

**Excerpts from *Project Performance Audit Report on the Nam Leuk Hydropower Project in the Lao PDR*, Asian Development Bank, Operations Evaluation Department, 2004**

Compiled by International Rivers Network

**Background:** The Bank's Operations Evaluation Department commissioned the *Nam Leuk PPAR* to assess the Nam Leuk Hydropower Project's development impact "to identify follow-up actions and lessons for future ADB operations." (pg. 8) OED felt this report was particularly relevant in light of proposed Bank funding for the Nam Theun 2 Hydropower Project.

The Nam Leuk Hydropower Project, completed in 2000, has affected the livelihoods of thousands of villagers through declines in fisheries and water quality and quantity.<sup>1</sup> The project diverts water from the Nam Leuk River through a 60-MW powerhouse before release into the Nam Xan River. Villagers living along the Nam Leuk have thus suffered from declines in water flow, while villagers along the Nam Xan have suffered impacts due to increased flow.

Nam Leuk is the first ADB-supported project in Laos that located a dam and reservoir inside a protected area. According to the ADB's loan agreement, 1% of revenues from sales of power to Thailand would be used to protect the Phou Khao Khouay National Biodiversity Conservation Area ("PKK Park"). Subsequent correspondence with EdL in 2003 confirmed that 1% of total revenues will be used towards protection of the park.

**Report excerpts:**

**1. Two project objectives not achieved**

Nam Leuk was built to achieve four objectives: to support development of the Lao power sector; to generate power for domestic use and export to Thailand; to strengthen the capabilities of Electricité du Laos (EdL) to prepare, design, and implement environmentally sustainable projects; and to strengthen management and protection of the PKK Park. (pg. v)

"The [Operations Evaluation Mission] considers that there was no serious effort put into the design of the objectives for strengthening the EdL and providing assistance to the PKK Park..." (pg. 7) "Little was achieved on the capacity building objective due to the lack of preparation at the design stage and lack of monitoring during implementation. There was no assessment of EdL's needs, no specific task, no specific budget, and no monitoring provisions." (pg. vi) "Although the 1% funds are being disbursed by EdL to the PKK Park authorities, the OEM believes that the intended goal, which was to support ecotourism and village-based integrated conservation and development programs is not being achieved." (pg. 38)

**2. Impacts to water quality and fisheries**

"OEM was informed about the poor water quality by three of the southern villages visited. The villagers reported of bad smelling water and skin irritation problems, and they associate these symptoms with the use of Nam Leuk river water particularly during the dry season." (pg. 34) Villagers reported similar problems along the Nam Xan in Ban Thamdin and Ban Thaheua.

Villagers reported declines in fisheries along the Nam Leuk and Nam Xan rivers. Villagers reported drops in fish catch (by weight) of 50 to 95 percent. Some villagers can catch enough only for personal consumption and have lost an important source of income. (pp. 69-83). The

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<sup>1</sup> The *Nam Leuk Social Action Plan* (Sogreah Ingenierie, revised January 1998) predicted that 3,120 people living in six villages in the reservoir area and along the Nam Xan and 6,200 people living in seven villages downstream of the dam on the Nam Leuk would be impacted.

report speculates that project impacts on fisheries have been “significant” but are difficult to quantify. (pg. 32)

### **3. Mitigation and monitoring inadequate**

“After plant start up, mitigation measures relating to reduced water quantity and quality and fisheries impacts in nearby villages were not fully addressed. Functioning water pumps and standpipes actually came into effect only after April 2003 (over 3 years after dam closing) and some of the installed pumps were not functioning at the time of the OEM. Monitoring of water quality and fisheries have been inadequate to ascertain the project impacts and mitigation measures have not been provided with respect to these.” (pg. vii)

“Up to the time of the OEM, mitigation efforts on fish impact have not been carried out under the Project.” (pg. 32) “...since there has been neither a systematic effort to compensate for the loss of fish nor to monitor how the villagers have coped, it is quite possible that there are households who lack alternative income sources and adequate protein intake.” (pg. 33)

### **4. Failure to protect Phou Khao Khouay Park**

The PKK Park “is not sustainable as a national park unless efforts are made immediately to channel the funds allocated under the Project in a more productive manner” and “[u]nless the management of the PKK Park is strengthened...” (pg. viii and pg. 29)

“...there is anecdotal evidence that the PKK Park is being further deteriorated by parties that have found illegal means of access to the PKK Park. It appears that the system adopted at present lacks the necessary planning, management, accountability, and performance indicators that are desired for such an endeavor.” (pp. 24-25)

### **5. Poor follow through by EdL and ADB**

“[Electricité du Laos Environmental Management Division’s] lack of staff, inexperience, and inadequacy of funds have led to incomplete mitigation measures in some of the surrounding villages. In hindsight, more attention should have been paid to the environment and social mitigation measures that were needed after plant start up. It appears that there is no dedicated budget allocation for EMD from EdL for continued monitoring of the environmental and social impacts of this Project, and ad hoc arrangements for mitigation are made when problems cannot be avoided by EdL or when funding from other projects is available.” (pg. vii)

“After plant completion, [EdL] was not diligent in monitoring and completing the mitigation measures. It was also not successful in effectively implementing the PKK management plan in collaboration with the Implementing Agency.” (pg. 41) “...[EdL] acted efficiently only when external consultants were contracted to undertake the mitigation measures.” (pg. 18)

“...with increased number of hydropower projects to supervise [EMD’s] resources and staff are not sufficient for effectively implementing environmental and social mitigation measures at all the power plants under EdL management.” (pg. 36)

Regarding ADB performance, “supervision and monitoring waned substantially once the power plant was built and the loan was closed.” (pg. 41) “ADB also could have provided better post-completion follow-up monitoring of environment and social mitigation measures, particularly because the PCR specifically recommended it as a follow-up action.” (pg. 18)

### **6. Future resettlement monitoring recommended**

The report states that “[i]n general, resettlement of the 16 families from Nam Leuk village has been successful... Many of the families are much happier about their current lifestyle and facilities available at their new location.” (pg. 31) Several families reported that life in their

previous village was “easier” because they had access to fisheries and larger amounts of arable land. (pp. 83-99) “[A] few households have become quite vulnerable due to sickness, lack of labor to work the land, and bad decisions made in acquiring agricultural property. These issues are not attributed to the Project. Periodically monitoring these households should be carried out to see whether their circumstances deteriorate further.” (pg. 32)

## **7. Lessons identified and recommendations**

“Unfortunately, environmental and social impacts do not terminate when the power plant begins operation and the project loan closes. In fact, often, additional impacts only commence at this stage. Given the ADB guidelines and OEM’s findings, it is recommended that a suitable percentage of revenue (in the range of about 0.5% of project revenues) be allocated in the first 10 years of operation specifically to continue the environmental and social mitigation measures associated with a project. The management of the fund should be periodically monitored to ensure its effectiveness.” (pp. 42-43)

## **8. Specific follow-up actions: mitigation and monitoring**

“Based on the information available and the lack of monitoring data, the OEM recommends that further mitigation work should be carried out in the affected villages to replace the fishing opportunities and improve the water quality and quantity. This should be accompanied by a defined monitoring program.” (pg. 42)

### *Fisheries*

- EdL should carry out fisheries monitoring and mitigation in the next 3 months to replace lost fisheries. A systematic, participatory and equitable approach should be adopted to find appropriate and sustainable activities to replace fishing opportunities.
- Implementation has to be monitored for at least the first 5 years. (pg. 43)

### *Water quality*

- EdL should provide a technical assessment of Nam Leuk water quality within the next 6 months, including assessment of impacts present and future. (pg. 43)

### *Water supply*

- EdL should evaluate water supply conditions of affected villages in the next 3 months and ensure that adequate water supply is available.
- Defective systems and pumps should be fixed immediately.
- Effective water management training, assistance and authority should be given to 1-2 people in each village. (p. 43-44)
- Negotiate water rights [between people living at the operators’ village and local farmers from Kensang and Thamdin] before it becomes a confrontational issue. (pg. 31)

### *Phou Khao Khouay Park*

- Within 6 months, carry out an investigation to evaluate the impact of EdL funds and PKK activities on the Park in the last 4 years. (pg. 44)
- Organize tripartite meeting between ADB, EdL and PKK Park authorities to discuss and determine suitable mechanism for future management of the 1% fund. (pg. 44)
- Establish a multi-party committee to approve activities related to PKK Park improvement. Consult and collaborate with villagers within and in the surrounding area of PKK Park and involve them in sustainable park management activities that provide them with supplementary income. (pg. 25)

*Resettlement*

- Periodically monitor resettled families identified in report. (pg. 32)