility study about the dam, they still know very little. They have even received admonishments by one government official who ordered them to stop asking about flooding or dam projects, afraid that a third party might come and hear. I advised villagers not to be afraid of the government officials because they pay taxes to the government every year. Therefore, it is their right to know what will happen to their own village and land, irregardless of the fact that they are a poor or remote village. They are Lao citizens and pay land taxes to the government.

When talking with the villagers I felt pity and a great desire to help them with their difficulties. They are deprived of information regarding the dam. I tried to bolster their confidence so that they might employ it when speaking with government officials; I tried also to encourage villagers to state to officials what they are for and against. I encouraged them to organize groups within the village or conduct small discussion meetings. I also suggested that the villagers vote for one person as a representative of the village to write a letter to the head of the district and governor of the province. When the government comes to the village our villagers must speak with them too – they should not let others do what they want without input from the community. If they really cannot stop the project, then they must talk with officials about compensation:

“Can we do that? Ok, I will try to talk with other villagers here first. As you know daughter, villagers here, they don’t really care much about this, they just let it happen, then move when the government tells them to move. Some of them take it easy and don’t want to go against government projects.” – Farmer, female, 42 years old

Villagers do not even have a chance to participate in the decision-making process of the project. It seems that the government is hiding something from the villagers – most of whom are confused by the representatives from the government and Italian-Thai Company often coming and going into the village. There are Vietnamese, Chinese, Thai, Japanese staff members, and Lao government officials –some villagers claimed that the officials went up to the mountain to survey for mining and minerals, not only dam-building.

“In the past French war era there was a gold mine in the mountain, but I never saw it before.” – Farmer, 60 years old

Compensation for villagers in Ban Mai Sing Sam Phan impacted from the Pak Moon dam has not been resolved yet. This issue arose 13 years ago and still villagers have been waiting and asking for their dues ever since. Nothing has happened or gotten better. The government has done very little to help the villagers who are poor, and becoming poorer, due to the impacts of the dam.

Recommendations

Since I began my research in the 2 villages, I have obtained much information, knowledge, and experience from the villagers there.

Ban Koum dam violated the statute of Free Prior Informed Consent (FPIC). The governments in both Laos and Thailand should do more to safeguard their peoples' livelihood and natural resources. The Lao government should be more aware of the dam's impacts, especially if they plan on making dams the primary revenue producers in the country— all technicians they have are hired from foreign countries with very high wages. Another important issue to keep in mind is that Lao has a very low capacity to manage social and environmental impacts of big dams.

“There are tens of thousands of people who have increased their level of poverty from Houay Ho and Theun Hin Boun dams, more than a hundred thousand villagers are likely to lose land, fisheries, and other natural resources.”—Carl Middleton, International Rivers.

The Lao government must listen and learn more about the impacts of dams, especially from Pak Moon dam, which serves as a very good representative example.

Local people must learn their rights, in order to use their knowledge in negotiating with project advocates. They should also be brave enough to ask and make suggestions, raising awareness about how important their livelihood, fisheries and riverbank gardens are to them. There are seven families who have solar cells in their houses and 24 families who do not have solar cells yet. Encouraging the government to provide more solar cells would cut down on local needs for hydropower and the need to build more dams. Therefore it is necessary to select one person from the village who can work with the government closely about the project's progress.

INGOs or local NGOs should be more attentive and care more about villagers' lives in the project area. They should be working more closely with the government, dam builders, and villagers. They should be willing to help villagers when their assistance is need, to hold leader positions and be strong and stand beside them against the project. Until now nobody has done this, and, admittedly, it is very difficult to do.

The government should offer more opportunities to local people to participate in the decision-making process, as the project area will be built on the land of locals whose families have been living there for generations. It should study carefully the large impacts of dams on people's livelihoods, the environment, and the ecosystem. They should not only care about the small amount of money that they borrow from

foreign countries to build the dam, but the amount that will become a massive debt to the Lao people and Laos itself.

The government must remember that natural resources are nearing depletion, as our small world is consuming them at a rapid pace – if we do not take care and use our resources in careful, thoughtful ways that benefit all people in the country, they will disappear. It must make sure that the dam will really be built and that the affected people will receive enough compensation before the dam is constructed; that affected persons will be satisfied with their new lives after resettlement. It must not forget to provide them with new occupation or profession to accommodate for their lost land, gardens, rice fields, fisheries, and their changed community. When they move to the new location, and create new communities, they are forced to change their occupation to better suit the new environment, to guarantee a better quality of life.

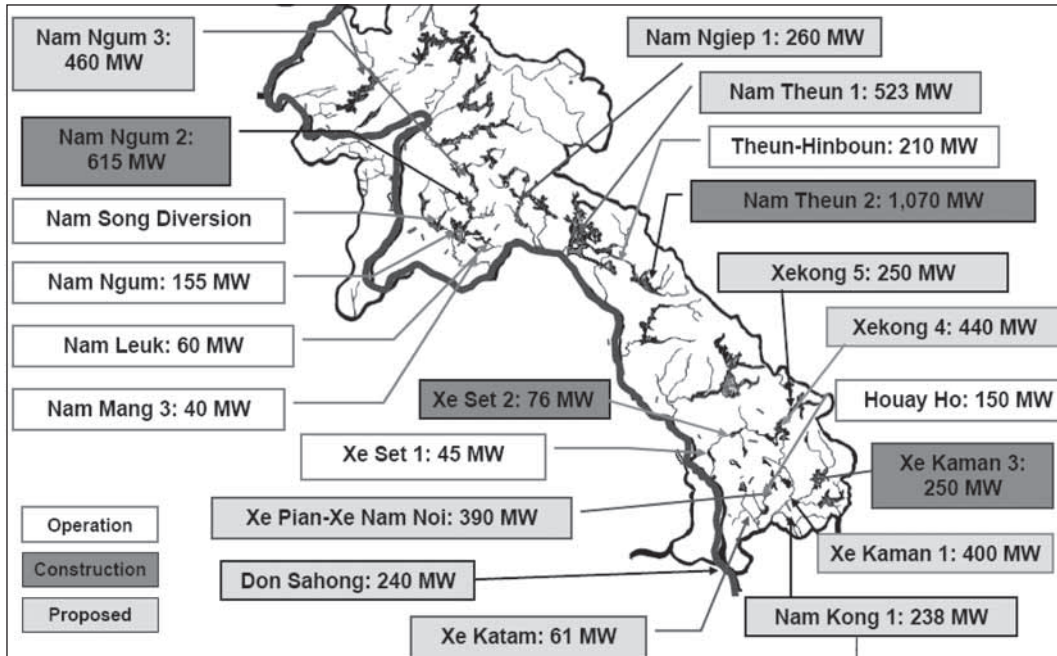
The Importance of fisheries on livelihoods in Don Sahong and Hangkhone villages, Khong district, Champasak province, Lao PDR

By **Namthipkesone Bouttasing**

Namthipkesone Bouttasing is active in the preservation of her native Khmu language and culture, and is working to prevent the negative impacts of development projects in indigenous communities. She has interned with the NGO Forum on the ADB in Manila and TERRA, a regional environmental NGO based in Bangkok.

Introduction

Since the Lao government has opened the country to foreign investment and development, many large-scale natural resource extraction projects, including logging, irrigation, road construction, rubber tree plantations, mining, hydropower dams and other infrastructure development schemes are being implemented in this small Southeast Asian country. While these projects are meant to bring economic growth, many of them will impact not only local people's livelihoods but the environment, as well.



Key existing and proposed dams in Laos Map produced by TERRA based on Maunsell-Lahmeyer International Lao Power System Development Plan (2004), and updated by International Rivers with information from August 2007 Lao Power Development Plan

Don Sahong Dam

Don Sahong dam is one of the dams in the Lao government's plan. The Don Sahong dam, located less than one kilometer upstream of the Cambodia border, would block the sole channel that fish migrating up from Cambodia can easily pass, known as Hoo Sahong in Laos. As a result, the dam could prevent fish migrations up the Mekong River from Cambodia and Vietnam to Laos and Thailand, ultimately undermining fisheries-based livelihoods in all four countries. In fact, a Mekong River Commission 1996 newsletter noted, "the blocking of Hoo Sahong could devastate much of the most important Mekong River fisheries in Laos."⁵⁶

"The Lao Government and Mega First Corporation Berhad (MFCB), a Malaysian engineering company, signed a Memorandum of Understanding in March 2006 on the Don Sahong hydroelectric power project. The Don Sahong dam will be for

⁵⁶ Baird, I.G. 1996 Khone Falls fishers, Catch and culture (MRC newsletter), Vol.2 No. 2 November 1996

hydropower generation, with the electricity to be sold to Thailand and Cambodia. Construction of the dam will cost US \$ 370 million and is planned for completion in 2010 if found feasible. The Don Sahong Dam will be located close to Khone falls, Hang Khone village, Khong district, Champasak province. The dam will be a 20 – 25 m high wall, blocking the Sahong channel⁵⁷

Don Sahong Dam would be the first dam ever built on the mainstream Mekong River south of China. However, the dam will not cross the whole Mekong River, but will instead block Hoo Sahong, one of the many channels of the mainstream Mekong River in the Khone Falls area.

The Don Sahong dam will cause a number of serious negative impacts to local people living on Don Sahong and Don Sadam islands. There is one village on Don Sahong and two on Don Sadam. Other villages may also be fully or partially flooded, and other villagers who live away from that area but fish there seasonally will also be negatively impacted. Overall, the dam will cause considerable negative environmental impacts to the Khone Falls, which is the only waterfall on the Lower Mekong River, and is one of Laos' most important natural places, with the potential for designation as a World Heritage Site in the future. The negative impacts of the dam will also extend to tourism. Importantly, the dam would be located just upriver from where the only year-round population of Irrawaddy dolphins in Laos is found (Baird et al. 1997). The dam would very negatively impact dolphins, as well as the local tourism industry that depends on them.

Don Sahong and Hang Sahong villages

I chose Don Sahong and Hang Sahong villages to conduct my research, because these villages are based very close to the Hoo Sahong where fish can migrate all season. Furthermore, it is the only Hoo (channel) that Irrawaddy Dolphins can travel from Laos to Cambodia and back. The whole of the country, however, will be faced with the problem of reduced food securities if the dam is built. Over 80 percent of the Lao population depends on fisheries and other natural resources.

These two villages are at the base of the Siphandon (4,000 Island) area of Champasak province. There are more than 180 households in Don Sahong Village, and 50 households in Hang Sahong Village. People have lived there for more than 100 years. They are lowland Lao people (Lao Loum), mostly Buddhist farmers and

⁵⁷ The Don Sahong Dam and Mekong Fisheries, A science brief from the WorldFish Center by Eric Baran and Blake Ratner June 2007

fisher folk. The two main sources of food for the villagers in the two villages come from growing rice, and fishing.

“Our villages are rich in fish, we never have a lack of food, even people from other towns come to catch fish in our village. Without fish we will die. Fish are very important, since we were born our parents fed us by fish.”⁵⁸

The importance of fisheries

A 2007 World Fish Centre report says that wild capture fisheries in Laos amount to 64,600 metric tons, 78 percent of the country’s total fish production. Research estimates the direct value in the domestic economy at between US\$66 million and US\$100 million a year, contributing an estimated 6 to 8 percent of Laos total GDP⁵⁹ “In southern Laos more than 80 percent of households take part, with aquatic resources accounting for about 20 percent of gross income. During months when rice is scarce people rely on fish and other aquatic foods to keep from going hungry. Without fish most families have no alternative way to stay nourished. A study in southern Laos concluded that “fishing can not be described as important only for the poorest of the poor, but an essential component of all the households, livelihoods”

Wild capture fisheries are important to all Mekong riparian countries, with an annual value of USD 2 billion per year. The wild fish catch in the Lower Mekong Basin, the most productive freshwater fishery in the world, reaches an estimated 2.6 million tons a year, five times more than reservoir fisheries and aquaculture production combined. As recently highlighted in a report produced under the Cambodia National Mekong Committee, the loss of even a small percentage of the fishery represents tens of thousands of tons and millions of dollars worth of fish⁶⁰

Any decision to build a dam on the Hoo Sahong will be a disaster for Laos and Lao people, and there will also be negative impacts on neighboring countries. From experience, any fish passes made to allow fish to migrate up past the dam would probably fail. For example, a fish pass was built for the large run-of-river Pak Mun Dam on the Mun River in Thailand, but it has been shown to not work. Therefore,

⁵⁸ 45-year-old, farmer, male 2007

⁵⁹ The Don Sahong Dam and Mekong Fisheries, A science brief from the World Fish Center by Eric Baran and Blake Ratner June 2007

⁶⁰ The Don Sahong Dam and Mekong Fisheries, A science brief from the WorldFish Center by Eric Baran and Blake Ratner June 2007

it is not in the best interest of Laos to allow any dams to be built on the Hoo Sahong channel.⁶¹

“We enjoy fishing together with many people from other islands. We join fishing outings and give fish to each other. All people here, including our children, are fishers. The only jobs that we can do are growing rice and fishing”⁶²

Irrawaddy Dolphins

The Irrawaddy Dolphin is one of 7 river dolphin species in the world and lives in salt and freshwater. It has a wide tropical distribution but there are only three exclusively riverine populations: in the Mekong River (Lao PDR, Cambodia), Mahakan (Indonesia), and Ayeyarwady River (Myanmar). These populations are all listed in the IUCN Red List as “Critically Endangered”, the highest form of threat ranking before a population becomes extinct in the wild. The Mekong River supports a population of less than 100 individuals, distributed over 190 km of mainstream. It is the only freshwater dolphin in Lao PDR and Cambodia. The upstream limits of dolphin distribution are the Khone Falls in Lao PDR (722 km up the river), which form a natural barrier to dolphin movement north.⁶³

Tourism in Siphandone

Siphandone is situated in the Mekong River Corridor GMS Priority Tourism Zone and the Emerald Triangle. The Siphandone Wetland (Siphandone, meaning 4,000 islands in the Lao language) extends to the border with Cambodia and contains thousands of channels and islands, with the largest and most visited among them being Don Kong, Don Det and Don Kone.

Dolphin-based tourism is the fastest growing source of external revenue for local communities at the Dolphin Pool. Together with the Khone Falls, dolphins are a principle reason many tourists visit the Siphandon region in southern Lao PDR. In 2005, at least 9,000 people were documented visiting the Dolphin Pool, and over 52,539 tourists visited the Siphandon region (250-300 tourists per day in Peak

⁶¹ Basic information and concerns about the Don Sahong Dam, planned for the Mekong mainstream River in the Khone Falls area, Khong District, Champasak province, southern Lao PDR

⁶² 45 –year- old, Farmer, male 2007

⁶³ The Don Sahong Dam and the Irrawaddy Dolphins, A science brief from WWF by Mark R Bezuijen, Richard Zanre and Marc Goichot Vientiane, September 2007

season), including 31,891 international tourists and 21,648 domestic tourists. Average duration of visits by international tourists to the Siphandon region was 4.16 days with an average expenditure of USD 19.63 per day, and for the domestic market, 6.71 days with average expenditure USD 39.12/day. Based on these figures, in 2005 the Siphandon region, including the Dolphin Pool, received over USD 8.2 million in tourist revenue.

Spiritual beliefs

Lao people have different religious beliefs and pay respect to their deities whether they are Buddhist or otherwise. Regardless of religion, most Lao people give their respect to land and rivers spirits, as do people in Don Sahong Village.

“Every year villagers have a ceremony to show their gratitude to the Hang Sahong channel, the place where the dam would be built. People from the project came here to do a water survey and they also took part in the ceremony to give their respect to Hoo Sahong.”⁶⁴

Khone falls

This is a visually beautiful place, a small island surrounded by the Mekong River, which is the lifeblood that feeds thousands of people, and nourishes the trees. The village people sell fish to other provinces. The tree cover is like a natural roof for the people and animals, providing shade from the sun.

Spectacular waterfalls include Li Phi and Khone Pa Pheng, that latter of which is considered the largest and most beautiful and is often referred to as the Niagara Falls of Asia. This area has become a famous tourist destination in Laos and the Lao people are very proud of it. The Lao government is considering proposing the area for accession to the RAMSAR Convention on Wetlands of International Importance. A RAMSAR designation would support efforts to protect the area and promote tourism, bringing substantial economic benefit to the local communities and the national economy”⁶⁵

⁶⁴ 50-year-old, farmer, male 2007

⁶⁵ The Rivers Coalition in Cambodia, The Don Sahong Hydropower Project. International Rivers

“The Khone falls is a key site for all Mekong fish resources including Irrawaddy Dolphins”⁶⁶

By April, the first schools of small migratory catfish arrive at the Khone Falls from Cambodia. The species *Pangasius macronema* (*pa gnone siap*) is caught in large quantities as they migrate up the Mekong past the waterfalls. Catches of this economically important species are particularly high in the Hoo Sahong channel of the Khone Falls; which lies between the island of Don Sadam and Don Sahong. Most of the other channels that make up the Khone Falls have large waterfalls on them which migratory fish cannot get past. The Hoo Sahong channel, on the other hand, has no natural barriers along its approximately 7 km length, making it easily passable by migratory species of fish that move up the Mekong River to the Khone Falls from Cambodia⁶⁷

“Only from this Hoo (channel) fish can get up from Cambodia, and every year and every season different fishes come through this Hoo”⁶⁸

Resettlement

There are many villages based close to the channel where the dam will be built, but only one village, Ban Hang Sahong, comprised of 50 households, will be relocated from Hang Sahong village to another place. In Don Sahong Village, local people believe that they will not be affected by the dam because that is what the project officials told them.

“Officials said that our village will not be affected from the dam”⁶⁹

Potential impacts of Don Sahong Dam

Dams are identified as a high potential threat to Irrawaddy dolphins in the Mekong River. In general, there are at least four ways that dams result in death, increased stress or reduced breeding in dolphin populations:

⁶⁶ The Don Sahong Dam and Mekong Fisheries, A science brief from the WorldFish Center by Eric Baran and Blake Ratner June 2007

⁶⁷ The Don Sahong Dam and Mekong Fisheries, A science brief from the WorldFish Center by Eric Baran and Blake Ratner June 2007

⁶⁸ 45 year old, farmer, male 2007

⁶⁹ 45-year-old, farmer, male 2007

1. Dividing dolphin populations into smaller groups, which are genetically isolated and more vulnerable to extinction.
2. Loss of microhabitats in the river which are critical for dolphin survival. Dams cause changes in river flow dynamics and sedimentation patterns, which alter dolphin habitats. Counter current or eddy pools, which are the primary habitat for dolphins and also support prey fish species, are particularly affected.
3. Reduced abundance and diversity of prey fish species. Dams may block fish migration routes and degrade habitats for fish breeding and shelter.
4. Short-term disturbance during dam construction (e.g. noise from blasting, increased sediment loads) may disrupt dolphin social, breeding, navigation and foraging behavior. Increased stress may result in greater susceptibility to disease.⁷⁰

The highest potential impacts of the proposed Don Sahong Dam appear to be from factors 2 and 3. For factor 2, loss of critical dolphin habitats at the Dolphin Pool is a high risk due to the close proximity of the dam site to the pool. Alterations in daily flow patterns and water velocity from the dam may result in a reduction of counter current areas (required by dolphins as shelter from swift flowing river sections).

For factor 3, declines in dolphin food supply fish may result from dam construction across the Hoo Sahong channel. This channel is the main migration corridor for fish passing through the Khone Falls area and the biological importance of this site is well documented. Seasonal fish migrations through this channel are a key component in the life cycle of fish populations in southern Lao PDR and northern Cambodia. Declines in fish abundance and diversity due to dam construction would possibly impact the Irrawaddy dolphin through reduced food availability throughout its range in the Mekong River.⁷¹ It is not only endangered species like the Irrawaddy dolphin and the giant catfish that would likely be driven to extinction by a dam built across a channel of the Mekong; the livelihoods of millions of people living along the river banks and far beyond, dependent on the rich fisheries, would also be at risk, with southern Laos facing a potential food crisis.⁷² One fisheries expert at the Mekong River Commission (MRC), who prefers not to be named, concluded:

⁷⁰ The Don Sahong Dam and the Irrawaddy Dolphins, A science brief from WWF by Mark R Bezuijen, Richard Zanre and Marc Goichot Vientiane, September 2007

⁷¹ The Don Sahong Dam and the Irrawaddy Dolphins, A science brief from WWF by Mark R Bezuijen, Richard Zanre and Marc Goichot Vientiane, September 2007

⁷² A Malaysian corporation wants to dam a channel on the Mekong River to generate electricity, despite overwhelming evidence that it's a very bad idea. Tom Fawthrop reports. Dominion Post Magazine New Zealand section published on 6/7/2007

“This project does not make any sense. Only the Malaysian company stands to gain. On the Laos side, it is all losses and they will be astronomical losses”.

Downstream of the dam, there are more communities that will be affected. In Cambodia, a very big number of people rely on the Mekong fisheries. The dam will hurt their livelihoods, even people who live very far away from the border⁷³

Many conservationists are hoping that the MRC, which has a mandate to protect the Mekong, will finally take action. It has long been a toothless political body, contenting itself with scientific research and studies about the Mekong, but seldom taking any practical initiative to enhance the sustainability of Southeast Asia’s most important river.

However, if neighboring countries Cambodia or Thailand formally lodge an objection to the dam, the official Lao Government delegation would be obliged to answer their anxieties, putting pressure on the government.

Nothing has been built yet. The final Environmental Impact Assessment report, commissioned by Mega First, has yet to be released, but scientific evidence against the dam appears overwhelming.

Now it depends on an international outcry to force Laos’ leaders to pay attention to the costs of a dam building frenzy”⁷⁴

Fish decline

There are decreasing volumes of fish left to catch. Some kinds of fish have already disappeared. The local people in Don Sahong and Hoo Sahong believe that the fish have declined because of increased fishing by people from other places.

“If they block this Hoo (Hoo Sahong) we will have no fish to eat in the future, and what about our children, what will they do? This is

⁷³ Describe a river development scheme in your river basin, Major river development scheme in the Mekong basin: Hoo sahong Hydropower Project

⁷⁴ A Malaysian corporation wants to dam a channel on the Mekong River to generate electricity, despite overwhelming evidence that it’s a very bad idea. Tom Fawthrop reports Dominion Post Magazine New Zealand section published on 6/7/2007

the most important thing that we should think about together. Yes, of course electricity will come, bring us brightness and we will have TV to watch. But when that time comes we will be poorer and poorer. The screen of the TV will pull the money from our pockets, the rice baskets will have no rice and then we will sell our land and our rice fields”⁷⁵

From my point of view, the fish have declined because of over fishing and because some of the river networks have been blocked by upstream dams. This has affected the migration of fish from the Pak Mun River to the Mekong River. In addition, on the Namxong River the fish population has declined since they blocked the river to build Nam Ngum 2 Dam. People now complain that there are few fish, and they have little income.

Public Participation and Access to Information

From my research in Don Sahong and Hang Khone villages, and also Don Det and Don Khone, I can say that most Lao people have no experience with dams and their impacts, thus making it difficult to know whether decisions regarding dams are well informed.

Further inhibiting full participation among affected villagers is the fact that most of the attendees at meetings are men, with almost no women. This shows how gender plays a role in the process.

“Meetings are men’s duty; we women work on the farm, take care of children and feed buffalos. Furthermore, the meeting place is not big enough for all of us. Not only this meeting, but any meeting set up by government officials, they just tell the chiefs of villages to join the meeting and then we have a meeting in each village and our chiefs will tell us what happened!”⁷⁶

“From what I know, Lao villages are not engaged in the decision making process. Many people have poor educations and also they don’t have experience about dams. So what they know about the dam is only what they have been told, that building it is to make electricity for local people and also for sale to make money for the country. For sure some of them are very happy that they are going to have electricity, but they

⁷⁵ 45-year-old, farmer, male 2007

⁷⁶ 50-year-old, farmer, female 2007

don't know what impacts will come. If you talk about the impacts from the dam with people, they will be scared of what is going to happen to them when the dam is built”⁷⁷

The Lao government or the company that wants to build the dam does not appear to have any plans to do public consultations in the districts or villages. After talking, the villagers from Don Sahong and Hoo Sahong have more questions and comments about what they need from the project if the dam is built.

“I do not know what development will bring us. They said that they would develop our village to become a tourist destination and will develop peoples' lives to be better than before. But I really want to know what exactly this development will be like.”⁷⁸

Conclusion and recommendations

From the information I learned from my fieldwork, fisheries are critically important for the people of Don Sahong and Hang Sahong. They now seem happy and generally enjoy their lives there, but it is critical that people be able to live on the land and grow rice and practice fishing. Fisheries and agriculture are essential to local livelihoods and food security. Local people want electricity; however, the dam will drastically change their livelihoods

People should be educated about the impacts of dams and should be able to have a voice in development choices. Furthermore, it would be beneficial for local people to build small scale dams and use solar cells for electricity, rather than get it from macro-hydropower dams that require foreign investment and have a negative impact on the environment.

Fisheries are essential to local livelihoods and food supply security. As they say, “no fish, no life”. Most of the local people on Don Sahong and Hang Sahong have no experience or ideas about the negative impact from dams. From my interviews with 30 people, only two men talked about the potential dam impacts and a little bit about environmental impacts. They know that fisheries are very important, but people keep saying that they still have another Hoo for fishing and they do not want to stop the dam building because of dreams of tourist money.

⁷⁷ Describe a river development scheme in your river basin, Major river development scheme in the Mekong basin: Hoo sahong Hydropower Project

⁷⁸ 75-year-old, farmer, female 2007

It is essential to people determine an appropriate amount of compensation. The local government needs to make sure that people from Hang Sahong will enjoy a better standard of living than present. The heads of villages need to work closely with the government to make sure that they are compensated for their losses before the dam is built.

Large dams can be harmful to local people, from my understanding and experiences, as well as knowledge and meetings with people who have been affected by dams. I wonder, therefore, why the Lao government is trying to build many dams to get some money from investors at the expense of the environment. If more dams get built, more damage to agriculture and ecological systems, as well as indigenous people and their livelihoods, will result.

Resettlement

Damming the Lower Sesan River: A case study of the potential effects on a local community

By Meach Mean

Meach Mean works for the 3S Rivers Protection Network in Ratanairi Province, conducting community-based research on the impacts of hydropower projects on the Sesan, Srepok, and Sekong rivers, monitoring the effects of dams on fish and plant life, and working to address health, water quality, and relocation issues. Meach Mean speaks Lao, Tampuen, Kavet, Krueng, Brao, Jarai, Cambodian, English, Thai, and Vietnamese.

Introduction

This research will look at what is known about the Lower Sesan 2 Dam resettlement and compensation package. The research will also look at how affected communities have been involved (or not) in the process of making decisions regarding the dam and what the communities would like in the future while the dam is being built, as early as 2010. The research will then give recommendations to affected communities and another NGOs and also the Government on how to improve the resettlement process for the project and for future projects.

This research is very important because right now very little information is known about the Lower Sesan 2 dam and the resettlement and compensation package. Communities in Cambodia do not have much experience with resettlement and do not know what to expect. There are many worries that the dam will cause more poverty, as it may not fairly compensate villagers for the loss of their livelihoods and impacts suffered. What happens with this case of resettlement and compensation

may set a trend in determining the way that dams are built (or not built) and what the process of resettlement will be like with communities throughout Cambodia in the future with other projects.

The objective of this research is to learn more about the project and its resettlement process. The research will help document information regarding the communities who will be affected and also research into what communities want in terms of participation in the decision-making process of building dams. This research will try to answer the following questions: Do communities want the dam? What kind of information do communities have regarding the dam? Do communities think they should participate in the decision making process regarding hydropower development and resettlement and compensation issues?

Background of the Study

Since 1996, the 720 MW Yali Falls dam, located in the Central Highlands of Vietnam, has been a source of death, destruction and suffering for approximately 50,000 ethnic minorities who live along the Sesan River in northeastern Cambodia. Changes to the river's water flow and quality through the dam's construction and operation has caused considerable damage to the environment and has impacted the livelihoods of communities. Some of the downstream impacts of Yali Falls dam have included, unpredictable water flows, worsening water quality, and a severe decline in fisheries caused by blocking fish migration and changed hydrology. Despite these impacts continuing on the Sesan River and the protests of local communities, there is yet to be any mitigation for the impacts suffered or compensation given to affected communities.

In recent years, the Government of Cambodia has given priority to securing cheap and reliable electricity in order to help promote economic growth and investment. As hydropower has been viewed by the government as the best way to produce energy, the government with the help of Vietnam has begun looking to further develop dams on the Sesan River. One of the dams that is in the process of being studied is the 420 MW Lower Sesan 2 hydropower dam in Stung Treng province. Study on this dam began in January 2008 by the Electricity of Vietnam with Key Consultants in Cambodia (KCC) doing the Environmental Impact Assessment and a Vietnamese company, Power Engineering Consulting Company 1 (PECC1), developing the resettlement and compensation proposal. The EIA should be finished in November 2008,⁷⁹ consultations that have taken place with local communities suggest that

⁷⁹ Key Consultants in Cambodia, email correspondence with Bun Chantrea, NGO Forum on Cambodia, October 2008.

approximately 5,000 people in 12 villages will be resettled and 7000 ha of forest will be flooded. The dam is also expected to block fish migrating from the Tonle Sap Lake and the Mekong River to the Sesan and Srepok Rivers.

Most communities that will be affected by the dam do not support the project, but many feel that the project will go ahead. This feeling exists because while the dam has not yet been approved, a Chinese company called Shanghai Construction General Company, has already begun to build a new road (since part of the old road will be flooded) and Vietnamese officers in uniform have already moved into the dam site, in order to help do technical studies. Resettlement is expected to take place in 2009 and construction on the dam may begin as early as 2010.

Because many communities in northeastern Cambodia depend on the natural resources and the rivers as a source of livelihood and food security, damage to the environment may mean damage to the lives of people living in the area. For these reasons, if the Lower Sesan 2 dam is built, close attention should be given by the government to make sure the project benefits are greater than its costs, in order to ensure that the lives of affected communities are better or equal to the time when there was no dam.

A General History of the Environment, People, and Livelihoods along the 3S Rivers in Northeastern Cambodia

Background of the 3S Rivers and the northeastern provinces of Stung Treng, Ratanakiri and Mondulakiri

The Sesan, Srepok and Sekong rivers (3S Rivers) are major tributaries of the Mekong River and make up 19% of its water flow. The Sesan and Srepok rivers begin in Vietnam before entering into northeastern Cambodia. The Sekong River starts in Vietnam, flows into Laos and then converges with the Sesan and Srepok before it enters the Mekong River. The proposed Lower Sesan 2 hydropower dam will be located where the Sesan and Srepok rivers meet in Stung Treng province, Cambodia. This section will describe the importance of the Srepok and Sesan river basins for the environment, people and livelihoods of those living near these rivers.

Srepok River Basin

The Srepok River basin makes up an area of approximately 30,900 km² of which 18,250 km² is in Vietnam (the basin is within three provinces in Vietnam: 14,400 km² in Dac Lak, 2,800 km² in Gia Lai Kontum, and 1,350

km² in Lam Dom) and inside Cambodia the basin area is 12,650 km².⁸⁰ In Cambodia, the river flows through the northeastern provinces of Monduliri, Ratanakiri, and Stung Treng, where it joins with the Sesan River and then the Sekong River before it flows into the Mekong River. There are approximately 11,000 people on the Srepok River in Monduliri, Ratanakiri and Stung Treng provinces.

Sesan River Basin

The Sesan River is one of the major tributaries of the Mekong River and it has total catchment area of approximately 76,700 km². The river originates in the Central Highlands of Vietnam in Gia Lai Kontum province and has a length of 237 km and basin area of 11,450 km² in Vietnam. In Cambodia, it travels through Ratanakiri and Stung Treng provinces for a length of approximately 250 km, where it then joins with the Srepok River and then Sekong River before it joins into the Mekong River at Stung Treng Town⁸¹. There are approximately 55,000 people living along the Sesan River in Ratanakiri and Stung Treng Provinces.

Environment

Northeastern Cambodia is rich in natural resources, with many rivers, forests and agricultural land. Stung Treng and Ratanakiri provinces have many different land uses, which largely includes forest land, while the rest of the land is paddy fields, farm lands, mountainous lands, national parks, wildlife sanctuaries, residential lands, land and forest concessions, roads, rivers, and fallow land.

Population, Ethnicity and Culture of the People at the Dam Site

In the surrounding area of the Lower Sesan 2 dam site, there are 12 villages within four communes, which are located in Sesan District, Stung Treng Province. In Ratanakiri province, there are 3 villages in Sre Anrong Commune in Kun Mom District along the Srepok River and 3 villages in Hatpok Commune, Vuen Sai District along the Sesan River. These villages will be the most strongly impacted of the villages along the Srepok and Sesan rivers by the hydropower dam. However, the rest of the villages along the Srepok and Sesan River are likely to experience indirect impacts from the dam.

⁸⁰ Vietnam Government and DANIDA. 2003. Water Sector Programme Support Sub-component 3.1 Integrated Water Resources Management for the Sre Pok River Basin. Hanoi, Viet Nam.

⁸¹ Culture and Environment Preservation Association. Sekong River-Based Livelihood Study in Northeast Cambodia. December 2007.

Many of the communities who live along the Sesan and Srepok rivers are ethnic minorities and live in poverty. And some of these ethnic minorities have lived there for thousand of years. Most of these communities have a closed subsistence economy that relies on fertile land, healthy water and fish, and natural resources.

The people living along the Sesan and Srepok rivers belong to around 11 different ethnic groups including Jarai, Kachuc, Tumpoun, Krung, Lun, Brao, Kavet, Phnong, Khmer-Khek, Lao and Chinese. All of them have different languages and culture, some ethnic minorities believe in Buddhism and some groups they believe in the Hindu religion, but the majority are animist and believe in the spirits from the forest, the mountains and water rapids. Land is important for all of them, in order to produce rice fields and other crops. Rivers are also important for fishing, transportation and as a source of water. Forests are important for non-timber forest products, which serves as a source of food, household equipments, and occasionally to sell for money. The natural resources are an important source of food security. These ethnic minorities have never had conflicts between each other related to the use of land and natural resources.

Livelihoods of the People

The majority of the people living along the Sesan and Srepok rivers are farmers and fishermen, with their lives and livelihoods depending on natural resources, such as farming, fishing, hunting and collecting non-timber forest products. In order to have food security and survive, these people rely on healthy natural resources. The majority grow crops to eat and sell using slash and burn techniques. During the rainy season, they farm paddy rice and in the dry season they grow small riverbank gardens with tobacco and vegetables, in order to use in their households or occasionally to sell for money. Fish are the major protein source of the people. People fish and hunt throughout the year mainly for their family's food, but sometimes they do it to sell for money. Often people will go into the forests in order to collect non-timber forest products, such as bamboo shoots, mushrooms, leaves, fruits, rattan, and other needs. They use these products as a food source, materials for their homes and making equipment, and sometimes to sell for income. Only a small amount of the people are small scale business people, who do work such as selling items in their village's market.

Trans-boundary Impacts and Hydropower Development in Cambodia

Hydropower Development on the Sesan and Srepok Rivers in Vietnam and Downstream Impacts to Cambodia

Thousands of people, especially indigenous people, have lived and depended on natural resources along the Sesan River in northeastern Cambodia, for hundreds of years. However, in the last decade, the river has been negatively impacted first by the 720 MW Yali Falls dam 75 kilometers upstream in Vietnam and then by a series of additional dams being operated or constructed. Construction began Yali Falls in 1993 and went into operation in 2001. Built without a proper Environment Impact Assessment considering downstream impacts to Cambodia, the dam caused serious changes to the river's downstream flow and water quality. These changes in the river have negatively impacted surrounding natural resource, along with the livelihoods and health of the communities who live alongside the river.

Since 1996 many communities have experienced serious flooding. A series of floods have destroyed homes, has washed away people's property and livestock, and has ruined people's crops. Irregular water fluctuations have also become common. The water quality has declined, so communities can no longer drink the water from the river. When they bathe in the river, they often get skin diseases and illness. Environmental impacts of the dams have included river bank erosion and agricultural crops being destroyed. Communities have also reported that fish catches have seriously declined. Because these impacts have hurt people's livelihoods, food security has become a problem and people have become poorer.

Despite the suffering of the villagers on the Sesan River from Yali Falls dam, Vietnam continued to build more hydropower dams on the Sesan River and its neighboring river, the Srepok. On the Sesan River there are now three dams in operation and three more under construction. On the Srepok River in Vietnam there are four dams under construction and two more dams are being planned. All of the dams on the Sesan and Srepok rivers are being built by the Electricity of Vietnam (EVN). Impacts from these dams are expected to be similar to the Yali Falls dam and will further impact communities, as they have yet to receive compensation or mitigation from the upstream dams.

Relationship between Vietnam and Cambodia

The Lower Sesan 2 hydropower dam is being planned for by the Electricity of Vietnam, because Vietnam is seen as a leader in hydropower development in the

region and because Vietnam is cooperating with Cambodia to promote investment and development in the northeast of Cambodia. EVN is interested in building dams in Cambodia, as part of the electricity will be for export to Vietnam, while part of the electricity will be for use in the provinces near the dam site. Vietnam and Cambodia both expect to get the benefits from the project, in the way of electricity power export and energy development. However, the benefits will be uneven, as EVN will get more benefits, since it's expected to hold the contract to build and operate the dam for around 44 years, before transferring the project to Cambodia.⁸² At the same time, the relationship between Vietnam and Cambodia has not always been good, as the dams upstream the Sesan and Srepok rivers in Vietnam have caused tension between the two countries and difficulty in resolving the cross-border issue.

Legal Framework

The two most important laws related to hydropower projects in Cambodia are the Environment Impact Assessment laws and Resettlement laws (not yet approved). The Ministry of Environment (MoE) was formed in 1996 with a department on Environmental Impact Assessments. A law on Environmental Impact Assessments was later approved in 1999. The law requires all hydropower projects over 1 MW to carry out an Initial Environmental Impact Assessment (IEIA) or Full Environmental Impact Assessment (EIA) to be submitted to the Ministry of Environment. The Ministry of Environment then has 30 working days to review the EIA, to provide comments for further study or to approve it. In 2008, guidelines on how to do EIAs have been drafted by the MoE, in cooperation with the World Bank, but have not yet been approved.⁸³ The experience in Cambodia with EIAs is that most EIA reports are not public or transparent. It is difficult to know if IEIA or EIA has even been done for projects.

Cambodia does not yet have a resettlement law. There is currently a draft version of the law, but it has not yet been approved by the National Assembly. Thus, there are no current guidelines in Cambodia for resettlement and compensation. The experience in Cambodia is that the resettlement policies of the company are used rather than national guidelines. This has meant often resettlement in Cambodia is often unfair, which has meant cases of forced evictions and compensation being given that is not based on the full value of land and property.⁸⁴

⁸² Key Consultants of Cambodia, meeting with 3S Rivers Protection Network, January 2008.

⁸³ The first public consultation on the DRAFT EIA Guidelines was held in February 2008 by the MoE and WB at Sunway Hotel.

⁸⁴ Pen Raingsey, NGO Forum on Cambodia, Resettlement Project Officer, interviewed by Meach Mean, September 10, 2008.

In Cambodia there is not yet much large-scale development and Cambodia has no experience with resettlement from dam projects to date.

The Lower Sesan 2 Hydropower Dam

Project Details

The Lower Sesan 2 Dam will make 420MW of power an hour and will supply electricity to surrounding provinces, with the majority of the electricity to be exported to Vietnam. The Cambodian government supports this project because they want to promote economic growth through the development of its energy supply and also because electricity is currently very expensive in Cambodia. While Cambodia and Vietnam have been talking about the possibility of building this dam since August 2006⁸⁵, a Memorandum of Understanding (MoU) was signed between the Ministry of Mines and Energy (MIME) and EVN in June 2007 for the construction of the Sesan 2 hydropower dam. On February 26, 2008, another MoU was signed between MIME and EVN Cambodia to build a 100 KV transmission line to supply power to Stung Treng province, a 220 KV sub-station in Banlung to supply power for Ratanakiri province, and a 220 KV transmission line for export from the Lower Sesan 2 dam to Banlung to the Lower Sesan 1 dam near the border and then to the Sesan 4 dam in Vietnam.⁸⁶

EVN then appointed Power Engineering Consulting Company No. 1 (PECC1) to undertake the feasibility study for the project. PECC1 is a Vietnamese subsidiary company of the Electricity of Vietnam. Upon request by Cambodia's government, PECC1 then contracted Key Consultants of Cambodia (KCC) to do the EIA as part of the feasibility study.⁸⁷ The EIA began in January 2008 and should be finished in November 2008. Once the EIA is completed it will be submitted by PECC1 to Cambodia's Ministry of Environment for determination. If approved, the project is expected to begin construction in 2010 and be completed by 2014-2015. The total cost of the project is expected to be USD 662.62 million.⁸⁸ The dam would be a Build-Operate-Transfer project, in which Electricity of Vietnam (EVN) will own and operate the dam. It has also been reported in the news that a new joint stock company, EVN Cambodia JSC, was established to help implement the project while also establishing subsidiaries in Cambodia to help mobilize money for the project.⁸⁹

⁸⁵ Raskmey Kampuchea. "Five Hydro-Electricity Plants proposed along Sesan, one will be started soon." 24 August 2006.

⁸⁶ PECC1 and KCC. Public Consultation Meeting for the EIA Study. Power Point Presentation from meeting in Stung Treng province, May 2008.

⁸⁷ EIA Department, Ministry of Environment, meeting with Rivers Coalition in Cambodia, September 22, 2008.

⁸⁸ 27 June 2008. Key Facts Sesan 2 dam from KCC to RCC

⁸⁹ VNS. "EVN to Build 2 Cambodian Plants" September 15, 2007.

Potential Impacts of the Dam

The dam is proposed 1.5 km from where the Sesan and Srepok rivers converge in Sesan District, Stung Treng Province. This is approximately 25 kilometers from the provincial center of Stung Treng. The dam site and the reservoir site will completely or partially flood seven villages in four communes. The landscape of the dam site is mostly flat land that is covered by forest, the paddy fields of communities and land and forest concessions.

The dam is expected to have the following environmental impacts:

- Because the land is very flat and the dam is 75 meters above sea level, the reservoir area of the dam will be very extensive and shallow and will flood 33,560 ha. of land;⁹⁰
- Forests will be lost as the project's reservoir will flood 305.74 km², 7 km of the national road #78, and approximately 7086 ha of forest in the new resettlement areas.⁹¹ Additional forests will be damaged due to the construction of a new road and the villagers need to cut down trees to create new farmland in the resettlement areas;
- There will be a loss of habitat for fauna and flora which contains some rare and endangered species;
- There will be changes to the rivers' water flow in terms of quantity and quality;
- There will be the loss of fish due to changes in the river's flow downstream of the dam and because the dam will block fish passage upstream of the dam to the Sesan and Srepok Rivers (it is estimated that 66% of all fish are migratory and currently move up and down the dam site. There are over 100 different fish species. If the dam is built, it is predicated that most of these species will disappear from upstream of the dam);⁹²
- It is also estimated that after 20 to 35 years of operating the dam to produce electricity, the sediment will build up higher and higher, so the reservoir will become shallower. Once the capacity to generate electricity becomes less, the company will need to take out the sediment and that may cause financial problems or cause the dam to no longer work.

The dam is expected to cause the following potential social impacts:

- The dam will either totally or partially flood seven villages in four communes (a commune is a category of organization in Cambodia that is bigger than a

⁹⁰ Key Consultants on Cambodia. Key Facts Sesan II Dam For NGO Meeting 27 June 2008, meeting with Rivers Coalition in Cambodia, June 27, 2008.

⁹¹ Key Consultants in Cambodia. Environment Management Plan for the Draft EIA report for Lower Sesan 2, June 2008.

⁹² Key Consultants on Cambodia. Key Facts Sesan II Dam For NGO Meeting 27 June 2008, meeting with Rivers Coalition in Cambodia, June 27, 2008..

village but is smaller than district—it can include anywhere from 3 to 10 villages). Approximately 4,574 people composing of 1, 052 families will be resettled into six resettlement areas. While the exact locations of the resettlement areas are unknown, it is known that 12 resettlement areas are being considered;⁹³

- 1290 ha of agricultural land will be lost, which equals around 25% of total agricultural land in Sesan district;⁹⁴
- Communities upstream of the dam are largely dependent on fish. This is around 11,000 people on the Srepok River and 20,000 people on the Sesan River. These communities will lose their livelihoods if there are no fish in the rivers;
- Resettlement may only be the building of new homes and buildings. People are worried about what will happen to their livelihoods;
- 3,000 workers are expected to be employed to build the dam.⁹⁵ Many of these people may come from outside the province, which may lead to problems and impact to communities.
- There may be jobs/salaries for local communities to build the dam, but once the dam is built there may be no more employment as they are more likely to be laborers than skilled workers;
- If people lose their livelihoods, they may have to migrate outside of the community to work;
- Families and communities may break-down and families may be unable to help each other like they have in the past;
- It remains to be seen if the government or companies will fulfill their resettlement promises or build infrastructure in the community, such as new pagodas or schools;
- There may also be health problems. The water quality declines as the water in the reservoir becomes stagnant and can't flow, so this creates health problems such as increase in mosquito habitat, Malaria, Dengue Fever, toxic algae pollution, skin rashes and other illnesses.⁹⁶

Resettlement and Compensation Plans

There is currently no clear information regarding the resettlement and compensation plans for the Lower Sesan 2 hydropower dam. Affected communities and local authorities do not yet know much information about the resettlement action plan and compensation package. According to a presentation given by PECC1 and KCC to

⁹³ Key Consultants on Cambodia. Key Facts Sesan II Dam For NGO Meeting 27 June 2008, meeting with Rivers Coalition in Cambodia, June 27, 2008.

⁹⁴ Key Consultants on Cambodia. Key Facts Sesan II Dam For NGO Meeting 27 June 2008, meeting with Rivers Coalition in Cambodia, June 27, 2008.

⁹⁵ Key Consultants on Cambodia. Key Facts Sesan II Dam For NGO Meeting 27 June 2008, meeting with Rivers Coalition in Cambodia, June 27, 2008.

⁹⁶ This is based on the experiences of communities living along the Sesan River in Cambodia.

affected communities in Stung Treng, affected communities will get new wooden homes on stilts according to actual size of current home. They will also get new land for farming up to a maximum of 5000 m² per individual. Infrastructure in the resettlement site will also be constructed. They will get new road system, a drilled well for their water supply, domestic power supply, a classroom, one clinic, one pagoda, and an office for new commune authority.⁹⁷

Research Findings

Community Involvement in the Lower Sesan 2 Planning Processes

The first public consultation meetings was held by KCC between the 29th of January and the 4th of February 2008 in Pluk, Kbal Romeas, Sre Angrang, Srekor and Talat communes, Sesan district during KCC's social and wildlife surveys. In March, the Provincial Governor and His Excellency Mr. Suy Sem, Minister of the Ministry of Industry, Mines and Energy came to Stung Treng and organized a meeting to announce that the government plans to build a hydropower dam on the Sesan River and that the government gave permission to EVN to carry out the Environmental Impact Assessment. They asked the commune council to tell communities to join the meeting and then provided them with some information about the main features of the dam. They also told the people that during the construction period, the company will need a lot of people to work as workers, so people can work with them and earn a lot of money.⁹⁸

Villagers have also reported on another consultation, in which the Vietnamese and District Governor held a meeting. At this meeting there were about 100 participants who were given a paper with a list of questions. The paper asked the participants if they wanted the dam or not, according to Mr. Luek Chunsovann from Pluk Village. He also said that approximately 75 to 80% of the people said no to the dam, that they did not want it to be built. This was also said by Mr. Bing Tinn, Commune Council member of Sre Kor commune, Stung Treng district. After this happened, the Vietnamese came again and this time they measured all sides of the land, counted trees and took photographs of the owner of each household in front of their homes. Villagers were told that if they were not present for the photograph of their house, they would not receive any compensation from the company once the dam was built.⁹⁹

⁹⁷ PECC1 and KCC. Public Consultation Meeting for the EIA Study. Power Point Presentation from meeting in Stung Treng province, May 2008.

⁹⁸ Tik Me Ta, villager from Pluk village, interviewed by Meach Mean, September 26, 2008.

⁹⁹ Based on interviews with Mr. Chep Thong, Kbal Romeas village, in Kbal Romeas commune (7 October 2008) and Mr. Pai Buntan from Sre Kor village, Sre Kor Commune(8 October 2008).

Consultations with communities who will be resettled were later held by PECC1 on the 1st of April 2008. More public consultation meetings were held by PECC1 and KCC in Stung Treng on 9 May 2008, involving affected communities in Stung Treng and a few NGOs. PECC1 gave a presentation to district governors, commune chiefs and village chiefs with a Power Point Presentation written in English, which included many technical terms. A few NGOs that were invited to join said that community was silent during the meeting, as they had been told beforehand not to say anything against the dam.

NGOs have also reported that the government arranged for local authorities to travel to Vietnam to visit the Yali Falls dam resettlement area and were told not to say anything bad about the project. After local authorities returned from the field visit in Vietnam, they have reportedly said they agree with the project, while a few others have told NGOs that while they disagree with the project, they must remain quiet with their opposition. One participant of this trip, Mr. Cheap Tua, Village Chief of Khbal Romeas village said “how can we be compensated the same as in Vietnam? The land and house given were very small. The communities in Cambodia have a different style of house than what the company plans to give them. Now, people have a lot land to grow different things (that the people in Vietnam do not have).”

Community Knowledge of the Dam

In general, the knowledge that communities who will be affected by the Lower Sesan 2 is very limited. However, most villagers do not even know about the plans to build the dam. The majority of communities who will be directly affected by the dam have not learned anything about the resettlement and compensation plans.

From the results of the research, it was found that there are three categories of levels of information that villagers have regarding the dam. The first category is that villagers know no information about the dam, the second category is that villagers know some limited information and the third category is that villagers have unclear information. The type of information that villagers have is based mainly on the location of their village according to the dam site.

Upstream of the Dam

Upstream of the dam close to the Stung Treng border in Ratanakiri province, most people have not heard any information about the dam. This area is neighboring next to Ta Lat Commune in Stung Treng province, a location where the reservoir of the dam will flood. These villagers have never see any people studying the dam to consult with or people informing them that the dam will be built. However, some

people in the three villages of Hatpok, Vuen Hoy, and Lumpait villages have heard a little information about the dam from friends who have come to visit the area or from people who come to fish there. These people have told them by mouth that Cambodia is cooperating with Vietnam and plans to build the Sesan dam where the Sesan and Srepok rivers join. Despite this limited information, the villagers have heard nothing about how the dam will impact their village.

Mr. Heang Saruem, Commune Council member of Hatpok Commune said “we never heard any information about the dam, we don’t know that our government wants to build another dam on the Sesan River, we have never seen any consultant come and ask us yet, but when I went fishing, I met with the people who come from Ta Lat Commune in Stung Treng, and they told me about a Vietnamese company making a study on the dam. During the study, they measured all villagers’ land, houses, trees and also took photographs of the owner with their house. Many villagers have told me that they have never seen or heard anything about the dam that will be built in Cambodia on the Sesan River. But if they really build the dam, what will happen to our villages and our paddy fields. Where can we live? Why haven’t they come to consult with us?”

Some villagers also said that they don’t want the government to build another dam on the Sesan River. In Ven Hoy village, Hat Pok Commune, an elder Ms. Pip Konpeang said “even though I have no electricity, I can live a very easy life. I have survived my life without electricity as my family has always used this lamp.” Her diesel lamp has been used for three generations of people since her birth to her current age of 68 years old. She said “we still use this lamp and don’t want to lose it.”

Villagers in Koan Mom district, Sre Anrong Commune in Ratanakiri province, which neighbors Khabal Romeas commune in Stung Treng knew a little information about the dam. They said that some villagers were invited to a consultation with KCC Company in February 2008. During this workshop, many people said they did not want the dam to be built because they already had the experience of Vietnam’s dams. The consultants told them that their commune would not be impacted by the dam’s reservoir. However, these villagers have now observed that they will probably be impacted by the new road that will be built (see section 5.5 Current Impacts to Community from Proposed Dam).

Reservoir Site

People living in the location of the Lower Sesan 2 Dam’s reservoir site have heard limited information about the dam and their possible resettlement. When interviewed, people in Srekor, Talat and Khabal Romeas communes said that while

they haven't attended consultations about the dam, they know that the Vietnamese company has consulted with the district governor, commune council members, and village chief in a meeting regarding the dam. After this meeting, the Vietnamese company then came to the villages and requested that all house-owners go to their homes in order to take photographs. When the company came to each home, they measured the land, counted the trees and took photographs of the villagers with their homes. During this process, the Vietnamese company did not share any information regarding the dam with the villagers. When one villager asked the company why they were building a dam, he was told "I don't need to answer your question; this dam is being built because it was requested by H.E. Hun Sen and the King. I don't know any information."¹⁰⁰

As people do not currently have much information about the dam, they are worried to make decisions regarding their futures. Some villagers have material ready to build new homes, that they were planning to build this year, but now they have stopped construction. Villagers have also stopped fixing or repairing the pagodas in some villages.

Downstream of the Dam

Downstream of the dam site are two communes, Pluk and Kamphon communes, which are both located close to the dam site. These communities have heard unclear information and do not clearly know what may happen to them when the dam is built. People have seen the Vietnamese company come to the area to count their homes and property. The company also took photographs of house-owners with their homes. When people ask why the company was doing that, the company told them that a dam is going to be built, but the people in these areas will not be affected by the dam. They were told that only during the construction of the dam, while breaking the stones for the dam, the villagers will have to leave the village for 3 to 4 hours a day and travel around 2-3 kilometers away from the village.¹⁰¹

Community Perceptions about the Dam

There are different perceptions of villagers living near the Lower Sesan 2 site regarding the construction of the dam. In general, the majority of the villagers are against the dam. The people who will be resettled are worried about losing their homes and property. Some houses are very new and the people do not want to break their house. They are also worried about their future and how they will survive in

¹⁰⁰ Naugt Phang, villager from Sre Kor village, interview with Meach Mean, October 22, 2008.

¹⁰¹ Tan Timg, villager from Pluk Village, interviewed by Meach Mean, October 1, 2008.

their new resettlement areas. As they will have new land for their homes and new farm land, people worry that they may not be able to make enough income or food to survive for a while, as some of their new plants will take a long time to grow. Villagers are also worried that when they have new land, they won't know how to make an income or business, as they think the land quality and size may not be good enough to continue with their traditional way of living. Some people are worried that their children or relatives will be living in separate locations, so they will have to travel far to see each other. People also do not want to lose the infrastructure that they have, such as pagodas and schools. Some villagers are also worried about losing their traditional way of life and their beliefs. For example, some very important old spirit areas, including Spirit Forests and cemetery forests will be flooded and left under water. Also rapids and deep water pools where people traditionally believe that there are strong spirits living will be changed once the reservoir is built.

For the people who will not be resettled and are against the dam, there are many reasons why they don't want the dam built. Some villagers don't want the dam built since they don't have much information about the dam yet. Others don't want the dam, because they don't believe they will get electricity. Other people worry about the impact the dam will cause to the natural resources, such as to the fish in the river, and how it will affected their livelihoods.

A small percentage of people have said they are not against the dam, because they don't want to be against the decisions made by the government or believe it will bring benefit to their communities. Some have stated that if the dam is built, they think the government should make sure there is a good policy plan for the people who will be resettled and make sure the futures of the people are taken care of and guaranteed for 20 years. Other people want the dam, as they think it will bring jobs to the area. For example, a local Vietnamese man from Stung Treng town who has a farm close to the dam site and is currently working as a translator for the Vietnamese company, said that he would like the dam built as he expects it will bring more work in the future for him. He thinks he may be able to work as a guide or provide technical support for the maintenance of the dam.

Current Impacts to Community from the Proposed Dam

Even through the dam is not yet built, villagers have already begun to report impacts from the dam as outsiders have begun to enter their villagers in order to buy land, to construct a new road as the current road will be flooded by the dam, and as workers for the dam's studies. This has affected communities in different ways.

Many people have come from outside to buy land in the dam area. People think the dam will be a tourist area, so they want to buy land and islands of the river in order to develop for tourism. Others think there will be many workers coming to the area, so they want land in order to sell products to the workers. People have said that even the Provincial Governor of Stung Treng has bought an island near the dam. Before the island was sold, people from Pluk village use to use this island during the dry season for small-scale eco-tourism, as there are small rapids nearby to bring tourists to visit. They also use to grow vegetables there and collect vegetables there. The Governor will supposedly use this island for promoting eco-tourism.¹⁰²

Because National Road #78 will be flooded by the dam project, a Chinese company has come to build a new road. A new road will be developed from Chhrup village, Khbal Romeas commune in Stung Treng province to Angkrong commune in Ratanakiri province. This road will impact the paddy fields of 25 villagers of approximately 90 hectares in Angkrong commune and some land from Chhrup village. It is not known if an EIA has been done, but already construction has begun.

There have also been workers coming into the villages near the Lower Sesan 2 dam site. Some are involved in the feasibility studies and work-camps that the Vietnamese have set up near the dam site. Some community members are also working as guides for the workers, receiving approximately 10,000 Riel per day. Also local Vietnamese people living in Stung Treng have come to work with the Vietnamese, in order to help with translation. Some community members are also buying animals in the area, such as ducks, chickens and dogs, to sell to the Vietnamese workers. To buy one duck now costs 60,000 to 80,000 Riel, while before it only costs 15,000 to 25,000 Riel.¹⁰³ This inflation makes it harder for local people to purchase animals to eat as they can't afford the same prices as the Vietnamese.

Community Perceptions on being resettled

Because communities feel a strong connection to the land that they live on, the forests surrounding them and the river near them, that they worry about losing these important resources when resettled. In the future, they worry there will be no more river and no more trees. For this reason, most villagers do not want to be resettled from the Lower Sesan 2 dam. In addition, communities have many concerns regarding the resettlement and compensation process and the new resettlement area.

¹⁰² Lee Sovann, villager from Pluk Village, interviewed by Meach Mean, October 1, 2008.

¹⁰³ Tan Timg, villager from Pluk Village, interviewed by Meach Mean, October 1, 2008.

Communities are worried that the resettlement process may not be fair or adequate for their future livelihoods. For example, Mr. Bing Tang, Commune Council member in Sre Kor Commune, is worried that communities who will be resettled may not be able to identify everything that they need, how long they will need support or how much their property is worth, so it is difficult for villagers to tell the company what they all need in their new location. This means the resettlement plan may not consider everything the villagers need once relocated.

Also, a village chief from Sre Kor village, who visited the new resettlement location is worried about the future livelihoods. He said “the area is near Srey PaKun, the area has very big trees and is deep in the forest. The land is mostly rocky. If the people resettle there, they will have to cut down a lot of trees and it will be hard to grow things. That land has no space for paddy fields.”¹⁰⁴ Another villager, Ms. Footyan said “if we move there in the future, we will become poorer and poorer, because the land is small and not of good quality. Our land now by the river is very good quality and close to the water.”¹⁰⁵

Future Needs of Affected Communities

Determining the future needs of affected communities is difficult. Many people do not have enough information or know what its like to be resettled to know what they will need in the future. Because of this lack of information and uncertainty what changes or impacts will come with the dam, communities are unable to be clear about what they need in the future when they speak with the consultants developing the resettlement plan. They do not know how to say what they will need in their new villages, in terms of compensation, social services or for their livelihoods. At the same time, they do not know where they can go to get more information about the dam. Because their commune chiefs also lack information, they depend on the company and the government to understand their situation and help them.

Conclusion and Recommendations

Conclusion

If the Lower Sesan 2 hydropower dam is built, it will have serious negative direct and indirect impacts on approximately 65,000 people living along the Srepok and Sesan rivers in northeastern Cambodia. Based on information given by the consultants

¹⁰⁴ Ka Pi, Village Chief of Sre Kor village, interviewed by Meach Mean, October 22, 2008.

¹⁰⁵ Foot Tyn, villager from Sre Kor village, interviewed by Meach Mean, October 22, 2008.

carrying out the EIA and from interviews with communities who have been consulted about the dam, approximately 5,000 people from seven villages in four communes will be resettled. In addition, the dam will flood forests and agricultural lands, change water flows and water quality, and block fish migration, among many other impacts. The EIA report may not accurately consider how communities upstream of the dam will be impacted, as upstream communities have reported that the EIA consultants or dam company have not come to visit their villages and consult with them regarding the dam.

While there may be serious environmental, social and economic impacts from the dam, the knowledge of the communities who will be impacted by the dam remains very limited. The majority of the people who will be directly affected by the dam have not learned anything about the resettlement and compensation plans. The research found that there are three categories of levels of information that villagers know, depending on where they live in relation to the dam site. Some communities knew nothing about the plans to build the dam, while some have been consulted by the company, and others had unclear information regarding the dam.

Without complete information, the resettlement process and how it may impact them, many villagers are worried about their futures. Communities who know they will be resettled are worried about losing their homes, property and livelihoods. They worry that they may not be able to survive in their new homes, as they won't know how to grow crops and fish in their new villages. They also worry that they will be separated from their children or relatives due to the location of the resettlement areas. In addition, villagers are worried about losing the infrastructure they have, such as their pagodas and schools, and they worry about losing their traditional way of life and culture. As part of their culture, they believe areas around their village are very important for spirits. If the dam is built, their spirit forests and cemetery forests will be flooded, and that deep water ponds will be filled, due to the dam's reservoir. These areas are very important as they are connected to strong spirits, they do not know where to go to get more information about the dam. Local authorities have not been given enough information about the dam or understand the possible future impacts. For this reason, communities are depending on the government and the dam company to understand their situation and help them in the future.

Conclusion:

- In conclusion, the government and dam builder didn't give clear information to communities who will be directly and indirectly affected by the dam.
- Some of the upstream villages in Ratanakiri province did not participate in the process of EIA study

- The relocation area of 12 villages were not included in the EIA report and communities did not consent to the project

Recommendations

For Communities

- Communities should build stronger networks, request consultations and be active participants in consultations held with the government and dam builders. They should request to take part in deciding whether the dam is built or not;
- Communities living in Hatpok Commune should consult with the Provincial Governor and EVN to present and explain the dam project, in order to make certain that their commune will not be affected by the reservoir's development;
- Communities should request that EVN clearly explain how much compensation they will receive, what types of compensation, how much, and for how long. Communities who will be directly and indirectly affected by the dam should request that their lives improve from their current conditions in the future;
- Request that the government and dam builder share the benefits of the dam with the communities affected if the dam is built;
- The communities who have been affected and/or lost their land due to the construction of a new road No. 78, should ask for compensation;
- If the dam is going to be built, the community should request that new schools, pagodas, health centers, etc. are built in the new resettlement areas before construction on the dam begins.

For Civil Society Organizations

- Help to disseminate information about the dam to the communities and build stronger networks with the communities and with other national and international civil society organizations;
- Request that all information regarding the dam is made public, that an EIA consultation workshop is held; and that communities help decide whether the dam is built or not;
- Ask for fair and just compensation with benefit sharing for all directly and indirectly affected communities;
- If built, help monitor the project's implementation to make sure it follows national laws and international standards.

For Government and the Dam Builders

- Local authorities should share information they have about the dam in their communities and start forums to publicize the information they have;
- Local authorities should join together to find strategies on how to work with the company, in order to get more information and make sure that the company's information is accurate;
- Local authorities and provincial government should request that the EIA reports includes impacts that will be made on communities living further away from the dam site, especially those upstream of the dam;
- The government and EVN should learn from the impacts experienced in Cambodia by Vietnam's dams and first resolve all problems before building another dam on the Sesan River;
- The government and EVN should organize a national public consultation workshop for affected communities and civil society organizations;
- The government and EVN should follow national laws and international standards from the World Commission on Dams, which includes benefit sharing from the dam and a fair and just resettlement and compensation package;
- The government should carry out an EIA for the new road that is being constructed, as well as the resettlement areas, and compensate anyone that is impacted.
- The Cambodia National Assemblies should approve the resettlement law and setup resettlement plan and fare compensation for affected communities by the Lower Sesan 2 dam, as soon as possible.

An Analysis of Chinese Resettlement Policies and Their Impacts on Affected Communities: A Case Study of the Tiger Leaping Gorge Dams

By Miao Yun

Miao Yun is a freelance journalist based in Kunming. She has written several books on Yunnan, traveling widely to every corner of the province to investigate the ways of life of the area's diverse inhabitants and the challenges they are currently facing.

Introduction

Tiger Leaping Gorge, located in southwestern China's Yunnan province, is a part of Three Parallel Rivers National Park, which was deemed a World Heritage Site by the UN Educational, Scientific, and Cultural Organization (UNESCO) in July 2003. The three rivers are the Mekong, the Salween, and the Jinsha. The last one forms the upstream portion of the Yangtze River. The Tiger Leaping Gorge is one of the deepest river gorges in the world. However, the future of this gorge is in question as eight dams are planned for construction along a 16 kilometer-stretch of the Jinsha River, which forms the upper section of the famous Yangtze.

These dams are designed to be supplementary projects to the Three Gorges Dam, regulating water run-off and blocking silt from the upstream river. They will also provide water for Kunming, the capital of Yunnan.

The Yunnan Provincial Government has requested of UNESCO that the boundaries of the "Three Parallel Rivers" World Heritage Site be redrawn to exclude the Tiger Leaping Gorge, one of the park's main tourist attractions. The loss of Tiger Leaping

Gorge would result in a 20% reduction in the area of the World Heritage Site. The exclusion would allow for the construction of the eight hydropower dams. Up to now, this is still disputed.

There are two major concerns with this project. Firstly, construction of the dams would affect 13 towns and townships in four of Yunnan's counties, flooding 200,000 *mu* (13,300 hectares; 1 *mu* = 0.067 hectares) of prime farmland and displacing 100,000 people of whom 80% are minority people. Jinsha river valley, a fertile breadbasket which feeds 300,000, will be completely submerged.

Secondly, the fifth dam which is called Jinanqiao has been under construction since 2004 without approval from the central government, while local people have been resettled to other areas.

The Lijiang authorities are happy to see the Jinanqiao dam get under way, given that the scheme represents \$50USD million a year in tax revenue once power generation begins. The current annual revenue of Lijiang is just \$25USD million.

Major construction activities for large-scale hydro projects normally don't begin until after feasibility studies on geological conditions, resettlement and environmental protection have been approved, though some preparatory work is allowed. Everything is being done in secret now.

Policy vs. Reality

“The wolf wants to eat the sheep. How can the sheep negotiate? The wolf just bides his time.” - Ge Quanzhao, an affected villager from Wuzhu who faces relocation.

Although there are policies regarding compensation and resettlement rights, the reality is they are rarely upheld. In general, those who would be affected by the dam lack complete and correct information about it. They do not know which company is in charge of this dam, nor do they know of its physical dimensions. Furthermore, the government did not tell them when the dam would be built. The villagers all had varying ideas about when it would be built. Some said the dam would be built in forty years. Some people thought it will be built very soon

Plans for constructing the dam have become a great hindrance to the economic development of the region and have caused huge losses in many social and economic aspects. Mr. Ge Quanzhao, supported by the Yunnan-based environmental NGO,

Green Watershed, presented the perspectives of affected communities at the October 2004 UN Symposium on Hydropower and Sustainable Development in Beijing:

“The dam plan has resulted in the discontinuation of infrastructure projects in the region, support projects for farmers being changed to other sites, county roads changed to temporary pathways for resettlement, and the vacancy of the Jinsha Township Leader seat for more than half a year because no one is willing to take over the position” -UN.

In other instances, some people did not dare to sell their rice. They were afraid they would not have a good harvest after resettling. The parents of older children did not know whether they should ask their children to come back to do farming or look for a job in the city. They did not know whether they should continue to invest in the village or start a new business in the town. In one case, a girl from a neighboring village was supposed to marry local village man, but she changed her mind because she thought her living standard would decrease after resettlement.

An old man from Wuzhu village told me “I felt very happy about Three Gorges dam, but felt sorrow after they informed us our resettlement date. It’s like a prisoner who has just been sentenced to death after more then twenty years of appeals. Then to suddenly know the date of the execution; they felt released. The stone in the heart fell down.”

In other words, even prior to the dam construction, losses have ensued. The development of the villages has stagnated.

Difficulty Accessing the Policies

I tried to get the environmental impact assessment (EIA) for Jinanqiao dam from the Yunnan provincial Environmental Protection Authority, but had difficulty accessing it. Up to now, that information has not been disclosed to the public. Even though some projects’ EIA’s have been disclosed on the internet, these only are summaries.

In 2005, a petition signed by 66 NGOs and 99 persons asking for the disclosure of the EIA of the Nu River dams was sent to relevant authorities. It was refused, however, the reason given being that the Nu is an international river and disclosure of such information would compromise state security if publicly disclosed.

As I learned from the villagers I visited, they did not receive the reading materials or hear any announcements about the resettlement criteria. Although some general policies of the central government can be found on the internet, it is often difficult for the affected persons to access because of lack of access to computers and illiteracy.

A married couple from Chezhou village talked about the process:

In March 2005, the resettlement bureaus held a meeting in the village. Only the village headman and an old man attended the meeting. The village head did not say what they talked about even though the villagers asked. In April, the villagers held a meeting and told the village leader he had to attend. The village head said the dam was still in its planning stage so he did not know the details. The villagers asked to hold the meeting with the leader of town, but she said the same thing. She talked of the importance of the project and how villagers should support state development projects. The villagers, however, were not satisfied. “Why should we sacrifice our benefits?” they shouted. “Why should we choose the way of the dam for economic development? Don’t we have other ways?

In March 2006, the villagers protested. They were furious over the lies they had been told. More than ten thousands people gathered together. Three of the workers who did the research were tied up and a county official was pushed into the river. After that event, the Lijiang government announced that the dam would not start to be built if most of the villagers did not agree.

Right of Participation in Decision-making

Through the two following examples, we can see if the villagers have the right of decision-making.

In September of 2006, the village head told villagers that each family would be able sell two *mu* of farmland at \$2,200 USD per *mu*. However, villagers were warned that they could not ask questions or negotiate with resettlement bureau officials. After only one month, the villagers were coaxed into signing a contract, often against their wishes.

In the case of Wulanghe village, a village which was resettled 3 years earlier, villagers had no right to decide whether they would resettle or not. Before their moved they heard such things as:

“If you do not resettle now, you will never get compensation,” and “if you do not resettle, your relatives who work for the government will have their salaries reduced.”

In the end, they received a notice stating they had to move before the deadline since the place was unsafe because of the construction.

Furthermore, the government forbade the local primary school from enrolling children from families that were scheduled to be relocated. This forced the families to relocate to the new area so that their children could continue their education.

After being relocated to the resettlement village, villagers began to inquire about the size of the land they would receive in compensation, but they got no satisfactory answer. “The land belongs to the state. How much land you get does not depend on you, but on the government,” said one villager. Final land compensation totals were usually smaller than what the villagers had in their old village.

Right of Monitoring

According to the grievance redress procedure of China, people can appeal their grievances to different levels in a step by step manner. The village committee, township resettlement committee, country resettlement office, municipal government resettlement office and State Land Administration have the responsibility to resolve problems within the stated time. But in reality, only lip service was given to those who appealed to the higher level, with only partial responses.

In Wulanghe village, each family only knew their own contract. The entire inventory of property of each family has not been publicized. The overall compensation for the entire village has not been made public. Villagers did not know how much village farmland was lost in total. For example, the government promised to compensate for the loss of public forestland. Each family got \$2500USD per 20 *mu*, but they did not know the size of the forest.

Similar to Wulanghe village, one mountain in Qihe village has been sold to the government. Each family got about \$1200 USD, but they do not know the total size of the mountain. When the villagers questioned about the size of the farmland, the officials at the resettlement bureau promised to measure again, but they did not. They also asked the village leader to negotiate for farmland compensation, which he promised to do, but it turned out to be just lip service.

In another instance in Wulanghe village, the villagers went directly to the authorities in Kunming and told them that they did not believe the village or township level authorities. As of my research two months have past and they still have not received any reply.

For Wuzhu and Chezhou villages, a petition was sent to the village level authorities, but the county level official said they never received it. They also sent the petition to the authorities in Beijing with the aim of stopping all preparation work in the region. More than 8,000 people have signed the petition.

Compensation

Policy

In China, compensation is usually only given for physical assets such as farmland and homes. Following are some policies related to compensation according to the *Land Management Law and Regulations for Land Acquisition and Resettlement for the Construction of Large and Medium-Sized Water Conservancy Projects and Hydropower*:

Article 13: Affected persons should be given approximately the same amount of farmland compared with the host community.

Article 16: The types of compensation for requisitioned cultivated land will include land compensation and resettlement subsidies for requisitioned land as well as compensation for attachment and young crops on the requisitioned land. Compensation for loss of assets and a moving allowance also will be given.

Article 22: Building upon the land should be compensated with the original scale, standard or can be restored these original functions.

Article 25: The amount of land requisitioned and the amount of land given for compensation should be equal. Attention to quality/fertility of land should also be considered.

Article 30: Land compensation and resettlement subsidies, the compensation of public assets will be paid to the village economic organization or village committee in full. It will be used for arranging the production and living after migration.

Article 32 a moving allowance and compensation for personal assets such as a house should paid to the individual wholly.

Same as the compensation, according to articles 5, 6 and 7 *supporting policy of large and medium-sized Hydropower resettlement in the later stage*, government support for assistance in rehabilitation will be given at a later stage. Each person will receive \$75 USD per year for twenty years. The subsidy will be given to individuals as a living subsidy; it also can be used as the supporting project to solve the main problem of the production and living of the affected persons.

Reality

Loss

For the people who have to be resettled, their losses are not only material, but there are also intangible things such as culture, identity and community relationships, whose value cannot be measured in monetary terms, and cannot be compensated.

Income

For Wulanghe, which was relocated three years ago, there is an active market in this village located near the road. Most of the villagers do business in the market. Their annual average income is \$3,500 USD, but 30% of each family's income is from farming, the rest comes from selling sand, livestock, and non-timber forest products (NTFP). Most of the families have the pigs, cattle, goats, and chickens. They graze their livestock in the nearby mountains, where they also gather mushrooms and herbs during according to the season. Some families can earn \$1000 USD per year from selling mushrooms gathered in the mountains.

Most of the families have trees such as walnut and fruit trees, which they can earn money from. Because of the ease of this type of passive work, even the elderly and handicapped can make a living by themselves.

I interviewed a family from Wulanghe which earned \$3,500 USD per year from selling sand from the Jinsha River as their primary source of income, a practice done by most people in Wulanghe. The sand is a key construction component, and in November, December, and January, the father collects and sells the sand, which gives his family about \$1,200 USD per year. However, villagers in Tiger Leaping Gorge have been forbidden to dredge and collect sand since construction of the Jinanqiao dam began.

As with the other families in the village, this family also grew maize and potatoes on its two *mu* of hillside land. The family had 60 goats, 3 cattle, 8 pigs and more than 200 chickens. They earned US \$1,000 USD from selling livestock per year. They also supplement their income by selling the vegetables, fruit, and mushrooms.

The villagers did not get compensation for the loss of their income generating resources. Before resettlement, they had to sell all of their livestock. Because many people sold their livestock off at the same time, the price was depressed, and they got only half the normal price.

Since it is not so difficult for villagers in the Jinsha valley to get different kinds of stable income, they prefer land-based compensation. Only two kinds of people prefer monetary compensation and then migrate to urban areas: those with jobs inside cities or towns, and business people. Most who are relocated, however, do not want to become urban dwellers.

“You have to pay for everything if you live the town,” said an old farmer from Wuzhu village. “Everything is free for me now. I can get chicken, eggs, vegetables and fruit anytime as I like”

“It is difficult to make living in the town. I can not find job. It is competitive to run business” -An old farmer man who lives in the Jinsha valley.

“The compensation is only useful for a short time. Only farmland can support you forever,” A farmer woman of Chezhou village.

“Several thousands dollar will run out quickly. My daughter is studying in university. I have to pay more than \$1200 USD for the tuition fee every year,” explained a farmer woman who lives in the Jinsha valley.

Ge Quanxiao talked about the intangible value of his house:

“You can see the river and mountain from the window. A house with a good view can be sold at a high price. I built the house with my own hands, feeling and passion, along with some other villagers. How can you measure the value of a house like that? ”

A freelance journalist called Lingu said:

“How can everything be measured with money? How can we measure the flavor and memory of our home?”

Some Unique Individuals Living in this Area

Ge Quanxiao also talked about some people whose income depends on being in this area. One local doctor, for example, known for using traditional methods to cure people is famous in this area. If he moved to another place, nobody would know him and it would be difficult for him to get the herbs from the mountain.

Another person whose income comes from planting and selling orchids also will lose his recourse.

The third one is an interesting local person who is a good guide for Tiger Leaping Gorge. He knows the area very well. He can sing and dance and wears the traditional dress so people like to take photos with him. He gets a high income from tourism.

“If he leaves this place, nobody will give him money.” Ge Quanxiao said ***“Even if he has a chance to dance in Tiananmen Square.”***

Resettlement for these people means they will lose their income recourses.

Minorities and Religion

70% of the people who have to move belong to ethnic minority groups including Naxi, Tibetans, Bai, Yi, Lisu, Pumi and Miao. The resettlement will affect their traditional culture such as ceremonies, dress, and language including their spiritual relationship with their homeland and natural resources.

Jinsha valley is a good example of different ethnic groups living harmoniously. Furthermore, Jinsha valley is a crossroads. North of the valley is Sangri-la, where the Tibetans live. East of valley is Nu river where the Lisu people lives. South of valley is Lijiang where the Naxi people lives. Besides these, there are Bai, Miao, Yi etc -- several ethnic groups have lived here for generations.

No one ethnic group is more powerful than another. They live harmoniously through mutual respect and mixed marriage.

“It is very common to see a family composed of several ethnic groups,” stated Ge Quanxiao in his address to the UN Symposium on Hydropower and Sustainable Development.

“For instance, Mr. Yang Xingrong of Jinsha Township has a family composed of five ethnic groups including Pumi, Lisu, Naxi, Han and Yi. Such examples of harmony are very common along the banks of the Jinsha River and can be seen as the heritage of ethnic cultures”
-UN official.

But if they move to a minority area where most people are one ethnic group, it could cause some problems.

According to one report, when the Tibetan people who live in Xiaozhongdian heard that there were some different people migrating to the area, they used an iron fence to make a barrier for their pastures.

Ge Quanxiao heard Tibetans say:

“We can sell the land to displaced persons for building their house, but their goats and cattle can not graze in our pastures.”

Ge Quanxiao joked that he wouldn't dare relocate to a Tibetan area unless his daughter married into a Tibetan family.

Up to now, there is no specific measures try to preserve the minority culture.

Interpersonal Relationships

Contrary to city dwellers, villagers have close relationships. They can solve their disputes quickly. They can negotiate for how to use the water for irrigation at different times. Conflict can be avoided before it occurs. After resettlement conflicts took place easily.

It is important for villagers to give gifts and money for events such as weddings, funerals, births, and the building of new houses. Besides money, people give some rice, tea and eggs. A villager from Wuzhu said his family still eats the rice that had been given three years ago for building the new house. Usually, each family spends \$200 USD for ceremonies.

The resettlement has caused a number of problems in this regard. A woman from Wulanghe village said that keeping close relationships has been inconvenient since she was resettled. She had to pay a lot for transportation to visit her relatives and was afraid to back home because the prohibitive cost of transportation.

The elders and children face even more problems. For the elders, they miss their old land, and they take a long time to get used to the new situation such as water, weather and relationships with new neighbors. Some elders got sick.

For children, some have been bullied by other classmates when they attend the new school. Some children became depressed because they lost their friends or teachers who they loved.

Compensation Procedures

In China, land is owned by the state and the collectives, so the land compensation, the resettlement subsidies and the government support for rehabilitation are usually given to village committees for them to independently decide how to distribute between the collectives and individuals. Common problems such as corruption may arise.

At both the government and village level corruption occurs. Within the village, distribution of funds between the collectives and individuals, as well as additional uses of the funds should be approved by two-thirds of villagers, but the process is not always transparent. Sometimes the collective used the fund to invest in a project, but it failed in the end.

According to the 2003 Audit Report of Yunnan Province, about \$70 million USD of funds for maintaining the reservoir and support for rehabilitation in later stages had been embezzled or diverted to build a hotel and buy cars.

On the other hand, the compensation paid directly to the villagers was also the source of some problems. Some villagers did not use the money very well. A young man said his friend had gotten a sum of money for the compensation of a road project. His friend spent the money for eating, drinking and entertainment with his friends. They used to spend several hundreds dollars on one night.

Compensation Criteria

Usually the government arranges the funds for land compensation and resettlement subsidies. Because there is no extra farmland, it is impossible for the affected people to get a similar quality and quantity of land. They have to resettle from the fertile valley to the harsh mountainous areas.

Besides the quantity, the quality of the land can not compare with before. The new farmlands are located on hillsides. It is difficult for farming. It is said that some people will be resettled to a place called Baisha, where the land is strewn with stones and the soil is very thin. The government said it would transport some new soil to improve the land for farming. The farmers thought it was a joke.

The government will buy land on the mountains to provide some land for displaced persons to graze their livestock, but the mountain is not good because there are lots of stones.

Ways of Measuring the Land

The following happened in Wulanghe village and Qihe village.

To learn the size of land, instead of measuring, the officials just judged the size by the contract the villagers signed with the government more than twenty years ago.

For economic trees, the officials usually did not count the small trees. If villagers argued strongly with the officials, the officials just counted several small trees as one tree to avoid conflict.

An academic from the Yunnan Academy Social and Science said

“It is unfair. Even though I just plant a tree for enjoying the shade, it is still personal property. Why can they not get compensation?”

Assistance for Rehabilitation

Policy

According to the *Land Management Law and Regulations for Land Acquisition and Resettlement for the Construction of Large and Medium-Sized Water Conservancy Projects and Hydropower*:

Article 13: Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based. The affected persons should have the almost equal land and recourses as the original inhabitants.

The roads, the infrastructure of water and electricity of the resettlement site will be organized and constructed by the village or town.

The houses should be built by the displaced persons freely. The government or village committee should help them to plan the land, but can not establish some provision forcedly.

Article 41: The infrastructure of transport, water conservancy, communications, education, sanitation in the resettled place should be strengthened.

Article 42: Projects in the benefit area should employ the qualified effected persons.

Article 45: The government should strengthen the training in scientific, cultural and practical skills for affected persons, improving their capability to obtain employment.

According to *Executive plan of supporting policy of large and medium-sized Hydropower resettlement in the later stage of Yunan province*:

Article 13: The varied methods such as employment help, skills training and workers export should be used to improve the living standards of affected persons.

Reality

The Wulanghe village has been relocated to Taoyuan village where they were supposed to be resettled since September of 2004. They live in a small abandoned factory where the government rents the dormitory for them with free electricity and water, but they do not know when they will be resettled. There is no road, water or

electricity on the hillside where the villagers will be resettled, and it is far from the school and hospital.

For compensation, they only got a transport subsidy. For house compensation they will have to wait until they have been resettled. They have not gotten farmland nor has compensation for farmland been mentioned.

The government promised to help them to find jobs, but the displaced persons have not received skills training or gotten loans.

Each person got a \$30 USD subsidy (which was just \$20 USD in the beginning) per month. It is not enough to make a living. With the low subsidy, the people are forced make a living from other sources. Some people who saved some money before started to run their own businesses. Some people found jobs in the city. Some people worked on the dam construction. Some old people make a living by gathering rubbish around the construction site.

Originally 39 families lived in the abandoned factory, but now only 13 families are left. Even though they would like to leave, they cannot because their children have to attend the primary school at the relocation site. If the families move, they will have to pay a high fee for their children to attend school in another place. Other families all went to other place to find the job.

Recommendations

The way to minimize social impacts is to encourage the Chinese government to improve relevant policies. Furthermore, resettlement policies are in need of investigation in order to build up awareness both within China and the international community.

For the Government

The project should be carefully assessed and evaluated.

Before the dam is built, it should be thought over carefully to ascertain whether the benefits really outweigh the costs.

For example, four million people will be relocated from Chongqing city because the Three Gorges dam has caused problems to the ecological environment such as

mudslides and pollution. The number of migrants is three times that which was originally calculated.

EIAs and SIAs should be conducted.

An environmental impact assessment law has been set up by the Chinese government and social impact assessment is mentioned in the EIA law. In order to assess the whole impact for making decisions and appropriate resettlement plans, the SIA should be done before the project has been approved.

Correct and complete information should be given to communities in the early stages, including the policies, resettlement plan, inventory of the property, etc. It should be easy to understand and accessible to the public. Various ways can be used such as media, posters, information leaflets and public meetings.

Mechanisms for ensuring full participation in the decision-making process during all stages should be established and regularly evaluated. Different groups should be involved, especially affected persons and NGOs.

Internal and external monitoring should be improved. Starting a project before it has been approved should be avoided. Ensure the resettlement process move complies with the plan. The administration of funds should be strengthened. Effective channels for affected persons to settle disputes should be established or improved and feedback given in time.

The implementation of policies for compensation and assistance should be improved. The resettlement site, farmland, basic facilities and compensation should be disclosed before people are resettled. Since the loss of income and livelihood can not be compensated for, income restoration programs should be carried out. Vulnerable groups should be given more attention.

Host communities should be given more rights. As affected persons, the host communities also need the right to be informed in early stages and participate in the whole process.

Systems of democracy at the village level should be enhanced.

Resettlement bureau staff trainings should be enhanced in order to clarify their responsibility.

For NGOs

Information should be shared with the public regarding environmental and social impacts, and relevant policies and laws.

Community trainings should be given. Through the trainings, affected persons will learn to look at the situation holistically and think of effective and rational ways to solve their problems. They can talk with outsiders more confidently. New leaders could be found through the training.

Effective networks should be established. The networks should be built with national NGOs and international NGOs to share information and get support.

For villagers

Women and young people should be united.

Effective leaders should be chosen in order to assure movements can be organized organically and step by step.

Various laws should be understood and used in an integrated way. In addition to resettlement Policy, other laws such as the Constitution and the Land Administration Law should be used together to make local voices stronger.

The Impacts of Hoa Binh Dam Resettlement Communities on Upland Farming Systems

By **Pham Tran Thang Long**

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Introduction

Nearly thirty years have passed since the Hoabinh Dam, the mainstay of energy production in Vietnam, was constructed on the Da River (1979 – 2006). At the time of construction there was still not any concern about issues related to environmental impact assessments. Anyway, the Vietnamese government has promoted the goal of sustainable development (hereafter SD) for resettlement areas, together with the goal of economic growth and poverty alleviation for the minority of ethnic minorities who are poor.¹⁰⁶ However, several years after starting dam construction and continuing until the present, many individuals and organizations inside Vietnam and abroad, have conducted studies assessing social and environmental impacts of the dam as well as studies on techniques for the SD of the dam. It must be said frankly that the dam has brought about economic changes, as well as negative impacts on cultural activities.

¹⁰⁶ National Scheme on Environment and Sustainable Development. Committee of Ministries, released on 12 June 1991; and Environment Law, released on 10 January 1994.

Due to such a result, this study considers the current state of two villages, Phu Hamlet and Tanson Hamlet, which were resettled as a result of the Hoabinh Dam construction, with a particular focus on their level of SD. At this point, it might be good to include why and how Hoabinh and Sonla Dams are similar, to show the adequate and suitable ways for a better life for resettled people from Sonla Dam. Those are none other than the resemblance between two sites on the same river, geographic conditions, ethnic composition, living habits, etc.

Dams on the Da River

The Da River or Black River, which is known as Li-hsien Chiang in Chinese, is one of the chief tributaries of the Red River in the Northern Delta of Vietnam. It is 690 km long and covers 52,900 km² of watershed region which includes a large area of three countries including China, Laos, and Vietnam. Within this watershed there are 2.2 million people, comprising the population of three provinces; Hoabinh, Sonla, and Lai Chau. This watershed has a plentiful water supply, with a total flow accounting for 51% of the current total of the Red River system. This makes for an abundant hydraulic power potential that is from 5,000 – 6,000 MW, or equal to 50 percent of the hydropower potential of the whole country.¹⁰⁷ To date, the Vietnamese government has continually dammed the Da River, with the Hoabinh Dam being completed in 1994 and Sonla Dam under construction.¹⁰⁸ These are the two biggest dams in Vietnam.

The course of resettlement and the history of the Hoabinh Dam

Generally speaking, the process of relocation for the Hoabinh Dam cannot be compared to the current resettlement projects. Before construction on the dam started, officials posted signs in the village with few details. However, villagers were finally instructed to relocate with very little advance notice. Affected inhabitants were informed in 1981 that they would have to relocate in 1983 due to the river flow being halted. In 1983, some chose to follow their village headman and relocate, while others relocated themselves. While some households relocated to the new village, others relocated to the Southern region because most had little land and they sought new opportunities for doing business in the South, such as Kontum, Gialai, Songbe or Lamdong Provinces.

¹⁰⁷ www.britannica.com, Keyword is Black River, and http://www.wrsi.org.vn/vlink_5_3.aspx.

¹⁰⁸ Son La Hydropower Project: More details needed in the government's plans. Summary of article that appeared in VN Express, Wednesday, 27 June 2001.

When moving, most people dismantled their houses to take with them to the new place. There was no road at that time, thus they had to transport themselves, their property, and their animals by river. They built their own rafts, and piled all of their belongings and animals onto them and moved to their new location. All furniture was brought by men and rented trucks, though everyone was allocated only one lorry trip for all their furniture and possessions, and was given only six months of rations (totaling 15 kg/person). Many villagers in my research sites told me that the relocated families cried at having to leave their homeland, houses, along with their plants and gardens. Then the government bulldozed the land to make space that would be distributed for resettled people. However, according to one district official, the resettlement process in general was not implemented in the way it had been designed. This led to a disorderly evacuation. Aside from that, at the time of the construction only a small amount of compensation was given to affected people. Up to the present, most compensation actually has come only after the plant was completed. The compensation has been part of several assistance projects for villagers known as 472, 747, 661 and 135¹⁰⁹ over the course of ten years. This is very different from Sonla, which had a clear and coherent delineation with new sites and infrastructure noted in advance.

Ethnic minorities and/or indigenous people¹¹⁰

Both Hoabinh and Sonla Provinces have been formed by the community of more than 6 major minorities along with their own languages, traditional literature and habits. On the road to Hoabinh Dam, the majority of the 58,000 people who come from ethnic minority groups had become the evictees.¹¹¹ Thus, to get more information about each minority will be useful once their own culture and residences are affected by the resettlement.

Voluntary immigration versus involuntary resettlement

We have witnessed at least two kinds of resettlement that are often a direct consequence of a planned change generated by a major development project or program: involuntary resettlement and voluntary movement of people. Both of these two kinds of resettlement happened following Hoabinh Dam construction. Following the government's appeal for relocation to accommodate this construction

¹⁰⁹ Program 135-Socio-Economic Development Programme for Ethnic Minority and Mountainous Areas; Project 472-Protective Project for the Da River; Program 661-Reafforestation 5 million hectares programme; Program 747-Re-growing forestry programme.

¹¹⁰ Research on Resettlement for Son La hydro plant.

¹¹¹ Engr. Catalino L. Corpuz Jr. Two major headaches for Indigenous Peoples.

project, which is under Soviet assistance, nearly all people must relocate to a new place which has been sought and selected by government officials with inadequate compensation. However, with low education and limited information, people just moved without making any complaints or inquiries. In reality, we meet voluntary resettlement in this case, too. There are some cases where resettled people agree with the transmigration program of the government to the Central and South of Vietnam in the name of the so-called building of a new economy. Another group who did not relocate immediately still stays at the site of the reservoir. They might eventually move upward gradually with the rising water level. As a result, they are involuntarily resettled people living on the sloping territories right at the highest water level. In addition, they have to face many difficulties for their livelihood as well as stabilizing their community.

Community-designed resettlement village model – Tanson Hamlet

This is a result from one of the first resettlement programs of the Vietnamese government. As the head of the hamlet relates, the word ‘Tanson’ means ‘new mountain’. Tanson Hamlet is located in the Northeast of Tanson Commune, about 2 km southwest of the main road 43 Hoabinh – Dabac¹¹², and possesses a good transportation system and a convenient position close to the center of Dabac District. People who were forcibly displaced by the construction of Hoabinh Dam in 1985 founded the hamlet. In Tanson Hamlet today, people are Tay, Kinh, Dao, and White Tai, but the majority of them are Muong, totaling 56 households with 225 individual members who live on only 32 ha of alluvial land. The remaining 388.23 ha is comprised of hills, and rivulets.¹¹³

Upwards running community gradually model – Phu Hamlet

Phu Hamlet represents another form of resettlement of residents who lived below the Hoabinh Reservoir. This hamlet retained its old name and old location after being resettled with the Dao Deo Tien ethnic group. However, it moved up gradually ahead the rising water level of the reservoir. Phu Hamlet is comprised of mostly sloping land, of which 75% is used for agricultural cultivation. Before

¹¹² Located to the north of Hoabinh Province, Dabac District is one of five districts clustered round the Hoabinh Reservoir.

¹¹³ Quan, Bui Van (Tanson hamlet’s leader), Report on socioeconomic and culture situation on Tan Son hamlet for the year of 2006.

the reservoir, people had alluvial land for both wet rice and upland rice. Due to the rising water level, people now have to cultivate on very steep land with a slope of 80 degrees that is only suitable for growing *luong* and *keo* trees¹¹⁴ and less land for maize and cassava. The villagers lack land for cultivation and additionally, they are not allowed to cultivate on the mountainsides in order to protect the reservoir. Most of the people have therefore simply waited for the development and increase in value of *luong* forest, up until now. Only a few households have turned to fishing in the reservoir. Moreover, because the Phu villagers are separated from each other, and have faced considerable challenges as they have moved up the mountain, it is very difficult for them to do business with others, albeit the government has constructed a new road.

Sustainable development

For Hoabinh Dam, reforestation policies and other supportive programs have only been implemented in general, while those conducted following a plan, especially in resettled sites, have many difficulties and contradictions to guaranteeing the goal of sustainable development. It's common to hear from both hamlets' residents an expression about the unusually hotter climate and the large-scale replacement of original forests by *luong* trees.

The crucial change is the beginning of a vicious circle of increasing expenditure, but degrading soil that occurs day after day both in Tanson and Phu Hamlets with the growth of maize and *Luong Thanh Hoa*. After the resettlement process, only the people in Tanson Hamlet got back some alluvial land for maize, cassava, and sugarcane cultivation, while the people in Phu Hamlet continue living on sloping land right above the reservoir. On that kind of land, villagers can only plant maize and *luong* trees, but have low levels of productivity. Some of them must rent land in a neighboring commune, or convert to fisheries, work that they had never previously viewed as being a staple of their livelihood. Although people use more fertilizer and take good care of their crops, their output is still decreasing. This is due to the fact that the variety of plants is no longer suitable for cultivation, while *luong*, maize, and cassava cultivation over the course of many years leaves soil eroded and nutritionally depleted.

Consequently, many of those interviewed in both hamlets complained that they do not have enough knowledge or the skills to conduct mechanized agriculture with modern

¹¹⁴ *Luong Thanh Hoa* has the scientific name *Dendrocalamus membranaceus* Munro, and met as another Vietnamese calling. *Keo* is scientifically identified as *Acacia mangium* x *Acacia auriculiformis*.

implements and techniques. Before resettlement, inhabitants of both villages lived on low-lying land and very close to the river. Hence, wet rice was a critical product which enjoyed ease of irrigation and stable output. People earned extra income from river activities such as fishing, driving ferryboats, and fishing timber out of the river to sell in the rainy season. However, in a very short time after relocation, both models had lost most of their arable land. While Tanson has had problems with cultivating fruit trees, sugarcane, and maize, Phu Hamlet has had difficulty not only with the variety of maize but also its sloping land and finding a way to intercrop with luong and keo trees. The villagers are more and more dependant for their crops on the weather; meanwhile there has been rapid deforestation, especially from 1993 - 1995 until it was halted by the government. Thus, while the mode of production has changed, the villagers' livelihoods continue to have unsustainable impacts on the environment and society.

Not only are they having financial difficulties, but both field sites have also bemoaned changes in their traditional culture affecting every family. As a result, people are at risk that the failure of their crops will lead to the breakdown of their community. These changes have resulted in the loss of profoundly important cultural customs such as traditional clothing, games, singing, and dancing. Everything has been simplified; and young generations do not have much interest in ethnic practices such as wearing traditional clothing and organizing annual festivals in the traditional way. Each village has only one small performance team that can sing and dance traditional songs. Additionally many ethnic groups merged into a single community, and new approaches to the outside society all help ethnic groups in their development while impairing some traditional features that were not prepared for the rapid transformation.

Conclusions and recommendations

Hoabinh Dam is old, but still brings many impacts to local inhabitants. Faced with all the revealed changes, residents still have a negative mentality and are not prepared for their future. Their limited skills and knowledge, combined with their dependence on the authorities, has produced confusion and suspicion of their future and towards the assistance of the authorities and others who want to help. Moreover, the environment cannot be protected if environmental protection activities are not associated with agriculture and forestry, as well as the improvement in their material and spiritual life.

In other words, to maintain and preserve construction as well as people in a sustainable manner, we must take an account of effects¹¹⁵ of using compensation money, using land and agriculture, and using water resources. Most of the following recommendations of this study in Hoabinh can be used as practical suggestions for the Sonla construction:

- Prioritize family livelihoods and ensure effective development projects with sustainable perspectives. A solution is needed urgently to resolve two problems: the area of land is decreasing while the population is rising. Affected people in particular and citizens in general need job-creation initiatives along with a career center to help them rise above poverty.
- Ensure the rights to participation and information in order to guarantee that the affected village conforms to each specific ethnic group's customs and practices, education and affected levels.
- Implementation of social and environmental impact assessments accompanied with oversight by local authorities as well as the grassroots level.
- Adjust suitable investment packages for protecting forests to real price and adequate time.
- Support for effective compensation and loans with trained modes of production and to specific groups contextually.
- Build a suitable socioeconomic strategy to preserve and develop traditional culture through forms of education and tourism.

Last but not least, despite the fact that we have witnessed several resettlement models, either involuntary or voluntary; these have led to difficulties and even destruction in many forms of local livelihoods and traditional culture due to the lack of many of the above suggestions. Furthermore, the best way is to have a creative, tailored and complete strategy with the participation of all stakeholders. This will be the most straightforward path to resolving difficulties with the aim of preserving, and developing the natural and social environments that are closely intertwined.

¹¹⁵ According to the Asian Development Bank (ADB), for any project that requires relocating people, resettlement should be an integral part of project design and should be dealt with from the earliest stages of the project cycle taking into account the following basic principles.

Resettlement Impacts of Nam Ngum 2 Hydro-power project on Local Culture

By Siengxay Sengkham

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Summary

The resettlement of people for Nam Ngum 2, a 615-megawatt hydroelectric dam planned for construction in central Lao PDR, is fraught with problems. Local officials' incomplete understanding of government policies protecting human rights and a lack of support for these policies from project implementers are the primary causes of these difficulties.

Resettlement plans are being finalized for relocating communities located along the Nam Ngum river, in the former Phuong district, an area just North of the current Nam Ngum reservoir. Relocation of these communities was set to start in the beginning of 2007, and is to be completed by the end of 2009. In total, 17 villages will be moved, comprising 6,100 people of different ethnicities, including Phuan, Tai Dam, Tai Deng, Khmu and Hmong. According to the plans, the villages will be moved into Fuang district, and, for ease of management, will be merged together into 'focal sites' of at least 200 families.

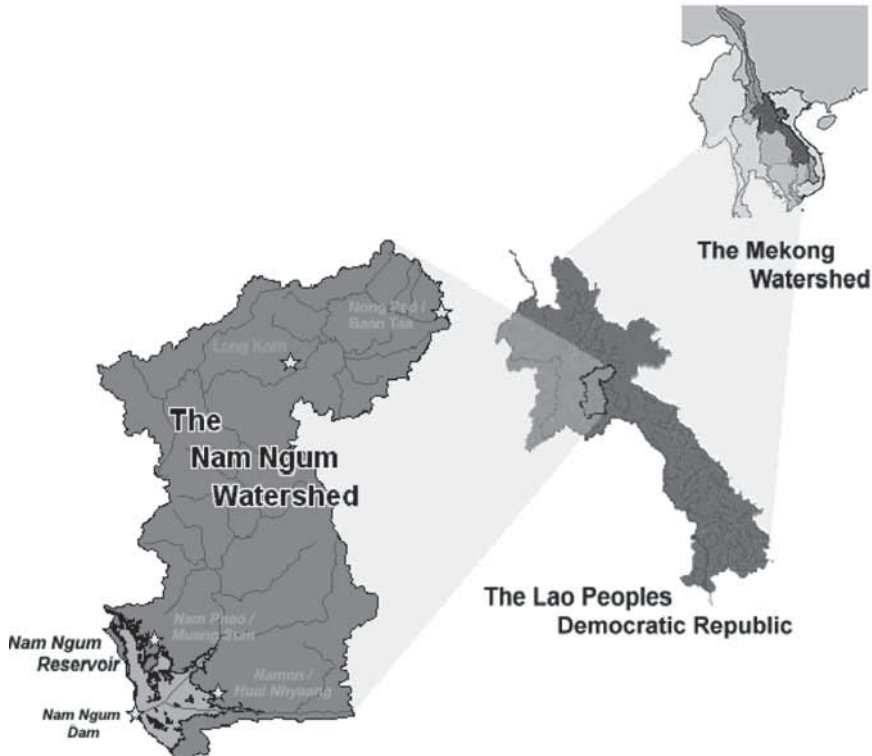
I identified several human and environmental rights abuses related to housing, freedom of movement, and respect for cultural and linguistic sustainability. Religious injustice was the most acute of these problems, as the project planners have not put into place any safeguards against the loss of non-Buddhist belief systems. The different ethnic groups in Phuong district have spiritual beliefs that belong to their cultural heritage. Each of these groups has evolved systems to ensure that they live in happiness and harmony within their society and in nature. This diversity should be a source of pride and a foundation for Lao nationalism. But the conditions that have nurtured and cultivated this diversity need to be protected. Unfortunately, the relocation and cultural amalgamation of these peoples does not respect the boon with which we've been given. It is part of a general trend towards the breakdown of our rich culture and a severe loss to the nation of Laos.

Introduction.

Lao PDR is a country with an extremely rich natural environment. Natural resources provide the basis of livelihood for the Lao people, the majority of whom live in rural areas. Due to the social and economic pressures of development, Lao PDR's natural resources are coming under increasing pressure from national activities, such as logging, mining and the building of dams and roads; to an extent, pressures associated with local livelihoods, such as wood use, agriculture and hunting have also affected this resource base (UNEP, 2001).

Hydroelectricity: Lao PDR's economic development strategy.

After the Lao government announced that it would begin opening up its economy, hydroelectric projects have become the major component of their development policy. The Lao government has accepted the metaphor that Lao PDR, with its plethora of wide rivers, is fated to become the 'battery' of peninsular Southeast Asia (Perrin, 2005). Consequently, the state has signed deals to export 5000 megawatts of electricity to Thailand by the year 2015 (Vietnam News Agency, 2006). This lofty goal requires the building of at least seven power stations, which, other than Nam Ngum 2, are all still in various phases of negotiation (Praiwan, 2007). Run-of-river dams on the Mekong river are also undergoing feasibility studies in Sayabouli and Champasak provinces (Vientiane Times, 2007; The Economist, 2007). Ninety-five percent of the electricity generated by the Nam Ngum 2 project is destined for export to the Electricity Generating Authority of Thailand (EGAD). The remainder is planned for domestic rural infrastructure.



In total, the Lao government intends to have at least 29 hydroelectric power development schemes in place by 2020, with a total installed capacity of 8,657 megawatts. The other principle buyers will be Vietnam, and to a lesser extent, Cambodia and China (Lao National Committee for Energy, 2007).

The Nam Ngum 2 hydropower project is located on the Nam Ngum, immediately upstream from the existing Nam Ngum 1 reservoir. The project is a joint venture between the Lao PDR government (25 %) the private investors (75%). According to the Lao government website, www.poweringprogress.org, the private investors included Shlapak Group (4%), C. Kanchang (28.5%), PT Construction and Irrigation (4%), Ratchabury (25%), Bangkok Expressway PCL (12.5%) and TEAM Consulting, Engineering and Management Co., Ltd. (1%). It is being built under a “build, own, operate and transfer,” or BOOT agreement. The hydropower plant will cost about US \$832 million, will have an installed capacity of 615 MW, and is expected to be completed by 2011 (Lao News Agency, 2006).

There are approximately 200 village communities in the Nam Ngum watershed, many of which are in the former Xaisomboun ‘special zone,’ which is now a district in Vientiane province (International Development Research Centre, 2007). Several different ethnic groups live in the area, including Lao Lum (Phuan, Tai Deng and

Tai Dam), Hmong and Khamu (61, 28 and 11% respectively, ADB, 2000). These groups have different rice production systems (such as wet rice and swidden cultivation) and various ways of managing resources to minimize competition. The complementarity of different practices by various ethnic groups can be compared to flowers in a garden: each of them uses a different localized niche, allowing them to mutually co-exist.

A power station at its base generates electricity by the head created by the dam. The developer prepared a study of the site using a FSL of 375 masl. At this capacity the reservoir would inundate 122 km², creating a large branching reservoir, and requiring the resettlement of large numbers of local inhabitants (Maunsell and Lahmeyer International, 2004). There is not enough land in this area for would-be resettlers, so most villagers will be relocated to Feuang district. The deputy governor of Xaisomboun district has partially recognized the difficulties that this will create. When asked about the social and environmental impact assessments, he replied: “we apologize that we cannot give a clear answer about that. We tried to ask the development project to respond. We are also worried about the traditional culture of the ethnic people that will be lost in the future” (personal communications, 2006).

Villagers have been living in Phuong district for several hundred years. Up until 1963, most of the ethnic people living here were Khmu. Since then, some other ethnic people have relocated from Vang Vieng district to live there. Many of these people lived in Ban Sone, which has increased considerably from migration from other villages and districts.

In response to these pressures, local initiatives in resource management were developed. This included the demarcation of resource boundaries, for example, in the form of community forests. Traditional management of forests and other resources is therefore longstanding, and is particularly prevalent in the more stable communities in the upper part of the watershed, such as in Xieng Khouang Province. National policy is supportive of local management initiatives (Hirsch, Phanvilay and Tubtim, 1999).

These villages still have strong and cohesive communities that are threatened by this relocation. By understanding the complexities of these communities and their cultures, we can make recommendations on how to minimize the damage caused by this abrupt change in their livelihood. This paper identifies some of the different ways in which these communities, comprising many different ethnic groups, could protect their traditional culture in the face of imposed change.

Resettlement

In total, an estimated 6,000 people could be moved from 16 villages in Phuong district (ADB, 2007). These people make up many different ethnicities, including Phuan, Tai Dam, Tai Deng, Khmu and Hmong. Villagers will be moved to two areas. A large group will move to an area of about 350 hectares, between Khounluang and Naxaeng villages in Feuang district, about 100 Km away from the project site. A small percentage will live in Xaisomboun district, about 20 Km away from the project site in the area between Namtei and Na-nhao villages. According to the resettlement plans, the villages will be merged together into ‘focal sites’ of at least 200 families. The relocation will take place between January 2007 and December 2009. Locals do not have any legal means to refuse resettlement because Article 15 of the constitution states that all ‘land within the Lao PDR is owned by the national community and that the State ensures the right to use, transfers, and inherit it in accordance with the Law’ (Lao PDR, 1991)

Lao PDR’s National Growth and Poverty Eradication Strategy

State officials justify that resettlement is part of a national strategy to ‘eradicate’ poverty. As Mr. Onneua Phomachanh, a minister in the prime minister’s office, said during the project’s discussion meeting: “these people are poor and their income currently depends on the seasons. They will be relocated to a new area, which will make their lives better. If we don’t put them somewhere better, we will not be helping reduce anyone’s poverty” (Vientiane Times, 2006).



Villagers who will be relocated to Fuang District

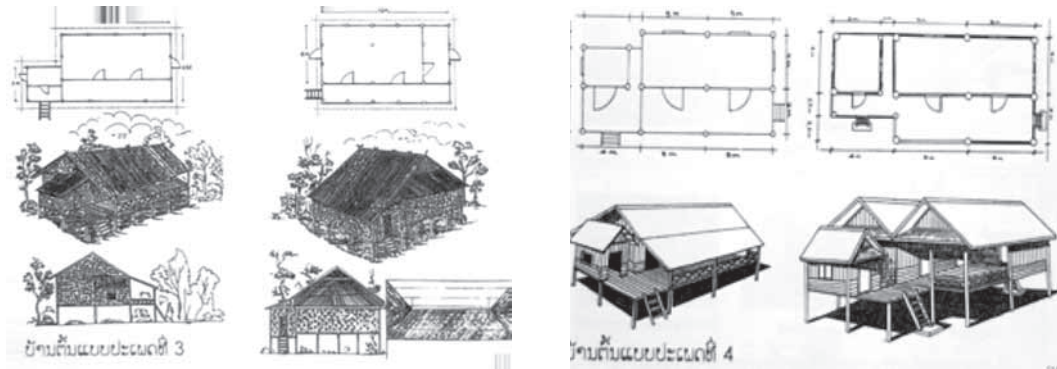
Prior to resettlement, project developers emphasized the benefits of the project for local, and in particular, ethnic people. Once the villagers are convinced by the stakeholder arguments and make written assents of admission, they are no longer eligible to claim compensation beyond that which had been contractually agreed upon. Then, under the binding terms of the contract, locals may be denied compensation in cases where they refuse to behave in the ways that they have been outlined to do. Illiteracy and unfamiliarity with legal documents and language prevents the villagers from understanding the consequences of these agreements.

Housing and Compensation in the Resettled Villages

Under contract terms, the project is responsible for locating, designing and building the houses, and financially compensating, the resettled villagers. Villagers will be awarded money based on the size and yield of the rice fields that they would be losing. For example, a one-hectare rice paddy, yielding about 2000 kg, would be compensated with 2,000,000 kip per year, for the duration of ten years, which comes to about \$2,000 USD. In addition to this, there is limited compensation for equipment and materials that villagers may lose during the move.

As regards the specific house designs, a different house template has been produced for each of the major ethnic groups. The architects have currently designed three styles of houses, in the fashion of what they perceive as ‘Hmong,’ ‘Khmu’ and ‘Lao’. Distinct housing for the lowland Lao subgroups, Tai Dam and Tai Daeng, have not been considered despite their being historically and culturally unique from the dominant Lao traditions.

The villagers have been compensated in ways that are inconsistent with claims presented in the state newspapers, by project staff and by local government officials. For example, in the *Vientiane Times*, it is stated that “the construction of new houses will be discussed again between the people and project managers. *The project will build the style of house they like or they can do it themselves with the money they get in compensation*” [emphasis added]. However, the villagers concerned did not participate in the design of these so-called ‘traditional’ models and many expressed unhappiness at their inability to be able to contribute to what they see as being so personal an issue. Many therefore asked why they were not allowed to participate.



Blueprints for the Khmu (top-left), Lao (top-right) and Hmong (bottom-left) houses according to the Nam Ngum to building plans.



In the context of this resettlement, villagers feel that they no longer have the freedom to direct their own lives. Even the village chiefs could not do anything to help their villagers. When questioned, the project authorities merely refer to the unassailable discourse that they are simply executing the development policy of the state government. When the villagers talk about the resettlement, their faces were troubled and quiet. They acquiesced, accepted that they are powerless and simply tried to follow the words of the project authority.

The issue of house styles came up repeatedly. At least ten villagers of Ban Pa Ngieng Tai pointed out that they have no chance to participate in decision making of how to design the house styles. As they explained, when they asked to join the developers in designing the houses, the project authorities refused them, stating that they already had an engineer who is well-known for creating house styles for ethnic people. According to the villagers, project staff dismissed their concerns, stating nonchalantly: ‘Don’t worry about that, we can do it for you all’ (personal communication, 2006).

Even the various public and private stakeholders have differing conceptions as to how the issue of housing and compensation will be played out. For example, during interviews with different district level officials, there was a considerable variance

in understanding. Some of the officials insisted that the resettlement of ethnic people would be based on where they themselves would like to move and that the compensation would be equal regardless of where the villagers chose. Other officials denied this, maintaining that only half the funds would be provided to individuals who chose not to live according to the project development plan. Since the district government itself is confused about the specific resettlement conditions, it obviously follows that the villagers will be totally perplexed. However, out of fear of speaking against authority, they do not attempt to resolve the uncertainty clouding their future.

However, some villagers were more concerned with the loss of their religious identity than house designs. Most villagers would like the freedom to move wherever they choose but without land or capital they feel forced into accepting the project relocation. While the villagers worry about losing their culture and would like to live with their relatives in other villages, they also worry about being landless. With their original land taken away, they don't see any choices under the circumstances and therefore accept the amalgamation insisted upon by the project developers. For example, about fifteen villagers from Ban Na Luong and Ban Pa Ngieng Nua explained that they were distressed by the fact that the project was not building a church to accommodate their Christian faith, in spite of having detailed plans for the construction of a temple in the relocated village for Buddhists. They said that they didn't care about house styles but that they just wanted to live with their relatives in another village, where they could protect their religion. However, this option was seen as financially impossible. Their understanding is that if they don't accept the resettlement conditions then they will only receive half the compensation, which they see as insufficient to subsist.

Amalgamation, cultural identity and representation in the resettled villages.

Each of the five effected ethnic groups have unique religious beliefs and customs. It is beyond the scope of this paper to compare these differences in detail, but I would like to familiarize the reader with some of the practices that I came across during my research.

The Phuan, unlike the Hmong or Khmu, practice Buddhism. They often pray at the temple, and offer food to the Buddhist monks every morning. Every eight days and every fifteen days, during the waxing and waning transitions of the moon, the villagers go to the temple to pray and listen to the monk explain the teachings of the Buddha. On these days, the Phuan people cease their activities and instead help clean or maintain the temples. However, during the Buddhist New Year in May,

they have a practice common to other Lao Loum groups: they pour water on the Buddhist statues in the temple in order to ask their ancestors for forgiveness. All of these activities give meaning to the lives of the Phuan people.

The Khmu people also have traditional cultural activities, such as the celebration of the Kherrer festival, which takes place every December after harvest. During the festival, the rice spirits are thanked, as are the household spirits. In addition, they ask the spirits for protection from poverty. Beside this, the Khmu people believe in a village spirit. At the head of the Khmu village, the villagers erect a special dwelling for the village spirit, and worship the area as a sacred and mysterious place. If someone commits a sin in this vicinity, it is believed that misfortune will befall him or her.

Hmong people also have special beliefs, such as the Kin Chieng festival. During this time, Hmong people do not enter into other peoples' houses or villages. According to this tradition, doing so would surely result in some ill-fate.

While the other ethnic people, the Tai Dam and Tai Daeng, also have specific beliefs, it is not the purpose of this paper to explain in detail the activities of each ethnic group. However, I can provide a sample so that the reader may understand a little bit about the cultural traditions of Tai Daeng ethnic people. When a household member dies, it is sacrilegious to move the body out through a door. Instead, they break a wall on the side of the house to make an appropriate exit.

According to the resettlement plan, the villagers will not be separated according to ethnic group after relocation. Unfortunately, the potential consequences of this decision have not been carefully considered.

In fact, most of the ethnic people in the former Phuong district have been living together for a long time in this area. The interesting relationship between the ethnic groups in this area was expressed to me by several people living in Ban Na Luong and Ban Na Tu. They have never attacked one another because they lived in different, geographically distinct, villages. But, they still respect each other. When people of one ethnic group celebrate their traditional festivals, people from the other groups also come, join in the festivities, and support the livelihood and cultural heritage of that ethnic group.

In the 'focal sites', however, power struggles will invariably arise. Considering that the Phuan make up the majority of the population, we might expect that their influence in the amalgamated villages would be similarly disproportionate. Whereas careful planning would have taken this into account in village design, the imbalance

is instead further exacerbated by the fact that it is also only the Phuan religion that is to be represented by the building of temples to the exclusion of spirit houses or other holy places of worship. Many of the other ethnic groups expressed their fears and frustrations regarding this injustice. At least twenty villagers from Ban Lak 33 and Ban Lak 37 worried that, without a place to pray to their spirits, their cultures would surely go extinct. They criticized the planners for behaving as though the villagers had no beliefs at all worth protecting.

Finally, the fact that project developers will be building temples but no other religious places may be at ends with Article 8 of the Lao constitution, which states that all ethnic groups have the right ‘to protect, preserve and promote their fine customs and culture. All acts of division and discrimination among ethnic groups are prohibited’ (Lao PDR National Assembly, 1991)

Conclusions

The resettlement plans of the Nam Ngum 2 project developers currently run against the basic principles of the Lao government and the Lao Central Party Committee, which can be summed up by their well-known motto: “The loss of traditional culture is the loss of the Lao nation.” (Phomvihane, 1996) Concern with the dissolution of culture has been prominent within party discourse ever since the nations’ first president, Kaysone Phomvihane acknowledged its protection as crucial for the strength and unity of the country.

Thus, the ideal of the Lao government is not incompatible with that of human rights and ‘earth rights’, a concept promoted by the similarly-named INGO, recognizing the inseparable link between human and environmental abuse¹¹⁶. While the Lao government demands national development, at the same time, it values the protection of the traditional culture of all ethnic people, all of which are tied to ecologically and socially sustainable livelihoods. Economic development alone will not ensure an improvement of the countries’ people. The protection of the traditional culture of the ethnic people is of equal importance.

The basic principle of ‘earth rights’ is that human rights, an ecologically sound environment, sustainable development and peace are all interdependent and indivisible. This means that all persons

¹¹⁶ For a more in depth review of this concept, see The Legal Bases of Earth Rights. *Introduction to Earth Rights Manual* (2006).

- have the right to a secure, healthy and ecologically sound environment, be free from discrimination in decision making about effects the environment,
- have the right to sustainable development,
- have the right not to be forced from their homes or land by the decisions of society. If needed to move, people should be involved in the process and compensated,
- and that Indigenous peoples have the right to control their own lands, territories and natural resources and to maintain their traditional way of life (Earth Rights, 2006).

The beliefs of ethnic people also have environmental value essential for sustainable development. For example, all ethnic people traditionally believed that the forest *is* their livelihood. The forest kept them from danger and throughout times of hunger and disease, and helped them live together in peace. Ethnic people often believe in a mountain spirit and forest spirit, and they cannot destroy the forest without retribution from them.

However, most of the interactions between the State and the local people have been initiated to make villagers understand national development concepts. An understanding of how traditional cultures of ethnic people might in turn assist in development is absent from discourse.

The report, “Internal Resettlement and International Aid Agencies in Lao PDR” (Baird and Shoemaker, 2005), and other published papers (for example, Vandergeest, 2003) have recently been produced on internal resettlement and related aspects of development policy in the uplands of Lao PDR. These include a critical examination of how resettlement and land and forest allocation initiatives have not recognized the spatial organization of upland people – through changing their agricultural practices, altering access and use of forest resources, reorganizing the spatial layout of villages along roads and even through insisting that houses be permanent and sturdy like those of the lowland Lao. This spatial reorganization is facilitating cultural integration into the dominant culture. There is another study about the nutritional implications of internal resettlement and other changes in livelihood, (Krahn 2003) such as on opium eradication projects.

Government authorities participating in the development project are powerless to implement state policy that may help local people conserve their cultural heritage. They cannot give feedback to the project owner regarding the implementation of the project.

Recommendations:

Recommendations call for keeping the same ethnic group together; not to penalize people who want to choose where they are to be resettled; and to provide room for input by effected groups. The government should be sensitive to cultural/religious needs, provide for time and means (e.g., religion sites) for them to merge with one another and adjust, allow for public feedback, be open to taking corrective actions, and encourage advisory monitoring by independent parties. Income from the sale of energy to Thailand should be enough to provide some funds to promote harmonious, peaceful, economic living conditions and environment. Genuine desire to learn from mistakes and do better and better the next time around must be present for Laos' hydropower development program to be successful. Specific initiatives might include:

- Increase the participation of resettled people in the decision making process, including choices related to housing and spatial organization.
- Study the negative experiences of other countries that have engaged in involuntary resettlement.
- Utilize indigenous knowledge and traditional culture to formulate a more integrated and sustainable development policy.
- Engage in development that supports local initiatives.
- Increase transparency regarding the potentially destructive impacts of new projects.
- Incorporate 'earth rights' principles into district and provincial level decision-making.
- Establish a strong multi-ethnic nationalism and avoid importing other countries' development strategies.

Former president, Kaisone Phomvihanh, once said that the Lao government's strategy should focus on the needs of the Lao population, and this should be a central part of the development standard of the Lao government (3). These words are becoming ever more timely, as more and more large-scale development projects are invading the Lao countryside. Any project that harms the Lao people's way of life means that it will also harm our nation and our chances of developing in a just and meaningful way.

EarthRights International (ERI) combines the power of law and the power of people in defense of human rights and the environment—our earth rights. We specialize in fact-finding, legal actions against perpetrators of earth rights abuses, training for grassroots and community leaders and advocacy campaigns. Through these strategies, ERI seeks to end earth rights abuses, to provide real solutions for real people, and to promote and protect earth rights.

For more information on ERI, visit www.earthrights.org

This volume is comprised of writings from three classes of EarthRights Mekong School graduates. EarthRights International's Mekong School is a training program for civil society advocates from the Mekong Region (China, Burma, Laos, Thailand, Cambodia, and Vietnam) whose work focuses on human rights and the environment.

The papers presented here take an in-depth look at the impacts of large-scale infrastructure projects, and how citizens are engaged in advocating for more equitable development in the Mekong region. In the first section, authors investigate community complaints regarding negative impacts from Asian Development Bank (ADB) and World Bank funded projects, and make recommendations to strengthen international financial institution safeguard policies. The second chapter examines the threats posed by the series of hydropower dams currently planned and under construction along the mainstream of the Mekong to migratory fish stocks, local livelihoods, and regional food security. The final chapter is a survey of problems related to resettlement in the wake of large dams, with a look at how civil society groups are advocating for policy reform.

It is hoped that the papers presented here will inspire further work towards greater public participation and transparency in development planning in the Mekong region.



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