

# **Review of Draft Final Resettlement Action Plan for Theun-Hinboun Expansion Project, Lao PDR**

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## **SUMMARY**

The proposed Theun-Hinboun Expansion hydropower project in central Laos will displace up to 4,800 people and negatively affect another 48,441 people living downstream, on project construction lands and in host villages. The project involves a storage dam on the Nam Gnouang River and a doubling of capacity at the existing Theun-Hinboun power plant, resulting in a doubling of the amount of water diverted into the Hai and Hinboun Rivers.

This analysis highlights key concerns about the August 2007 Draft Final Resettlement Action Plan (RAP) for the Theun-Hinboun Expansion Project (THXP) prepared by Norplan. It concludes that the measures proposed in the RAP are inadequate to manage the substantial impacts that will arise from the project.

A fundamental problem with the THXP is the lack of adequate and productive replacement agricultural land for both the displaced villagers and those living downstream. A second but equally significant problem is the inadequacy of the livelihood restoration measures proposed in the RAP, which are unclear, unproven and under-funded. The proposed measures have become the standard mitigation package for any hydropower project in Laos. They include: aquaculture to replace fisheries; dry season irrigated rice to replace wet season rice production; vegetable and fruit gardens to replace riverbank agriculture; investment in livestock management; and the always vague, and rarely successful, “non-farm employment” and “cottage industry” options. Despite their popularity with resettlement and environmental impact assessment consultants, these measures have never restored, let alone improved, livelihoods for dam-affected communities in Laos.

The RAP only provides for direct compensation for losses of individually-owned fixed assets, such as land, fruit trees and housing. There is no commitment to provide land-for-land, so many people will end up with cash compensation instead of land of equally productive value. The RAP fails to quantify the damages that will be sustained from the significant loss of common property resources and to determine acceptable levels of compensation based on those losses. Instead the RAP proposes replacing losses with livelihood restoration programs.

The problem with this approach is that the proposed measures have already been tried with limited success at the existing Theun-Hinboun Hydropower Project. The RAP fails to draw lessons from the successes and failures of the mitigation and compensation program at the existing project, or from the experiences at the Nam Theun 2 Hydropower Project, which is currently under construction upstream. As such, THXP is poised to repeat past mistakes.

As documented in numerous reports, the existing Theun-Hinboun project has affected approximately 30,000 people living in more than 62 villages along the Hai, Hinboun and Kading Rivers. Impacts have included the decimation of fisheries, particularly downstream along the Hai and Hinboun Rivers and in the headpond area, increased flooding leading to massive rice paddy abandonment, inability to cultivate dry season riverbank gardens, and impairments to domestic water supply. The 2001 Mitigation and Compensation Program that was developed to

resolve these impacts has had few concrete successes after six years of implementation. As documented in the 2007 FIVAS report *Ruined Rivers, Damaged Lives*<sup>1</sup>, the failures of the existing mitigation and compensation program can be attributed to the following factors:

- No compensation for lost fisheries has been paid to affected communities, and only four community fish ponds have been built to replace lost fisheries, having a “negligible impact” on providing replacement protein to affected communities.
- No compensation has been paid for the massive rice paddy abandonment that has occurred as a result of prolonged and more frequent flooding since project operation.
- The dry season vegetable garden program has met with limited success due to lack of a market for produce, the extra labor required, pump breakdown, fence failure, crop disease and loss of fruit trees from flooding.
- The dry season rice irrigation scheme, after an initial bumper crop, has seen universal declines in yields over the past five years. The profitability of dry season rice is questionable due to the costs of inputs such as fertilizer, pesticides and electricity for water pumping and many households have fallen into unserviceable debt as a result.

Ten years after the Theun-Hinboun project began operating, communities are worse off than they were before project development. Yet instead of attempting to learn from these failures, apply the lessons to a revised livelihood restoration program, and factor in direct compensation for actual losses, the THXP RAP appears to propose more of the same, with the possible exception of a commitment to pay for irrigation electricity costs for the duration of the concession. This unwillingness to learn from past mistakes and invest the necessary resources for real livelihood restoration inspires little confidence that the Theun Hinboun Power Company (THPC) will be able to restore, let alone improve, livelihoods in just six years after commercial operation.

## BUDGET

One of the much-touted benefits of the current RAP, according to THPC and its shareholders, is the amount of funding available for the program, which totals US\$41 million<sup>2</sup> over ten years. However, a breakdown of the proposed expenditure tells a different story. Of the \$41 million available, \$8.3 million will cover staffing costs for the Social and Environment Division, \$9 million will support resettlement infrastructure and land preparation (for those from the reservoir area), and \$9.7 million will pay for infrastructure for downstream areas (which includes relocation, electrification, irrigation and water supply).

The budget includes only \$850,000 to pay for compensation for lost assets for those displaced from the reservoir area, around \$2.5 million for livelihood programs over an 11-year period for the 4,800 people displaced from the reservoir area, and \$3.9 million for livelihood programs over 11 years for the 29,500 affected villagers downstream. This amounts to about \$47 per person per year for resettled communities for livelihood programs and a meager \$12 per person per year for downstream communities. While it is relatively easy to provide new houses, electricity and irrigation infrastructure, the big challenge in Laos is ensuring that people have a long-term, sustainable source of livelihood and income. With such a small amount of funding to invest in

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<sup>1</sup> FIVAS, *Ruined Rivers, Damaged Lives: The Impacts of the Theun-Hinboun Hydropower Project on Downstream Communities in Lao PDR*, Oslo, 2007, p.7.

<sup>2</sup> All dollar figures are in US dollars.

livelihood programs over an 11-year period, it is unlikely that the THXP income targets can be met or that livelihoods can be restored.<sup>3</sup>

Furthermore, THPC's guarantee of funding for only six years after dam operation jeopardizes the program's long-term sustainability. Experience at the existing Theun-Hinboun project indicates that it is highly unlikely that income targets will be met within six years after project operation, particularly given the lack of productive replacement land for villagers and the extensive expected impacts in the Hai and Hinboun valleys.

## RESERVOIR AND HOST VILLAGE RESETTLEMENT PLAN

### Insufficient Land and Resources

Up to 4,800 people from 11 villages will be moved to three host villages along the Nam Phiat and Nam Ngoy (Ban Nongxong, Soppouan and Phonthong). Resettlement will increase the village population in the host villages from 1,591 to around 6,000 people, exacerbating competition for scarce natural resources in the area. The biggest problem with the RAP is the lack of productive agricultural land for the displaced population, and the lack of any concrete analysis or field data to document the land and resources available to sustain a quadrupling of the population in the area.

Currently, the average amount of paddy land per household in host villages is 1.2 hectares (ha), which is generally sufficient to ensure food security in rice supplies for the existing population. However, quadrupling the population in the host villages means there will be insufficient paddy land for all families. The entitlements for resettlers include "Replacement land of at least the same size and equal productive value at a location acceptable to the [project affected peoples]", but it is unclear where this land will come from.

The RAP states that "the land needed for cropping can be reduced if irrigation can be introduced", but goes on to note that "of the three host villages, there is only potential for irrigation in Phonthong".<sup>4</sup> Although no detailed studies have been done of the area, and the only studies that have been done are desk studies, Norplan estimates around 541 ha might be available for irrigation.<sup>5</sup> This is a relatively uneducated guess since no soil surveys or field work have been carried out to determine whether the land is suitable for irrigation.

At the nearby Nam Theun 2 Hydropower Project, villagers were promised 0.16 ha of irrigated rice paddy per family. However, like with the THXP, the resettlement areas had not been subjected to detailed soil surveys, and after project approval it was revealed that the soils were too porous to sustain irrigated rice paddy.<sup>6</sup> This illustrates the importance of conducting detailed

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<sup>3</sup> The RAP lists income targets for resettled villagers at 17.5 million kip per family per year (equivalent to about US\$1800 per year at current exchange rates) and for downstream households at US\$1500 per year. The discrepancy between income targets for resettled and downstream villagers is not explained, nor is the rationale for these figures. In any event, due to currency fluctuations and failure to include non-cash items of livelihood the numbers are rather arbitrary. Targets expressed in terms of livelihood rather than purely income would ultimately be more useful for measuring the success of the program.

<sup>4</sup> Norplan, *Theun-Hinboun Expansion Project Draft Final Resettlement Action Plan*, August, 2007, Part 2, p.62

<sup>5</sup> Ibid.

<sup>6</sup> Aviva Imhof and Vinya Sysamouth, *International Rivers Network Visit to Nam Theun 2 Hydropower Project in Laos, Trip Report and Project Update*, International Rivers Network, September 2006, p.15.

soil and site surveys prior to finalizing resettlement plans, something that Norplan has not bothered to do.

Even if the land is suitable for irrigation, the amount available is still insufficient to offer 1 ha of land per resettler family: 735 households will be moved into the area, and only 541 ha of potentially irrigable land is available.

The RAP also acknowledges that there is already significant competition for other natural resources in the host village area. The RAP admits that the exploitation of non-timber forest products (NTFPs) in the Nam Phiat and Nam Ngoy areas “is being undertaken at unsustainable levels.”<sup>7</sup> On fisheries, host villages have “reported a dramatic decline in average catch per hour between 1997 and 2004” and villagers have to spend almost twice as much time as before to catch the same amount of fish. Norplan admits that “the pressure on fisheries in the host villages will certainly increase as a result of the coming resettlement process.”<sup>8</sup>

### **Unproven and Risky Livelihood Options**

In spite of the concerns surrounding land and resources in the host village areas, the Norplan framework presents a willfully naive optimism of the livelihood options for resettled villagers and host communities. The livelihood model is vague and does not clearly specify resettlers’ and host families’ entitlements. Norplan proposes five livelihood options, all of which lack the necessary detail to indicate that the models are well-tested, sustainable and viable.

#### **(a) Agriculture**

Norplan states that “where possible, each household will be provided with an irrigated paddy plot of 1 hectare with slope less than 5 percent” and that irrigation will be provided “wherever feasible”.<sup>9</sup> Norplan further states that “households that are not given irrigated land will be given a larger area of rain-fed paddy land”.<sup>10</sup> However, Norplan fails to refer back to their earlier analysis which noted that host families have an average of 1.2 ha per family of paddy land, and that the potential amount of additional land suitable for irrigation is 540 ha. There is simply insufficient land to provide all families with an irrigated paddy plot of 1 ha or a larger area of rain-fed paddy land. This is not addressed in the livelihood plan, nor are there any firm commitments regarding how much land each resettled and host family is entitled to.

In addition, there is no discussion of the difficulties of cultivating dry season rice and the economic marginality of irrigated dry season agriculture, particularly in a remote area at a distance from a market. This is surprising because THPC has been involved for several years in encouraging dry season irrigated rice and corn in the Hinboun valley, with limited success. By their own admission, THPC has had difficulties ensuring that the operations are profitable due to the high costs of pumping water and inputs such as fertilizer.<sup>11</sup> Villagers have reported declining yields over the four years since the dry season rice program was introduced, and a

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<sup>7</sup> Norplan, *Draft Final RAP*, Part 2, p.76.

<sup>8</sup> *Ibid*, p. 77.

<sup>9</sup> *Ibid*, p.82.

<sup>10</sup> *Ibid*.

<sup>11</sup> This is noted in Part 3 of the RAP which states that for irrigated agriculture “marginal benefit was obtainable overall but many villages lose money on this activity.” The RAP admits that only 872 families were still involved in 2007, of an approximately 5000 families living in downstream area.

corresponding increase in debt to the village Savings and Credit Funds.<sup>12</sup> Many of the poorest households have had to withdraw from the program as their debts mounted and yields collapsed, often turning to migrant labor in Thailand, day labor locally, or cutting wood for wealthy persons to survive. Yet the RAP fails to even refer to, let alone evaluate, the existing THPC program, thereby missing an opportunity to learn from past mistakes.

The RAP states that land for other agricultural activities “could consist of 0.5 ha of rain-fed terrace, 0.2 ha of orchard and a small garden plot close to the house of 0.1 ha”<sup>13</sup> (emphasis added). This statement does not clearly specify what resettlers and host communities are entitled to, nor does it draw lessons from the existing Theun-Hinboun project where villagers received fruit and vegetable gardens to compensate for the loss of riverbank gardens. According to the FIVAS report, *Ruined Rivers, Damaged Lives*, THPC’s dry season vegetable garden program has largely failed in four of the five villagers visited by the researchers.<sup>14</sup> Some of the reasons for failure include the lack of a market for produce, extra labor required, pump breakdown, fence failure, crop disease and loss of fruit trees from flooding.<sup>15</sup>

(b) Livestock

The RAP admits that there is insufficient grazing land in the host communities to accommodate additional resettlers, resulting in the need to grow forage to feed livestock. The RAP states that “each household will be provided with 0.5 hectare of forage plot” but doesn’t state where this land will come from.<sup>16</sup> The RAP goes on to state that villagers will need to dry and store fodder to provide a sufficient year-round supply of food. However, the RAP does not take into account the additional work that will be required to grow, harvest and dry forage for animals that currently undertake free-range grazing. This will put stress on all resettled and host households, but particularly on poorer or more vulnerable households that have little spare labor available.

(c) Community forest activities and plantations

The RAP states that each household will get 1.5 ha of plantation and a 1.5 ha share of the community forest. In addition, each household will be provided with 0.5 ha of NTFP-gardens due to the already high pressure on existing forest resources. The livelihood model provides no details on what kind of products will be grown in these gardens and plantations (beyond a passing reference to cardamom and eucalyptus), how the plantations will be cultivated and managed, who will be responsible for harvesting the plantations, how economically viable they will be, and what measures will be put in place to ensure that existing forests are not over-exploited.

The Asian Development Bank was involved in promoting eucalyptus plantations in Laos over a ten-year period from 1993 to 2003. According to the ADB’s own internal evaluation, “Plantations ... established and managed by the majority of farmers and individuals were unproductive or had low yields. Thousands of inexperienced farmers and individuals were misled by prospects of unattainable gains, leaving the majority of farmers with onerous debts, with no prospect of

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<sup>12</sup> FIVAS, *Ruined Rivers, Damaged Lives*, p.47.

<sup>13</sup> Norplan, *Draft Final RAP*, Part 2, p. 82

<sup>14</sup> FIVAS, *Ruined Rivers, Damaged Lives*, p.46.

<sup>15</sup> Ibid.

<sup>16</sup> Norplan, *Draft Final RAP*, Part 2, p.84.

repaying their loans, and with failing plantations.”<sup>17</sup> Experience in Laos has clearly shown that it is simply not appropriate to expect Lao subsistence farmers with no previous experience in tree growing to become market-viable eucalypt farmers, particularly when highly capitalized multinationals in Laos have difficulty achieving the required growth rates to be cost-effective producers.<sup>18</sup>

(d) Fisheries

The fisheries component of the livelihood package consists of small-scale aquaculture at the household level. The RAP assumes that small-scale aquaculture can be easily introduced to resettled villages despite the considerable constraints posed by introducing these activities in relatively short periods of time, particularly for populations suffering the trauma of recent dislocation from their traditional lands. The experience of numerous other development projects, including the UNDP-funded Provincial Aquaculture Development Project<sup>19</sup>, is that there is a relatively slow adoption of aquaculture during the early years. Households that do take it up tend to be those with relatively more capital (land and cash) who are prepared to take some degree of risk. Frequently, poorer families will not take the risks required to participate in aquaculture, unless the project is prepared to provide all of the required inputs at no cost to villagers. The THXP RAP states that households will be expected to contribute labor to construct the fish ponds, and after a one-off provision of fish seed, households will be expected to purchase future seed and fish feed. Under these circumstances, one could expect an aquaculture participation rate of less than 20%, made up of mostly wealthier families.<sup>20</sup>

Specific concerns with aquaculture plans include:

1. *Lack of land.* Land will be at a premium in all host villages and experience suggests that most villagers will give a higher priority to rice cultivation than aquaculture, for historical and cultural reasons.
2. *Weak extension services.* Affected people will need several years of dedicated support and extension services before they will be proficient at spawning and nursing of fish seed for sale to others. Experience at the existing Theun-Hinboun project indicates that THPC and provincial extension services are quite weak.
3. *Lack of available fish seed.* There is a local shortage of fish seed, which will either have to be supplied from Thai stock or sourced from around Vientiane, making it difficult for villagers to procure directly.
4. *Small size of pond.* The indicative size of fish pond of 100 square meters is insufficient to replace lost protein from wild fish catch, and therefore should not be viewed as adequate compensation or mitigation for lost fishery livelihood. Many households will lose several hundred kilograms of fish per year, for which a pond of at least twice the size would be

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<sup>17</sup> Asian Development Bank Operations Evaluation Department, *Sector Assistance Program Evaluation: Agriculture and Natural Resources in Lao People's Democratic Republic*, 2005, p.36.

<sup>18</sup> Barney, K. (forthcoming). "Local Vulnerability, Project Risk, and Intractable Debt: The Politics of Smallholder Eucalyptus Promotion in Salavane Province, Southern Laos." in D. Snelder and R. Lasco (editors), *Smallholder tree growing for Rural Development and Environmental Services: Lessons from South and Southeast Asia*, Springer, 2008

<sup>19</sup> This project was dedicated solely to aquaculture extension for smallholders and small-scale hatchery establishment

<sup>20</sup> See Blake, *A Review of the Adequacy of Compensation Measures for Communities Living Along the Xe Bang Fai River, Nam Theun 2 Hydropower Project, Lao PDR*, January 2005. (available at <http://www.internationalrivers.org/en/node/920>)

required to produce an equivalent amount of fish. This does not take into account the extra costs of aquaculture versus capture fisheries.

5. *Rice-fish culture failure.* It is naive to think that rice-fish culture systems will succeed in the context of the resettlement villages, given their poor record elsewhere in Laos and NE Thailand.<sup>21</sup>

(e) Non-farm activities

The RAP mentions potential wage labor opportunities for resettled households, but many of the proposed opportunities are not suitable for ethnic minority households, some of whom do not speak Lao, let alone English. The proposed employment opportunities include working for the government, tourism companies, and traders, but it is clear little research or analysis was conducted to determine if these are feasible jobs for resettled villagers. In addition, the RAP mentions temporary work during THXP operation and during the resettlement process. Dam operation requires very little labor, and work during dam construction and resettlement will be short-term and unavailable to most resettlers. Experience at the nearby Nam Theun 2 project has shown that most dam construction jobs have gone to Lao Loum (lowland Lao people) from Vientiane and other urban areas. Very few jobs have gone to local ethnic minority groups. Local people also report that they need to bribe foremen to get jobs and many of them lack the cash to do so.<sup>22</sup>

### Unsubstantiated Income Targets

The RAP includes some analysis of net income to be expected from the proposed livelihood options for villagers and optimistically concludes that income targets will be met. However, the analysis is weak and unsubstantiated in most areas. It does not quantify how much work will be required of resettled families in order to meet these targets. Nor does the analysis address what will happen to poorer or vulnerable families that lack the household labor or capital required for the livelihood activities. The RAP's estimated yield of various agricultural products is based on the figures used in the Nam Theun 2 resettlement plan. It is unclear why Norplan did not use more realistic and observed figures based on the existing THPC mitigation and compensation program. In fact, the Nam Theun 2 Power Company has had to revise their agricultural program several times because the soils are not suitable for the production processes initially recommended. This is likely to be the case at THXP as well, because like at NT2, there have been no detailed land or soil surveys of the resettlement sites prior to development of the resettlement plan.

### Other Concerns

- *Lack of clear support for vulnerable households.* The RAP states that support will be provided to resettled families until "at least 80 percent of sample households have achieved an income equal to or greater than the target income for two consecutive years."<sup>23</sup> It goes on to state that "special support will be provided to households that do

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<sup>21</sup> See for example, Funge-Smith S.J., "Small-scale rural aquaculture in the Lao PDR", *FAO Aquaculture Newsletter*, Nos 22 and 23, 1999 and Halwart M. and M.V. Gupta (eds), *Culture of Fish in Rice Fields*, FAO and the WorldFish Centre, 2004.

<sup>22</sup> Aviva Imhof and Vinya Sysamouth, *International Rivers Network Visit to Nam Theun 2 Hydropower Project in Laos, Trip Report and Project Update*, International Rivers Network, September 2006, p.20

<sup>23</sup> Norplan, *Draft Final RAP*, Part 2, p.87

not achieve the income targets”<sup>24</sup>, but does not specify what kind of special support, nor for how long this support will be provided.

- *Vague food support commitment.* The RAP states that resettled people will receive rice support “during the transition period until livelihood activities provide subsistence requirements.”<sup>25</sup> Nowhere in the document does it define how long the transition period will be. Furthermore, later on the RAP states that food support will “gradually be phased out” after the first year of resettlement, but states that “others will need two or three years of support”. It therefore appears that THPC are budgeting for only 2 to 3 years of food support, rather than until such time as people are able to grow enough food to feed their families.
- *Failure to assess risks of village savings funds.* The RAP states that some assistance to resettlers may be provided through village Savings and Credit Funds.<sup>26</sup> Yet there is no consideration of the risks of indebtedness that Savings and Credit Funds entail, nor is there any discussion of the experience that THPC has had with village funds over the past six years. Village Savings and Credit Funds can be useful tools to improve availability of credit in times of need, but there are great risks in them being used to replace compensation entitlements, which should be given free of charge to villagers to compensate for lost income and resources. Otherwise villagers are set up for a cycle of indebtedness at the very moment they are most vulnerable; namely, as they face the real disruption of resettlement and the challenges of rebuilding their lives in new and unfamiliar areas. In addition, the poorest and most vulnerable families are often excluded from the fund because other villagers know that they are at high risk for failing to repay the loans.<sup>27</sup>

## RECIPIENT RIVERS, HEADPOND AND UPSTREAM AREAS RESETTLEMENT PLAN

THXP’s impacts on the Nam Hai and the Nam Hinboun will be severe as the project doubles water releases into these recipient rivers. The RAP admits that the project will significantly increase the frequency and duration of flooding along the Nam Hai and Nam Hinboun, that greater erosion will occur along these rivers (where large quantities of land have already been eroded away, without payment of compensation by THPC), and that fisheries in the Hinboun River will be almost completely annihilated, with the exception of a few survivors adapted to very turbid waters. Along the headpond of the existing Theun-Hinboun project, the RAP predicts reductions in fish catch, increased fluctuation in water levels affecting riverbank gardens and poorer water quality.

Yet despite the fact that seven years of THPC’s environmental and social mitigation activities have failed to address the devastating impacts of the existing Theun-Hinboun project, the RAP makes the optimistic assumption that the impacts from the new THXP can be managed and livelihoods restored within a period of six years after commercial operation. There is no justification for this assertion.

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<sup>24</sup> Ibid.

<sup>25</sup> Ibid, p.11

<sup>26</sup> Ibid, p.102

<sup>27</sup> This was observed in Ban Pak Veng, a village in the lower Hinboun that was extensively studied by PhD student Keith Barney. See Keith Barney, *Power, Progress and Impoverishment: Plantations, Hydropower, Ecological Change and Community Transformation in Hinboun District, Lao PDR, A Field Report*, York Centre for Asian Research, June 2007, p.31.



## Increased Flooding along the Nam Hai and Nam Hinboun

The RAP admits that the additional releases into the Hai and Hinboun Rivers will significantly exacerbate flooding in these areas. Alarming, the RAP states that “the damage caused by a 100-year flood event will be experienced more frequently and in some cases every year.” According to the RAP, the mean annual flood will inundate 164 square kilometers with THXP, as opposed to 109 square kilometers inundated under natural flood conditions.<sup>28</sup> This additional annual flooded area of 65 square kilometers would make life untenable for many downstream villagers. In addition, the environmental impact assessment shows that the duration of the mean annual flood will increase significantly for downstream villagers. For example, at Ban Namsanam it claims that mean annual flood duration will increase from 0 hours (natural) to 393 hours (over 16 days) and at Kengkhot from 0 to 162 hours.<sup>29</sup>

As a result, between 1,000 and 2,000 ha of paddy land “*have been or will need to be* abandoned for wet season production in the Recipient River area” (emphasis added).<sup>30</sup> What is remarkable about this statement is the acknowledgement that paddy land abandonment *has already occurred* as a result of the existing Theun-Hinboun project, something that THPC has denied for years. The wide variation in the approximations of how much land will be abandoned is also alarming, in that THPC does not know exactly how much paddy land will be affected by THXP. Given the additional annual flood of 65 square kilometers and the unreliability of the hydrological monitoring conducted to date<sup>31</sup>, it is quite possible that more than 2,000 ha of paddy land will no longer be viable for wet season production.

There is simply no paddy land available in the Hinboun valley with which to replace the paddy land lost to flooding. The Hinboun valley, a formerly highly productive rice growing region, is comprised of a narrow floodplain surrounded by limestone karsts and hills. Presumably a large proportion of the remaining unflooded fertile paddy land will be flooded by THXP, leaving very little available land for wet season paddy rice cultivation. Villagers will instead be increasingly forced to rely on irrigated dry season rice production or upland rice cultivation. Yet along the lower Hinboun River, the land available for upland cultivation is increasingly being taken for large-scale industrial tree plantations owned by Oji Pulp and Paper.

The result of THXP will be even greater rice deficiencies amongst households that are already suffering as a result of the existing Theun-Hinboun project. There is no substitute for rice – the most important food staple in Laos - and the vast majority of subsistence farmers will always prioritize rice cultivation over any other crop. Therefore, livelihood models that rely on non-rice options are likely to fail.

The RAP states that for permanent loss of agricultural land, people along the Hai and Hinboun Rivers will be entitled to “replacement land of at least equal productive value” OR “cash compensation to the value of 7 years production” OR “cash compensation for the land value.” There is no indication as to how the type of compensation will be determined, but as there is unlikely to be any equally productive replacement land available due to the additional flooding,

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<sup>28</sup> Norplan, *Draft Final RAP*, Part 3, p.37

<sup>29</sup> Norplan, *Theun-Hinboun Expansion Project Draft Final Environmental Impact Assessment*, Table 6-4, p.6-6.

<sup>30</sup> Norplan, *Draft Final RAP*, Part 3, p.37

<sup>31</sup> See the Critique of the Draft Final EIA/EMMP that accompanies this paper for more information.

villagers will likely receive cash compensation. Cash is widely regarded to be an inappropriate and unacceptable form of compensation for lost agricultural land.<sup>32</sup>

### **“Voluntary” Relocation**

As a result of the additional flooding, the RAP admits that some villages or village households will need to be “relocated”. Norplan distinguishes this from resettlement, stating that it is a “milder disruption” than resettlement. This is an unjustified value judgment and illustrates the authors’ lack of understanding of the significant impacts that have already occurred as a result of aggravated flooding along the Hai and Hinboun, and the substantial impairments to quality of life and livelihood that such flooding presents. To depict a situation of extended and aggravated flooding and the necessity to move villages or households to higher ground as a “milder disruption” indicates Norplan’s lack of appreciation for local geography, culture and livelihood base.

According to the RAP, the relocation will be “voluntary”, yet the RAP states that “in the event that [project affected persons] do not wish to relocate... they may continue to remain in their current location but will not be eligible for future compensation for flood damage or be provided any infrastructure improvement.”<sup>33</sup> This is an extraordinary statement, and indicates that relocation is by no means voluntary. Indeed, if villagers do not “choose” to relocate, they will be provided with no assistance for the aggravated flooding that will occur as a result of THXP.

Norplan is unable to state how many people will be required to relocate as a result of the aggravated flooding, which villages will be most affected, whether there is land available, and if not, where people will move. The RAP states that preference will be given to relocating people within their village territory, but fails to consider the extra pressure on land and resources that will occur as a result. For those villages that do not have sufficient available land, the RAP contains vague plans to seek “under-populated areas nearby” but does not mention where these areas are and what land is available.<sup>34</sup> It is remarkable that a project with such large-scale impacts claims to adhere to international standards when it cannot even determine how many people will need to be relocated and to where they will be moved.

### **Electrification**

The entitlements section lists “domestic electric connections” as a benefit for all affected villages. However, THPC will only cover the costs of electricity transmission lines to village relocation sites and to villages “which are in acceptable locations”, but the cost of actual household connection will still be borne by the villagers.<sup>35</sup> This could leave the cost of electrification still beyond the reach of many impacted villages.

### **Fisheries**

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<sup>32</sup> See for example *Dams and Development: A New Framework for Decision-Making*, The Report of the World Commission on Dams, Earthscan, London, 2000, and Cernea, “The Risks and Reconstruction Model for Resettling Displaced Populations”, *World Development*, Vol 25, No 10, pp1569-1587, 1997.

<sup>33</sup> Norplan, *Draft Final RAP*, Part 3, p.36

<sup>34</sup> *Ibid*, p.39

<sup>35</sup> *Ibid*, p.45.

The RAP admits that fisheries in the Hai and Hinboun “have already been more or less destroyed”<sup>36</sup> by the existing project. It further admits that the additional releases will “strengthen the negative impacts on fish biodiversity and fisheries but as the value of these fisheries is already very low the incremental damage will not (sic) likely be small.”<sup>37</sup> Despite the admission of culpability with regards to the once productive fishery of the Hai and Hinboun Rivers, no compensation for lost fisheries has been included in the THXP RAP. Indeed, THPC has consistently refused to pay compensation for lost fisheries, despite recommendations from experts to do so.<sup>38</sup> In one village along the Hinboun, Ban Thonglom, the average household fish catch loss caused by the Theun-Hinboun project was \$363 per year, resulting in an annual loss for the village of \$25,773.<sup>39</sup> Ten years of the project’s operation amounts to a fish catch loss of \$257,730, which is far more than what THPC has spent on livelihood improvement activities in the village. Instead of compensating for actual losses, THPC has invested in a limited number of fish ponds which have had negligible impacts in terms of replacing lost fisheries, even by THPC’s own admission.<sup>40</sup> The RAP makes no attempt to rectify past damages by providing compensation for lost fisheries or improved aquatic resources management.

### Livelihood Improvement Plan

Like the RAP for the reservoir and host villages, the RAP for the downstream and upstream project areas offers a predictable array of vague livelihood options with no reference to previous experiences at the Theun-Hinboun project or other hydro projects in Laos. The RAP also fails to explain why these livelihood options would be successful in the new THXP with greatly exacerbated impacts and no appreciable differences in approaches. The proposed livelihood program includes livestock improvement plans, fish and frog raising, agriculture and “cottage industry” development.

The livestock improvement activities rely primarily on promoting more intensive production through forage growth, penning livestock and disease prevention. The RAP fails to address the very strong cultural attachment to keeping livestock free-ranging and how this attachment will be overcome, something with which the existing Theun-Hinboun project has struggled. The RAP also fails to note the additional labor required for high-intensity forage production and how this will affect other livelihood activities. The RAP recommends improved pig production and poultry production. However, nowhere in the RAP does it state whether animals will be provided to affected people free of charge, and if so, what each family is entitled to. If the animals will not be provided by THPC, it is difficult to see how villagers will be able to afford to buy additional animals for more intensive production. In addition, the plan does not address the losses of livestock - especially expensive cattle and buffalo - that will occur as a result of flooding and flood-induced disease.

The RAP recommends fish and frog-raising for downstream villagers, while admitting that “some locations are unsuitable for this activity due to regular flooding.”<sup>41</sup> The section on fish and frog-

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<sup>36</sup> Ibid, p.8

<sup>37</sup> Ibid.

<sup>38</sup> See, for example, Blake, Carson and Tubtim, *Review of the Environmental Management Division, Theun-Hinboun Power Company Ltd*, 2005.

<sup>39</sup> Schouten et al, *Evaluation of Environmental and Social Impact by Theun-Hinboun Hydropower Plant on Aquatic Life and Fisheries*, prepared for Theun-Hinboun Power Company, September 2004.

<sup>40</sup> RAP Part 3 p.49 states “Aquaculture activities commenced in 2005-2006 when frog (85 households) and fish (36 households) culture ponds was (sic) established. This is still in an early stage of development and it is difficult to assess the outcome of this activity.”

<sup>41</sup> Norplan, *Draft Final RAP*, Part 3, p.56

raising contains only general recommendations on the activities and provides no specific recommendations regarding what villagers will be entitled to, whether the aquaculture activities will be subsidized, and for how long. The criticisms outlined on page 6 apply equally to this section.

Another proposed livelihood option is cash crop production and mixed orchard/plantations. The RAP admits that this may be of limited interest to affected people since cash crop production has already been tried by THPC with limited success. The affected areas are generally far from markets and villagers prefer to grow rice for domestic consumption. The RAP states that promising options may include growing garlic, planting abandoned rice fields with flood-tolerant annual field crops, and growing flood-tolerant orchard species. While some of these recommendations may be feasible in the medium to long-term, the proposals are vague, untested and unproven in terms of meeting income targets. They also ignore the fact that the Hinboun's high turbidity may be a significant problem for viability of even flood-tolerant crops. The RAP does not cite experience, data or other evidence to support the recommendations.

The final and most important part of the livelihood restoration package, and the one of most concern to affected people, is rice production. Here the RAP recommends three options:

- (1) Provision of replacement paddy fields above flood-risk levels. As discussed above, the amount of land available for this is likely to be small.
- (2) Forego wet season rice production in flood-prone areas and develop gravity-fed irrigation systems to engage in dry season paddy production. The RAP admits that "few, if any villages will be able to pursue this option" presumably due to the lack of suitable gravity-fed irrigation sites.<sup>42</sup>
- (3) Forego wet season rice production and undertake dry season rice production with THPC-subsidized energy costs. THPC has committed to pay the electricity pumping costs of irrigation until the end of the concession, but the RAP notes that "diesel engines must be replaced with electric motors and electrification of villages completed."<sup>43</sup> While it is commendable that THPC has committed to cover these costs, it is unclear whether they will pay for diesel fuel costs until all villages are electrified, which could take years (many villages along the Hinboun are still waiting for electrical connections promised to them since 1998). In addition, THPC has been subsidizing dry season rice production for several years in the Hinboun valley with limited success. As noted above, the RAP states in an earlier section that "marginal benefit was obtainable overall but many villages lose money on this activity".<sup>44</sup> The RAP further admits that "some farmers" abandoned the activity. This is corroborated by the FIVAS report which notes the "growing failure of this programme" as evidenced by abandoned irrigation pumps along the banks of the Hinboun. The report notes that there has been a steady increase in debt to the village Savings and Credit Funds as a result of the program, while the poorest farmers have been gradually withdrawing from the scheme. FIVAS further explains that the attempts at cultivating dry season corn were unsuccessful as well, as yields were disappointing and offered prices were low.<sup>45</sup> Yet there is no discussion of why this next phase would be any different and what THPC will do to regain the lost confidence of farmers and to ensure profitability of dry season rice.

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<sup>42</sup> Ibid, p.58

<sup>43</sup> Ibid.

<sup>44</sup> Ibid, p.49

<sup>45</sup> FIVAS, *Ruined Rivers, Damaged Lives*, p.48

## Other Concerns

- *Failure to account for impacts of erosion and sedimentation on livelihoods.* The RAP does not mention the impacts that increased erosion and sedimentation will have on water quality and villagers' livelihoods. In the Nam Hai alone, RMR estimates that as of 2005 the river channel had widened by about 45 meters, leading to loss of around 68 ha of land.<sup>46</sup> RMR estimates the value of this land to be between \$100,000 and \$136,000, yet villagers have received no compensation for this loss. The amount of land lost to erosion would have increased in the three years since, and this does not include the land that has been lost in the upper Nam Hinboun. This erosion will be exacerbated by additional releases of water and THPC's failure to increase the size of the surge pond. THPC does not intend to implement any engineering works to control the erosion, presumably because they deem such measures to be too costly. As a result, proportionally greater amounts of land will be eroded away, and subsistence farmers will be forced to pay the cost of THPC's irresponsibility.
- *Failure to account for riverbank garden losses.* The increased flows into the Hai and Hinboun will also negatively impact dry season riverbank gardens, many of which had been restarted by the villagers following the failure of THPC's gardens. There is no mention in the RAP of these impacts and how villagers will be compensated.
- *Hazards of river crossings and river use not addressed.* The existing project has already made dry season river crossings hazardous along the lower Nam Hai and upper Nam Hinboun. Many villages have fields on the other side of the river, and in some villages children have to cross the river to get to school. While THPC promised to build bridges in some villages, these promises never materialized and children have been forced to paddle across a hazardous and fast-flowing river to get to school each day.<sup>47</sup> As a result of the lack of river crossings and the unpredictable water releases from the Theun-Hinboun project's power station, several people have died in the river. This situation will only get worse after THXP is built, endangering the lives of thousands of residents. Navigation, river crossing, bathing, washing and swimming will become potentially deadly exercises due to the faster additional flows. Yet the RAP only states that "access between village sites and fields in the lower Nam Hai needs to be addressed. The feasibility of each of the options... needs to be analyzed."<sup>48</sup> There is no mention of what additional warning systems will be put in place to ensure the safety of villagers during times of plant shutdown and re-operation. The RAP does not include firm financing to install river crossings.
- *Failure to address impacts along the Nam Theun-Nam Kading.* The existing Theun-Hinboun project has had impacts on the livelihoods of villagers living downstream of the dam site along the Nam Theun-Nam Kading River. Domestic water supplies have been impaired and fisheries have decreased as a result of lower water levels and flows. These problems will be exacerbated by the additional water diversions into the Hai and Hinboun Rivers. However, the current RAP absolves THPC from all responsibility for this issue, stating that it will be the responsibility of the Nam Theun 1 Hydropower Project, a

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<sup>46</sup> Resource Management and Research, *Theun Hinboun Expansion Project Social Action and Environmental Management Plans*, Draft, 11/20/2006, p2-24

<sup>47</sup> FIVAS, *Ruined Rivers, Damaged Lives*, p.7

<sup>48</sup> Norplan, *Draft Final RAP*, Part 3, p.45

project proposed for development further downstream. This position is unacceptable since villagers along the Nam Kading have already been affected by Theun-Hinboun, will suffer more impacts from THXP, and there are no guarantees that a) Nam Theun 1 will be built, or 2) that it will assume responsibility for the effects on downstream communities.

## **CONCLUSION**

The Resettlement Action Plan for the Theun-Hinboun Expansion Project is so poorly conceived and developed that it cannot and should not constitute a sound basis for decision-making around project development. The RAP seems to have been hastily and cynically prepared to appease Lao regulatory requirements. The RAP obfuscates and downplays project impacts and fails to present a viable plan for mitigating and compensating the very serious impacts that will result from the project. The result of the THXP is likely to be massive impoverishment and out-migration from the Hai and Hinboun River valleys, where life will become increasingly untenable due to the greater frequency and intensity of project-induced flooding. In the resettlement areas, both host villagers and resettled communities will be forced to compete for increasingly scarce land and natural resources, with a consequent lowering of living standards for all involved. The plan leaves the reader with little faith that THPC has any intention of restoring, let alone improving, people's livelihoods. It is surprising that Statkraft and Norplan, two companies from one of the richest and most advanced countries in the world, would put their name and reputation behind such a poor quality and flawed document, thereby indicating that they care little about the fates of some of the poorest citizens in Southeast Asia.