

**Failure to Restore: An Assessment of the Impacts of the  
Theun-Hinboun Hydropower Dam Projects on Downstream  
Communities in Laos**



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*Cover Photo: Downstream of the Theun-Hinboun Expansion Project, power lines to Thailand cross the Hinboun River. November 2013. Credit: International Rivers*

## Executive Summary

This assessment of the impacts of the Theun-Hinboun Hydropower Project and Expansion Project on downstream communities was commissioned by International Rivers and is based on a site visit conducted over the course of five days in November 2013 along the Hai and Hinboun rivers of central Laos. The interviews conducted for this report found that people living downstream of the Theun-Hinboun Hydropower projects continue to be seriously affected by the dam-induced changes to their livelihoods and surrounding ecosystems, fifteen years after the original project began operations, and one year after the Expansion Project began generating electricity.

Both Theun-Hinboun dam projects are owned by the Theun-Hinboun Power Company (THPC), a public-private partnership formed between the Government of Laos' Electricity du Laos (EdL), Nordic Hydropower<sup>1</sup> and GMS Lao, a subsidiary of Thailand's GMS Power Public Company Limited. The original Theun-Hinboun Hydropower Project (THHP) began operations in 1998 and negatively affected approximately 30,000 people in at least 66 villages along the Hai, Hinboun and Theun-Kading rivers, all of whom formerly relied on gathering food from the forest and wetlands, fishing, riverbank cultivation and seasonal rice farming for subsistence and income generation. Since completion, the original Theun-Hinboun project has caused ongoing exacerbated erosion and flooding in the Hai and Hinboun river basins, leading to a loss of productive agricultural land, and a severe decline in fisheries. Numerous reports from both the company and external observers have documented the impacts of the project on the river's ecosystem and livelihoods of affected communities (Shoemaker, 1998; FIVAS, 2007; Barney, 2007; International Rivers and FIVAS, 2008; Matsumoto, 2009; Schouten et al, 2004; RMR, 2006; Norplan, 2007a and 2007b).

The Theun-Hinboun Expansion Project (THXP) was completed in December 2012 as an extension of the existing Theun-Hinboun Hydropower Project, damming the Nam Gnouang River and doubling the volume of water diverted into the Hai and Hinboun rivers. Some of the predicted consequences of the Expansion Project include exacerbated erosion of the riverbank, altered flow patterns, more severe flooding events than in the past, and increased

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<sup>1</sup>As of April 2013, the shares held by Nordic Hydropower in THPC were acquired by SN Power, a member company of Norway's Statkraft Group (<http://www.snpower.com/news-room/press-releases-2013/theun-hinboun-power-company.aspx>).

sedimentation of the river downstream. Fish populations that had already dramatically decreased due to the original Theun-Hinboun Project are expected to further decline.

The expansion project has forcibly displaced 4,186 villagers from their lands in the reservoir area. According to THPC's own estimates, an additional 51,000 people are affected (THPC, 2008). The exacerbated flooding along the Hai and Hinboun rivers means that many of the people still living along the river banks are left with few options but to give up their once productive rice paddies, fruit trees, communal livestock grazing lands, foraging areas and homesteads and move away from the river to designated relocation sites set up by THPC. These sites are less affected by the fluctuating river levels, flooding and erosion, but the soil is less fertile than the nutrient-rich floodplain areas directly along the river and natural resources are scarcer. Families from twenty-three villages are moving to new consolidated settlements under a company-managed relocation program. People from twelve of the twenty-three villages in the middle and lower Hinboun River are still in the process of relocation and remain uncertain about the exact schedule for moving, compensation they will receive for lost assets and livelihood prospects for the future. The relocation process involves consolidating different existing communities into one large focal village.

Based on villager testimonies recorded during the fieldwork, the main findings related to the downstream impacts of the Theun-Hinboun Dam and the Expansion Project are as follows:

- **Food and income insecurity are of primary concern to the families living downstream.** This situation is largely due to the nearly complete decimation of capture fisheries, the loss of access to other natural resources from the surrounding floodplain, the continued flooding of the areas along the river where people traditionally cultivated wet season rice, and the failure of alternative livelihood projects to fill the resulting gap in lost food and income sources.
- **Families living downstream moving from old villages to new consolidated settlement sites face several pressures and constraints that compel them to involuntarily resettle.** The dam-induced erosion, fluctuating river levels and increased incidences of flooding mean that growing and gathering food in previously fertile areas along the river is no longer possible, and that there is increasing damage wrought on housing structures and other physical assets. Since infrastructure in the old villages is becoming dilapidated or is lacking altogether, there is also an incentive

to move to a location where THPC and the government are investing in new infrastructure. Since government policies and local officials actively promote the establishment of new consolidated villages in the name of development, people are expected not to object to suggestions or instructions to move. As a result, villagers fear being subject to repercussions if they are seen as resistant to moving.

- **Communal wells, pumps and toilets initially installed by THPC in communities along the Hinboun are now falling into disrepair.** These villages are scheduled to be relocated between 2014 and 2018, but in the meantime, there is no evidence of further infrastructure investment by THPC or the Government of Laos. As a result, corresponding health concerns are increasing in these villages.
- **Many of the livelihood mitigation and restoration programs have largely failed.** Livelihood programs including subsidized dry season irrigated rice and household-level fish-raising have been initiated by THPC over the past fifteen years. These programs have typically been designed as short-sighted experiments without being based on thorough assessments of the resources available, market opportunities, scale of initial losses incurred or aspirations of affected people. Given the limitations of these measures, the support offered by THPC is not perceived by villagers to constitute fair compensation for losses incurred.
- **The grievance system for resettlement and compensation does not provide for independent channels of recourse.** Villagers say they want to be able to report grievances about resettlement and compensation issues through an independent third party, to ensure their own security and that of their family. They are concerned that using the current grievance system developed by THPC could lead to being more closely monitored by state authorities.

The environmental and social impacts of the two dams built by the Theun-Hinboun Power Company illustrate that despite the oversight from international financial institutions and the company's publicized efforts to mitigate and manage the social and environmental impacts, the company's programming has failed to adequately restore - let alone improve - the livelihoods of people living downstream.

## Foreword

This assessment of the downstream impacts of the Theun-Hinboun Power Company's two dam projects in central Laos was conducted in late 2013, fifteen years after the initial Theun-Hinboun Hydropower Project came into operation, and nearly one year after the Theun-Hinboun Expansion Project was completed. The Government of Laos, along with the Asian Development Bank (ADB), the World Bank and other institutional donors, assert that hydropower dams are indispensable to poverty alleviation in Laos, and help support social and environmental mitigation measures in dam-affected areas. Since Laos is a one party state that lacks an independent media and has stringent security laws that forbid people from listening to, being in possession of, or reading documents perceived to be critical of the government or its agenda (International Federation For Human Rights, November 2012), there are no public forums for open, informed discussions about the long-term costs and benefits of hydropower dams. Arbitrary detention and human rights abuses by state authorities are well documented by organizations such as Amnesty International and the International Federation For Human Rights. Given this context, monitoring the impacts of dams and conducting analytical research about infrastructure development projects is constrained. Under these circumstances, the primary author and research assistant have chosen to remain anonymous, while the identities of local respondents have been protected.

The following report provides documented evidence demonstrating that the Theun-Hinboun Power Company's operations have served to break the resilience of formerly healthy river ecosystems and self-sustaining communities, and that the projects' operations are primarily culpable for the problems currently faced by villagers along the Hai and the Hinboun rivers. The findings of this report affirm those documented in the October 2009 report commissioned by a coalition of international non-governmental organizations, "Expanding Failure: An Assessment of the Theun-Hinboun Hydropower Expansion Projects' Compliance with Equator Principles and Lao Law". The updates contained in this report provide further evidence that the Theun-Hinboun Hydropower Project and Expansion Project have jeopardized the economic, food and water security of local villagers, and that negative impacts have not been mitigated or addressed through adequate compensation.

## **Introduction**

The Theun-Hinboun Hydropower Project (THHP) in central Laos is a trans-basin diversion scheme that transfers water from the Theun-Kading River into the Hai and Hinboun rivers. The original 210 MW hydroelectric dam began operations in 1998. Ninety-five percent of the energy supply generated is exported to Thailand, while the remaining 5% is reserved for domestic distribution. Ever since the inception of the Theun-Hinboun Hydropower Project, regional and international human rights and environmental groups have consistently raised concerns about the project's negative impacts on affected communities and the surrounding ecosystems. THPC failed to commission baseline studies prior to project construction, and did not establish rigorous methodologies to collect data about the impacts on downstream communities, making it difficult to scientifically establish the actual impacts on affected communities. Soon after operations began, documentation from researchers revealed that villagers were reporting a 30-90% decline in fish catches (Shoemaker, 1998). These findings were later confirmed by internal studies commissioned by THPC (Schouten et al, 2004). Independent and company sponsored studies have further revealed widespread losses of riverbank vegetable plots due to fluctuating water levels and rapid erosion. However, since THPC is operating within a country that currently lacks an independent press and civil society, the company has not been pressured by people within Laos to take remedial action or pay reparations for unmitigated economic losses to thousands of families impacted either upstream or downstream.

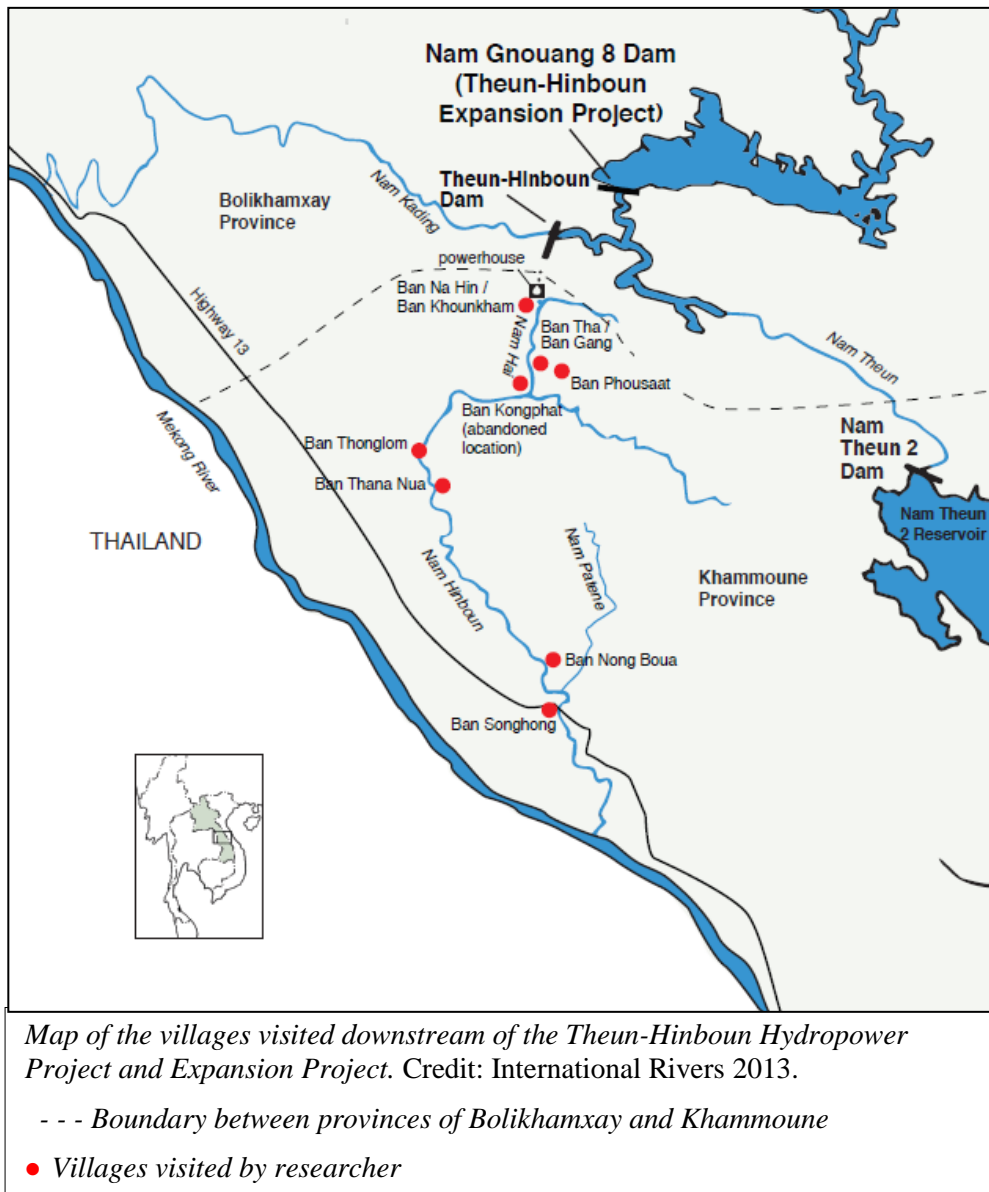
In 2008, THPC began building a second project, the Theun-Hinboun Expansion Project (THXP). This extension involves a 65 meter high dam upstream of the existing project, on the Gnouang River, diverting additional water from the Theun-Kading through a new parallel headrace tunnel and into the Hai and Hinboun rivers to generate an additional 210 MW. Financing for the US\$720 million dam project was provided by foreign-owned public and private banks, including from Australia (ANZ Banking Group), France (PROPARCO and BNP Paribas), Germany (DEG), Belgium (KBC), Netherlands (FMO), and Thailand (Export-Import Bank of Thailand, Bank of Ayutthaya, Kasikorn Bank, Siam City Bank and Thammachart Bank). The three banks from Australia, France and Belgium have all signed onto the Equator Principles, a voluntary code of conduct for financial institutions to manage environmental and social risks in overseas project financial transactions. The Asian Development Bank (ADB) provided \$60 million for the Government of Laos' equity share in

the original Theun-Hinboun Hydropower Project, and has provided periodic technical assistance in the form of safeguard monitoring for the expansion project.

Following the construction of the THXP, the project-affected population from the combined projects totals over 50,000 people, although exact numbers of impacted people have yet to be ascertained. To make way for the THXP reservoir created on the Gnouang River, 4,186 people were resettled. In addition, twenty-three downstream villages with a combined population of over 8,000 people are part of THPC's program of involuntary relocation. The shortages of usable arable land and access to clean water for all of these project-affected people is also exacerbated by a number of other developments in the Hinboun valley, including new dam projects, rapid deforestation, land use changes, industrial forestry and mining concessions.

The following study examines socio-environmental impacts of the Theun-Hinboun projects on the communities located along the two downstream recipient river valleys of the Hai and Hinboun, and is based on the perspectives of people interviewed in the villages of Phousaat, Tha/Geng, Thonglom, Thana Nua and Nong Boua. The focal cluster settlement of Phousaat is a consolidation of six relocated villages from along the Hai-Hinboun floodplain. Tha/Geng is the name used to refer to both a relocation site and an original village, as residents have sought to retain the name of the village to which they have attached their identities and ancestral roots. The relocation site was established in 2010 close to Phousaat. People from Thonglom are scheduled to move to the new focal village of Phakhouak over the course of 2015 and 2016, while residents from Thana Nua are scheduled to move to the consolidated village of Paxang between 2014 and 2016. Those from Nong Boua are not scheduled to move as part of the Theun-Hinboun Power Company's relocation program, but some reported that they may self-relocate across the river to higher ground due to dam-aggravated flooding in lower parts of the village. This report adds to the body of evidence indicating that the Theun-Hinboun Power Company still falls far short of being transparent, fair and accountable to locally affected people, responsible in mitigating environmental impacts, and in compliance with standards outlined by the Equator Principles or the guidelines of the World Commission on Dams.





## Methodology

In early November 2013, the primary author-researcher of this report and field assistant spent five days in the communities downstream of the Theun-Hinboun projects, interviewing local leaders and other village members in the consolidated sites of Phousaat and Tha / Gang and the villages of Thonglom, Thana Nua and Nong Boua along the Hinboun River. The author-researcher has worked for many years in the rural development sector in the Lower Mekong Basin, and has visited all villages detailed in this report on several occasions since 2004. As a result, the author is familiar with the communities along the Hai and Hinboun rivers, the changing state of the local environment, and the context of THPC's mitigation and

compensation efforts to date. Due to time constraints, villages on the Kading River, downstream of the original Theun-Hinboun Hydropower Project, were not included in this assessment, and deserve attention in future reports.

## Findings

### Altered Hydrology and Exacerbated Flooding of the Hai and Hinboun Rivers

Since the operations of the original Theun-Hinboun project began in 1998, villagers have consistently reported that erosion occurring downstream of the power plant along the Hai and Hinboun continues to accelerate, while the sedimentation load has intensified. By 2005, it was estimated that after eight years of operations, the Hai River had widened by up to 45 metres, with 68 hectares of land (or between 8.5 and 14 million tonnes of soil) lost to erosion (Resource Management and Research, 2006). Some of the land along the Hai that has collapsed into the river over the years was fertile agricultural soil previously relied upon by villagers for farming. Despite the evident continued widening of the Hai-Hinboun confluence and loss of land and forest along both rivers, it is unclear what surveys have been carried out to calculate land lost to erosion. Although requests for transparency in this regard have been submitted to THPC by non-governmental organizations such as International Rivers, THPC has chosen not to release any data.



*Villagers in Tha/Geng rely on a small pump to grow maize near the Hai river, but have found that the land is continuously being lost to erosion, November 2013. Credit: International Rivers*

Villagers do still engage in farming riverside plots, but to a far lesser extent than in previous years. They report continuing to lose land each year as the increased flow of water discharged downstream has exacerbated bank erosion. As one villager from Tha explained, “The soil

keeps falling in the river, and we keep losing the land [that we use for growing food].” However, these losses have never been addressed with corresponding amounts of compensation, and as a result, villagers questioned whether compensation would ever be forthcoming for this land lost, and the rate at which it would be calculated.

Further downstream on the Hinboun, there are similar processes of bank erosion in locations where people are still attempting to grow and harvest food, including from riverside vegetable plots. Although there is no publicly available data to verify anecdotal accounts, those interviewed in November 2013 commonly reported that since the Expansion Project began operations, erosion has noticeably intensified in places, while pools within the river have become shallower due to sediment deposition. Consequently, former favoured fishing grounds are no longer viable. Turbidity of the water remains high, visible all the way down to the lower reaches of the river.

Once the original THHP began operating, the mean annual flow of the Hai increased by 30-50% compared to natural hydrological flows. Now with the Expansion Project in operation, the river is estimated to have an increased flow of between 60 to 90% (SWECO, 2006 cited in Norplan, 2007a). If the surge pond of the expansion project downstream of the powerhouse had been enlarged prior to the expansion project beginning operations, some of the extra water flows and fluctuations downstream could have been ameliorated. However, THPC did not invest in any design modification to increase the pond storage volume. As a result, the Hai River now discharges an estimated one million tonnes of sediment into the Hinboun annually (RMR, 2006). The sediment deposition is a factor contributing to aggravated flooding along the Hinboun. This is in part due to the large number of channel 'choke points', such as limestone reefs and accumulations of debris (caused by the erosion), which impede passage of the increased flows (RMR, 2006). The worsened flooding in duration and depth, combined with the elevated turbidity of the river have serious repercussions for wet season rice cultivation and livestock raising on the Hai-Hinboun plain. Villagers interviewed who still attempted wet season rice cultivation in 2013 reported that their rice harvest has been greatly reduced, or totally wiped out. For example, one villager in Thonglom reported that he was only able to harvest eight sacks of rice from two rai of land, where previously he would normally be able to expect to harvest 20 sacks.



*Ongoing erosion along the banks of the Hai River a few kilometers below the powerhouse November 2013.*

Credit: International Rivers

THPC’s Environmental Management and Mitigation Plan for the Expansion Project (Norplan 2007) outlined the “extensive” river-bank erosion along the Hai River that “has not been stabilised even after almost 10 years of operation” and concluded that erosion processes could increase after the start of THXP. Four years later, THPC’s Social and Environmental Division report, “Theun Hinboun Expansion Project: From Inception to 2010” (2011) affirmed that villagers downstream have been impacted by floods that have been “exacerbated by the first Theun-Hinboun Project.” According to this report, THPC does “need to plan for potentially greater impacts from the new project.” Given that there is a much greater water flow and heavier sediment load from the upstream operations of the Theun-Hinboun Dam and Expansion Project, the impacts of flooding are increasingly acute for villagers living along the Hai, Hinboun and Theun-Kading.

Yet, in written exchanges with researchers and civil society organizations, THPC has repeatedly claimed that flooding and erosion along the river is caused by heavy storms, population increases, shifting cultivation, backwater flows from the Mekong, and land use

changes (see Barney, 2007; Theun-Hinboun Power Company, 2010; Allen, 2013). To date, THPC continues to deflect calls for an acknowledgement of villagers' land and assets that have been lost as a result of the flooding and erosion, and continues to avoid being held accountable for payment of compensation.

### Failed Livelihood Restoration Programmes

In all villages visited in November 2013, it was apparent that many of the small-scale livelihood projects recommended and implemented by Theun-Hinboun Power Corporation's Social and Environmental Division for villages in downstream project zones are short-sighted, inadequate and have failed to restore peoples' livelihoods or compensate for financial losses incurred. Their projects have mitigated neither the losses of food security nor socio-economic resilience that local villagers once had before the building of the Theun-Hinboun Dam and Expansion Project. Despite all the livelihood interventions trialed by THPC, many respondents interviewed during this study said that they are struggling to achieve a sense of food security with the limited access to wild produce, and repetitive flooding of the crops they attempt to cultivate. The situation was particularly acute in late 2013, when devastating floods destroyed rice crops, stored rice, livestock and wild food sources.

### Dry Season Irrigated Rice Cultivation

As a result of increased instances of project-induced flooding since the original Theun-Hinboun Dam began operations in 1998, villagers along the entire length of the Hai and Hinboun rivers have typically given up cultivating wet season rice crops, following successive devastating floods. By 2005, an estimated 822 hectares of wet season rice paddies had been abandoned in 74 villages due to aggravated flooding impacts, which included deeper, more prolonged and more turbid flood waters (Resource Management and Research, 2006). Some families persevered by growing wet season rice for several years after the Theun-Hinboun Project began operations, finding ways to harvest smaller yields, despite the losses incurred.

As of November 2013, it was evident that the majority of households in the villages visited on the Hai and Hinboun floodplain had ceased production of traditional rice crops along the riverbanks, following successive devastating floods.

Instead of first agreeing to pay compensation for the loss of productive agricultural land, THPC began supporting dry season rice cultivation as a partial mitigation measure. Starting in 2001, the Social and Environmental Division of THPC began to subsidise the cost of pumps, irrigation canals, fertiliser and other inputs, while providing credit and extension advice to households that decided to switch to dry season rice. Villagers testify that although nearly all households have stopped growing wet season rice, not all households can afford to participate in the irrigated rice projects because of the comparatively high costs involved. Some families have tried cultivating irrigated dry season rice, but found it was prohibitively expensive and insufficiently productive due to a variety of technical and managerial problems experienced. They report that yields have fallen dramatically since the first few years of production, while costs have risen and subsidies from THPC reduced. If external support for this initiative from THPC is discontinued, the sustainability of this intervention is questionable.



*Abandoned rice paddy in Thana Nua that was flooded in August 2013. November 2013.*

Credit: International Rivers

Villagers cite the experimentation with irrigated rice as causing many to fall into debt, especially the poorest households, and observed that there has been a high rate of dropout from the program. Due to the high risks, high costs and initial debts involved in dry season rice production, the people hardest hit by the flooding and losses of wet season rice paddies as well as other assets are unlikely to benefit from this type of agricultural programming. For example, one villager from Phousaat reported that since seven hectares of paddy fields owned

by his family near their old homestead in Hadxaykhang had now been destroyed by successive flooding episodes, he had made the decision to switch to cultivating a much smaller area of dry season irrigated rice. However, given the capital investments needed, many other families could not afford to take the associated risks. He, along with other villagers interviewed in Phousaat, explained that food insecurity is widespread with many families facing shortages of rice, fish and meat. Since relocating from their old villages, they are obliged to buy more food items than before and are no longer self-sufficient. Previously, villagers could feed their families by catching fish, hunting wild game, and collecting bamboos shoots, edible roots and vegetables. However, these sources have dwindled, making families dependent on monetary incomes in order to be able to afford to buy sufficient food in the local market. According to one household head, “We just have to step out of our house now and we’ll have to spend money.” Although THPC has supported some of the costs associated with fuel and repairs for irrigation pumps, villagers are highly conscious of the fact that this assistance is merely temporary and will be phased out.

The reality that villagers downstream of the project are typically not finding dry season irrigated rice projects successful or profitable was acknowledged by THPC’s Manager, Mr. Robert Allen in October 2012, who explained to International Rivers that THPC would be working in the affected communities to see if other crops would yield better results (Personal Communication with International Rivers, Vientiane). However, this type of livelihood experimentation is fraught with uncertainty, placing the burden of risk on the shoulders of the very people who have already been subject to displacement and impoverishment.

Villagers from Phousaat, Thana Nua and Nong Boua planning to cultivate irrigated rice expressed concerns about the rising costs of fuel and fertiliser, with financial and extension support provided by THPC declining relative to past years. In these villages, people reported that despite being self-sufficient prior to the operation of the Theun-Hinboun dam projects, the only way to cope with the expenses involved in buying food for their families was to rely on wage labour opportunities and remittances from migration of family members to urban centres in Laos and across the Mekong to Thailand. Given the shortage of reasonably paid local employment options, some villagers explained that extraction of forest timber - despite being illegal and increasingly hard to find - was occasionally seen as a last resort to generate the income needed to be able to feed their families.

## Water Infrastructure and Riverbank Access

Water wells were installed by THPC in communities downstream of the Theun-Hinboun Hydropower Project between 2001 and 2004 as part of the company's original program to project-affected people, and at that time provided easier access to better quality water supplies for drinking and domestic consumption (Blake et al, 2004). However, this water infrastructure does not appear to have been adequately maintained. In both Thonglom and Thana Nua, villagers noted that since THPC wells are not working and have not been repaired or replaced, people are collecting water from non-THPC wells or natural springs far from their house for the purposes of drinking, cooking and washing. In addition, some of the toilets built in Thana Nua and Thonglom have collapsed and are no longer in use.

Villagers, including young children, continue to use the river to bathe, especially in light of the shortage of functioning water taps. In the past, concrete stairs to the river had been installed by THPC to develop safe public access points in each village. At the time of writing, these routes showed signs of serious erosion, collapse, and in some cases entire loss. However, they also reported that the risk of slipping and falling from the steep riverbanks into the fast-flowing water is of concern. They did not know how the access points would be fixed if there was no external support for the needed materials or technical equipment. Given the neglected state of infrastructure, many villagers interviewed were of the opinion that the best option for accessing better infrastructure would be to relocate to the new consolidated settlements because running water has been promised to all households.



*A collapsed well installed by THPC in Thana Nua, November 2013.*  
Credit: International Rivers



## Fish and Livestock Raising

Villagers testify that the river water has become more turbid, shallow and fast flowing over the past year, and that the populations of fish and other aquatic species, has continued to decline. Under the operating regime of the first Theun-Hinboun project, the turbines were closed down on a weekly basis. As a result, the water flow temporarily decreased and provided a brief opportunity for the villagers to set fishing nets or other gear. This is no longer the case as the turbines operate non-stop and the water releases are correspondingly continuous. Along the Hinboun, villagers recounted that as recently as 2012, there was an active fish-trading network extending south to the market at Songhong. However, with even scarcer stocks of riverine fish in 2013, the network has now nearly ceased to exist. They recalled that the fish populations have declined rapidly since the commissioning of the original Theun-Hinboun project, corresponding to losses of up to 90 % in some villages on the Hai and Hinboun rivers since 1998. In their opinions, catching fish on the river is now even less worthwhile than in past years, while other aquatic organisms, such as shrimp, molluscs and edible weeds, have become increasingly scarce.

At Thonglom, women gathering wild foods along a small tributary stream near the village explained that since the building of the Theun Hinboun dam projects, there is now a severe shortage of aquatic products available. They recounted that some days they only rely on a handful of filamentous algae, or “*tao*”, to feed their entire families. According to them, “We used to be able to harvest this [*tao*] from the Hinboun in the dry season in no time at all and catch a basketful of fish for dinner as well. Now it is not even worth fishing, as there is nothing left”.



*After the construction of both Theun-Hinboun dams, it has become increasingly difficult for villagers like this woman from Thonglom to gather “tao” and other river-based foods. November 2013.*

Credit: International Rivers

In response to the decimated wild fisheries, THPC has introduced communal fish ponds in some locations and encouraged household level aquaculture projects to raise frogs and catfish with subsidies. Few families report success with these small-scale aquaculture projects. For example, in Ban Nong Boua, villagers were given concrete blocks, cement and sand to build small fish tanks of about 6 m<sup>2</sup>. They were given basic training by THPC staff and received catfish fingerlings as well as feed from the company. After two years, villagers had to purchase their own fingerlings and fish feed, but found these supplies too difficult and expensive to obtain locally. They also reported that the concrete tanks had started to crack and leak.

Even if households were able to successfully raise fish, due to the scale limitations of this THPC-recommended model, the amount of fish that a family could hope to culture in a pond of about 6 m<sup>2</sup> would be just a fraction of the estimated daily consumption intake of wild fish and aquatic animals prior to project operations. For example, if a family of five were to raise sixty catfish fry over three months to an average of 200 grams each, the maximum yield of fish obtained in such a tank would be 12 kilograms. If eaten, the consumption of fish would average 26 grams per person/day. In comparison, before the Theun-Hinboun dams were built, the daily household fish catch in Nong Boua was estimated as typically providing 650 grams per person/per day (Thorncraft, 2006, p.16). Within this context, such livelihood programming cannot be considered as an adequate compensation or mitigation measure.



*Abandoned concrete well ring and a fishpond in Nong Boua, November 2013.*  
Credit: International Rivers

Villagers also express similar dissatisfaction with the company's support for livestock production. With increased flooding along the riverbanks and fast flowing water, they report that numbers of drowned livestock have increased over the years, resulting in serious losses of savings. The worst losses by far were experienced following heavy rains, in late July 2013, when a severe flood swept down the Hai and Hinboun River Valley. With waters rising quickly during nighttime hours, much faster than previously encountered, villagers had little time to move their belongings and livestock to higher ground. As a result, in the three villages located along the Hinboun River mentioned in this report, people reported heavy losses of cattle, buffalo, and poultry, as well as boats, belongings stored under houses and stored rice grain. People in Thonglom and Thana Nua recounted attempts to save their cattle and buffalo by taking them to higher ground off the floodplain on boats, while at the same time, seeing the flood wash away their poultry and pigs. After the floods receded, people recalled that surviving livestock lacked food sources and were more susceptible to disease and ill health. In the context of the losses already suffered from being downstream of the Theun Hinboun dams, the impacts of the 2013 flooding have served to further jeopardize villagers' food, water and economic security. As a result of the frequency and severity of the floods being experienced, villagers are raising questions about emergency procedures that should be in place to make sure they and their livestock can escape the rising waters more quickly is faster, and whether THPC has plans in place to temporarily halt power production if needed.

### Riverbank Cultivation and Irrigated Gardens

To mitigate for the damage and loss of riverbank vegetable cultivation due to the erosion as well as elevated and fluctuating water levels from the original Theun-Hinboun Hydropower Project, THPC has in the past supported the establishment of irrigated vegetable gardens and fruit orchards for villagers in downstream communities. In all villages visited, residents explained that they found that the fruit and vegetable plots (known locally as “*Suan Theun-Hinboun*”) were not profitable and prone to floods, with the gardens now abandoned. Some people preferred to invest in their own non-irrigated vegetable plots, including along the riverbank or behind their homes. Villagers provided a variety of reasons for abandoning the Theun-Hinboun sponsored gardens, including a lack of market opportunities to sell the produce, problems with pump maintenance, poor soil quality, unaffordable fertilisers, disease and pest problems, inadequate extension support, and damage to fruit trees by exacerbated flooding.



*Abandoned “Suan Theun-Hinboun”  
in Nong Boua, November 2013.*

Credit: International Rivers

## Displacement and Relocation

*The government officials are very corrupt. Anything that is given to help the people for resettlement is skimmed off at each level from the top down and we only seem to get the crumbs left at the end. --Villager from Phousaat*

Approximately 8,500 people from twenty-three villages located along the Hai and Hinboun rivers are included within THPC’s relocation program. The intention is to move people to consolidated focal villages “further away from riverbanks to reduce the risk of annual flooding” (Theun-Hinboun Power Company, 2011, p.14). According to THPC, since “villagers keep their land and livelihoods around the old village site they are not considered as being resettled, but rather as relocating to new houses on less flood-prone land nearby.” At the designated relocation sites, THPC has committed to support the development of community infrastructure as well as to provide assistance to households for rebuilding their homes and for small-scale agriculture and aquaculture projects. In reality, these villagers receive less material, housing and livelihood support than those villagers who have been displaced by the reservoir. Those located nearest the confluence of the Hai and Hinboun were moved in 2010 and 2011. Other communities are still in the process of moving, with all twenty-three villages expected to have moved by 2018. Families are therefore being encouraged by local officials and THPC representatives to move away from the flood-prone

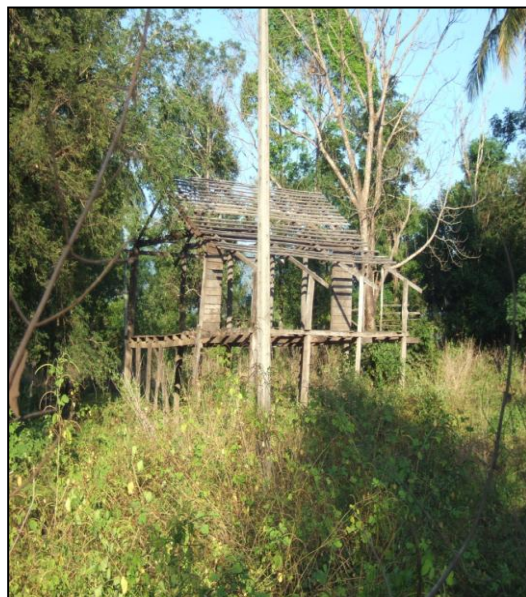
original village locations to new clustered settlement sites, while being promised improved infrastructure, increased access to social services, and greater physical security. In this situation, distinguishing whether they are “voluntarily” or “involuntarily” relocating / resettling requires attention to the specific social, political and economic context at hand (Baird and Shoemaker, 2007).

The company's definitional differentiation between 'involuntary' resettlement and 'voluntary' relocation is not merely semantic, but has far-reaching implications on villagers' rights and livelihoods at this and other dam sites in Laos. Those living downstream are deemed to be merely voluntarily relocating away from the riverbanks (despite project-induced rising water levels) and are supposed to be able to continue cultivating their old fields. People classified as 'relocating' have fewer avenues for claiming compensation due to loss of productive land, less monetary support offered for housing, and are provided with a scaled-back version of livelihood programming as compared to those displaced by the reservoir. People from these villages along the river are moving to consolidated focal settlements in 'flood-safe' areas according to a schedule spanning from 2010 to 2018. Despite this process being explicitly due to the cumulative downstream impacts of the two projects, it is proceeding according to a schedule and decisions made without the informed consent, consultation or participation of directly affected individuals.



*Children who resettled in consolidated village of Phousaat return to the familiar places of their old village, 2012.*  
Credit: International Rivers

Villagers interviewed who had already moved to the relocation sites of Phousaat and Tha, including those from the old villages of Kongphat and Hadxaykhang, expressed several grievances during interviews, including inadequate assistance for house reconstruction, scarcity of fresh food, and problems associated with cultivating rice at their old village site, particularly given the time and expense accessing their distant fields and ruined crops due to repetitive flooding. Villagers in these new consolidated settlements also explained that tensions have arisen between families over housing and land allotments as well as the lack of agreed upon process to nominate headmen who could adequately represent everyone's interests.



*Abandoned housing structure at Kongphat, November 2013.*  
Credit: International Rivers

Villagers were under the impression that they would receive subsidized water and electricity for two years after moving to the new relocation sites, but in fact received bills only two months after moving. As a result, they are struggling to afford unexpected service charges. Another issue commonly raised by villagers was the lack of independent avenues by which to safely communicate the problems they face in order to access compensation and redress for grievances from the company personnel through third party adjudication. As one villager rhetorically stated, “Theun-Hinboun is the same as the district, which is the same as the province, which is the same as the national government. Therefore, we can’t complain.”

In a meeting with International Rivers in June 2013, Stephen Sparkes, Vice President of Corporate Responsibility at Statkraft, acknowledged gaps in communications with villagers who are scheduled to move, and stated that THPC is making an effort to improve outreach to

affected villagers to discuss timelines for moving and the support they can expect before and after ‘relocating’ (Personal Communication with International Rivers, Vientiane, Laos). Yet, at the time of writing, villagers in Thonglom and Thana Nua were yet to move to a new site, and commonly described a lack of clarity surrounding the schedule for when they would move, where their new homes would be, and how they might regain a sense of economic security. Village elders in particular expressed a strong attachment to the land, familiar areas for food gathering and places of spiritual importance, and as a result, were apprehensive about the consequences of moving. Although some said that they would much rather stay in their current homes, other villagers interviewed during the site visit concluded that moving may be the best option available since there are increasingly limited possibilities to maintain a livelihood of farming and fishing in their old villages. They also look forward to being able to access electricity for the first time and better schools and medical facilities, as promised by THPC.

### Pending Cumulative Impacts of Downstream Dams

Concessions for two additional hydropower dams on the Hinboun River have been granted with little consideration for the additional and cumulative impacts on local people or the ecosystems, as well as no clear line of communication initiated between the different project proponents. One of the main shareholders in THPC, Electricity du Laos, is presently building a dam near Thonglom, while a small Lao-Chinese company, Rasita Power Company Ltd., is taking the leading role in a smaller proposed project near Songhong. Information on these projects is not accessible to the public, and villagers in the area have not been provided with project details. For example, near Thonglom, despite preparatory construction being underway in the area, such as the excavation of a bypass channel, the construction of roads, and the testing of bedrock, people have yet to be informed about the planned dam in terms of its size or predicted impact.

However, local people have heard that land upstream will be inundated, causing losses to cultivated land and livestock grazing areas. If these projects proceed to completion, villagers who have already lost cultivable land due to the impacts of the Theun-Hinboun projects will once again be at risk of losing even more of the land they rely upon. To date, there is no publicly available information outlining how or if THPC will communicate with the project proponents of these downstream dams to coordinate mitigation procedures for the emerging

cumulative social and ecological impacts (including emergency preparedness measures for heavy rains and flooding, timing of water releases, sediment accumulation and erosion, as well as compensation and resettlement entitlements).



*Preparatory construction for the Thonglom Dam, downstream of the Theun-Hinboun Expansion Project. November 2013.*  
Credit: International Rivers



## **Conclusions and Recommendations**

*We live under a government that does not allow us to speak out about these issues. We are not like the villagers in Thailand where they can protest.... I saw on television they could protest against the Xayaburi Dam, even though it is on the Mekong in Laos. - Villager from Nong Boua*

This report highlights the livelihood losses and deteriorating living conditions experienced by people in numerous villages within the Hinboun River Basin as a result of the Theun-Hinboun hydropower projects and calls into question claims made about the project by its proponents. The two projects have had highly negative impacts on downstream villages and ecosystems. The downstream floodplain-dependent communities are suffering numerous and far-reaching environmental impacts from poorly mitigated water releases and the social consequences of short-sighted and inappropriate livelihood programming. Experimental livelihood restoration projects have failed to compensate for declines in food security and economic stability that local villagers once had before the building of the Theun-Hinboun Dam and Expansion Project. Theun-Hinboun Power Company and its international financial backers still have a responsibility to fully support the restoration of the livelihoods of the tens of thousands of people continuing to suffer from the cumulative impacts of both projects.

In order to further investigate the serious problems faced by downstream communities, and to develop credible, sustainable remedial action plans, the following recommendations are being made:

1. **THPC should establish a panel of experts (PoE) compliant with the principles of best practice developed by the World Commission on Dams** (Guideline 22 on Independent Review Panels for Social and Environmental Matters), with a mandate to do site visits, author or commission studies and provide recommendations on all aspects of social and environmental performance for both the original Theun-Hinboun Hydropower Project and the Expansion Project. The proposed phase-out of the PoE in 2017/2018 (as outlined in THPC's Terms of Reference released in February 2014) should be extended up until the end of the expansion project's concession agreement. THPC should ensure that all panel reports and studies are made publicly available in Lao and English on THPC's website and offices.

One of the first priorities of the Panel of Experts should be conducting a comprehensive and publicly accessible report on the status of fisheries and quality of water along the Hai, Hinboun and Theun-Kading rivers as well as the reservoirs of both projects. Based on this information, an evaluation of reparations owed to villagers for lost fisheries and living aquatic resources should be conducted. An assessment of economic losses due to riverbank erosion along with the extent of abandoned paddy fields should be done to calculate corresponding compensation for villagers whose land, assets, and food security have been lost. If the PoE intends to assess whether income targets outlined by THPC are being met in each project zone (as outlined in THPC's 2014 ToR for the Panel), income benchmarks should be adjusted according to rising costs of living. An evaluation of the percentage of income in households sourced from remittances of family members that have migrated for work should be factored into any such studies, as should additional indicators related to secondary poverty within households, time-use data and other measures of social deprivation.

2. **THPC studies conducted on fisheries, water quality, erosion, turbidity, sedimentation and project-related reservoir greenhouse gas emissions should be made publicly available**, posted online and available from THPC offices. Data should include studies conducted prior to – and after – construction of the Expansion Project, and should be regularly updated with information from the affected rivers (Hinhoun, Hai and Theun-Kading). References to these studies are made in THPC's Social and Environmental Division reports (“Theun-Hinhoun Expansion Project: From Inception to 2010” and “Theun-Hinhoun Expansion Project: 2011 to Commercial Operations”). However, during personal communications with International Rivers, the THPC and Statkraft representatives have said the information is not practical to post online, as there are evidently multiple data sets and studies are still under completion (October 2012, June 2013). Making this information available to the public – even if considered by the company to not be conclusive or completed – would be a positive step towards greater transparency and accountability to all stakeholders.
3. **All families living downstream that still need to move should be provided with the same entitlements as those offered to families moved from the reservoir area,**

including the option of a new house or self-relocation with financial and food support, until such time as they establish sustainable replacement livelihoods. Compensation should be backdated based on the losses incurred due to the operations of both the THHP and the THXP, including for eroded lands previously cultivated along the riverbanks, decimated fisheries, drowned livestock, abandoned rice fields and other assets. Clear schedules and action plans for moving should be discussed openly with all villagers, and once finalized, should be made publicly available.

4. **In consultation with downstream communities, THPC should review past experiences of livelihood restoration plans and infrastructure, evaluate available resources in the area, and revise their programming for the consolidated relocation sites.** The failure of livelihood programming to date to adequately mitigate for losses incurred calls for a reassessment and examination of alternative options that could be offered to villagers. At the very least, more durable infrastructure needs to be built. From the outset, infrastructure should be designed according to local conditions and be more resilient to the current flooding regime. With erratic rainfall and flooding patterns becoming more frequent due not only to climate change trends, but also the reality of the damaged river ecosystem and land-use patterns, THPC has a responsibility to support infrastructure works that would help prevent further erosion and flooding along the riverbanks downstream.
5. **Studies should be commissioned (or undertaken by the Panel of Experts) to assess operating guidelines during times of exceptional rainfall.** To improve the management of risks of irreparable harm downstream, THPC should commit to procedures for temporarily turning off the turbines at THHP and THXP, based on factors related to rainfall patterns and rising water levels. These measures should be publicly disclosed and communicated in an accessible language to all affected downstream communities.
6. **The scheduled phase-out of THPC's Social and Environmental Division (SED) in 2018 should be evaluated** by the Panel of Experts and be open for extension based on a realistic timeline for handing the project responsibilities over to Lao authorities.



*Downstream of the Theun-Hinboun Expansion Project, near the site of the planned Thonglom Dam, November 2013.*  
Credit: International Rivers

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