Viewpoint

In whose interest? The role of studies in hydro power development in the Mekong Region

Charlie Pahlman, ACT Mekong Group

> It is expected that the project will have a positive impact on the development of the rural areas in central Lao PDR. The environmental implications of the project are being carefully assessed. The head pond will increase fish production and improve navigation upstream of the dam. The groundwater water level for the local population will be better stabilized, and the diverted water will provide a reliable source for drinking and for irrigation. Very little resettlement and no adverse health impact is anticipated. (Asian Development Bank 1996)

> It is clear that the river section downstream of the dam site has been severely impacted by the Project…. for a river diversion such as the Theun-Hinboun Project any attempt to retain the ecology of the two downstream rivers (the donor or recipient river) is bound to be fruitless. (Theun-Hinboun Power Company, 2000 from the ADB website)

This paper briefly examines the role of the Asian Development Bank (ADB) as lead financier of the Nam Theun-Hinboun hydro power project (NTH) in Laos, and discusses how 'studies' are used to justify certain predetermined outcomes, manipulate criticisms and undermine local voices rather than providing independent and rigorous information and analysis on which to base sound decisions.

The paper also explores how international financial institutions can distort the neo-liberal and market driven economic processes and principles that they claims to espouse. While preaching the virtues of the private sector development banks are often only able to get the private sector to risk their capital for projects like the NTH if certain costs and risks are 'socialised' (i.e. shifted to the public sector). This means that projects which are justified on their supposed economic merits will not progress unless institutions like the development banks provide subsidies, guarantees and other forms of safety nets to the private sector.

The Nam Theun-Hinboun project

The Nam Theun-Hinboun is a 210 megawatt hydro electric scheme located on the Theun River, in the border area between Bolikhamsay and Khammouane Provinces, some 280 kilometres east of Vientiane, Lao PDR. The Theun River is the fourth largest tributary of the Mekong, which is shared by Burma, Lao PDR, China, Cambodia, Thailand and Vietnam. The scheme comprises a 25 meter high dam, a 5.2 km head-race tunnel to a power house and then a 3.5 km tailrace before discharging into the Nam Hai, a tributary of the Nam Hinboun River, another tributary of the Mekong. The power generated is primarily exported to Thailand under a power purchase agreement signed with Thailand's electricity generating authority (EGAT) in 1996.

Construction of the US$260 million project began in 1994 and was completed in 1998. The project is a semi privatised BOOT (Build-Own-Operate-Transfer) scheme operated by the Theun-Hinboun Power Company (THPC). THPC is jointly owned by Electricity du Laos (EdL) (60 per cent), GMS Power Company of Thailand (formerly MDX) (20 per cent), and Nordic Hydropower (20 per cent), which is owned by the Norwegian power utility, Statkraft. The ADB provided a $60 million loan to the Lao

government for their equity share in the project. The Swedish and Norwegian governments have also provided some $70 million in government guaranteed loans for the project from Nordic financing institutions (Usher and Ryder 1997, Ryder 1999).

From the beginning, the project was promoted by the ADB and the private developers as a benign so called 'run-of-river' hydro project with a small reservoir and minimal environmental or social impacts. In fact, the original project feasibility study conducted in 1993 concluded that the dam would have significant beneficial environmental impacts.

The original project contracts, brokered by the ADB, limited the Theun-Hinboun Power Company's liability for social and environmental costs to US$1 million – an amount that was allocated mainly for infrastructure, consultants, and government training.

Studies – information and misinformation

While construction of the NTH began in 1994 the final impact studies for the project were not completed or released until May 1996. These studies, carried out by Norplan (now Norconsult International), a Norwegian consulting company with links to the Nordic dam building industry, were criticised for ignoring many key impacts of the project and for not adequately consulting with local communities. Nonetheless, the study raised many serious concerns and questions about the potential impact of the dam, particularly on fisheries and wildlife, as well the uncertainty caused by the lack of adequate baseline data and the inadequate time available to conduct the studies. The report stated 'It is … imperative that a minimum release of water is maintained at all times to sustain fish life in the Nam Kading and thereby a diverse wildlife within the NBCA (National Biodiversity Conservation Area)…This report recommends a minimum flow of 10 m3/sec to Nam Kading below TH dam, after weighing power sector and environmental interests against each other' (Norplan 1996).

A subsequent assessment of the Norplan report by the Norwegian energy utility, the Norwegian Water Resources and Energy Directorate (NVE) in 1996 recommended that the minimum flow be increased to 15 m3/sec for at least the first three years of operation.

Project engineers and economists, however, were unhappy with these recommendations. In their view a minimum down stream release of 10 m3/sec to the Theun River would be too costly in terms of reduced electricity generation as more water would be released below the dam instead of going through the turbines. They therefore decided to set the minimum downstream release at 5 m3/sec, ignoring the recommendations of their own studies, and ensuring that the down stream Theun River would be reduced to a trickle. Meanwhile, they continued to publicise the negligible impacts of the project.

Run of which river?

One way the ADB sought to emphasise the minimal environmental impacts of the NTH project was to call it a 'run of river' project. This is generally used to refer to small or medium sized hydro schemes that do not require large storages of water and where the run of the river is used to channel water through the power house. Given, however, that the purpose of the NTH was to divert water from one river basin to another, it was a misleading term and has been used to inaccurately downplay the impacts of the project on the environment and the communities downstream of the diversion dam. It does beg the question – run of which river?

In 1998, Bruce Shoemaker, a former aid worker in Laos, carried out a study in the area affected by the project. His report, '*Trouble on the Theun-Hinboun*', released by the International Rivers Network (IRN), documented detailed claims by villagers that fish catches had declined by as much as 90 percent, water supplies had been disrupted and farming land destroyed. The report also showed how villagers had been misled by the project proponents and had not received adequate compensation.

The ADB and THPC (1998) response to the Shoemaker report was to attempt to discredit his findings (claiming for example, that reduced fish catches were due to lower rainfall that year) and to intimidate villagers who had spoken to Shoemaker.

Fisheries impacts

Nonetheless, the increased public concern about the NTH impact on fish populations and fisheries in both the Theun/Kading river and the Hai/Hinboun river systems forced the THPC to commission a monitoring study on fisheries. This was undertaken throughout 1998 by fisheries specialist Terry Warren. Although Warren's detailed report was submitted to THPC in June 1999 (Warren 1999), a year later neither the THPC nor the ADB had released it publicly, and none of the recommendations had been acted upon. Unable to get a response from THPC or the ADB, Warren presented a summary of his findings at an international conference in Sydney in June 2000 (Warren 2000).

The findings confirmed what many already suspected – that the project had already resulted in serious negative impacts on fisheries and livelihoods. There had been long term reduced fish catches both in the head pond area above the dam and down stream of the dam in the Theun/Kading and the Hai/Hinboun rivers. Warren called for further monitoring and an increase in the minimum bypass flows from 5 m3/sec to 10 m3/sec. His report was critical of the lack of adequate fisheries studies carried out prior to the project being approved (Warren 2000).

A river beyond repair?

While Warrens' fisheries report remained unavailable, the THPC released a new Mitigation and Compensation Program for the project in September 2000. The MCP report outlines a ten year program costing somewhere between $2.74 and $4.65 million. In this document, there is no longer any pretence that the project had had minimal environmental impact. This THPC report claims that the damage to the river ecosystems has been so complete and irrevocable that it is a waste of money to try to repair it by increasing

downstream releases. With no obvious irony, the report quotes Patrick McCulley's book *Silenced Rivers*, stating that:

> Mitigation is especially dangerous when it misleads the public into believing that dam builders can re-create the characteristics of wild rivers and fisheries, and so allows more dams to be built. *(McCulley in Theun-Hinboun Power Company 2000)*

The THPC report goes on to argue that:

> …any attempt to retain the ecology of the two downstream rivers (the donor or the recipient rivers) through a riparian release is bound to be fruitless. The scheme's whole justification depends on switching almost all the dry season flows to another (low elevation) river. The degree of change in the ecology will be extreme in both systems.

The situation had come full circle. From the early claims that this was a 'win-win' project with negligible environmental impacts we were then told that the project impact had been so devastating and irreversible that mitigation by releasing water to areas downstream in the dry season would be a waste of time and too costly. The company's refusal to make environmental releases is at odds with the recommendations made by its own fisheries consultant and the World Commission on Dams.

One of the key recommendations made by the THPC fisheries consultant was that the company be obliged to release a minimum flow of 10 cubic meters per second as originally recommended by Norwegian consultants Norplan. In his report to THPC, Warren states '…there is no evidence to suggest that the damage undoubtedly caused by the present minimum release of 5 cubic meters over two dry seasons in 1998 and 1999 is irreversible. On the contrary, environmental conditions can be expected to improve providing the increased minimum flow is continuous' (Warren 2000).

In its world study of large dams, the World Commission on Dams has also emphasised the value in maintaining minimum flows downstream of dams as a way of maintaining downstream ecosystem integrity and community livelihoods. This contradiction suggests that the THPC has not based its position on scientific reality and experience with operating dams. According to the THPC's own estimate, the environmental release proposed would reduce revenues by about $8 million a year, which is more than 10 per cent of average annual revenues since the dam began operating in 1998.

In other words, the THPC has commissioned reports that have little to do with providing objective information for sound decision making on mitigating environmental damages and everything to do with the politics of achieving predetermined outcomes in the THPC's interests.

At the early stages of the project it was in the interests of the ADB and developers to understate costs and overstate benefits. This not only helped to justify the project to the financiers, the Lao government and the ADB board but ensured that external costs and risks, such as environmental and social costs, were not incorporated into the project cost structure and were thus not the responsibility of the developers. When the project was completed, it was in the interests of the developers to argue that mitigation measures such as downstream releases were pointless as such measures would impact on the profitability of the scheme.

In broader terms, from the appraisal and impact study process to the ongoing mitigation and compensation program, there are serious inadequacies as follows:

- environmental and social impact assessments were completed and released AFTER construction had started;
- there was a lack of meaningful consultation with local communities;
- there was a failure to identify affected areas or quantify economic losses;
- there were no mechanisms for accountability to local communities;
- no substantial fisheries studies were carried out prior to the approval of the project;
- studies were carried out by consultants with potential conflict of interests;
- concerns and recommendations raised in the studies were ignored;
- studies and information critical of the project were suppressed;
- no public hearings or independent peer review process of studies were conducted;
- no criteria for evaluating project benefits and impacts were developed; and
- there was no recognition of citizens' rights to immediate and direct compensation for damages to resources and livelihoods.

It can be argued that any impact assessment of large scale development projects like the NTH are of value only to the degree that they are subject to independent scrutiny, peer reviews and public hearings, and are part of an open and transparent process of assessing all factors and scenarios, including a 'no project' option. This has clearly not been the case with the NTH.

Far from facilitating a process which leads to well informed and transparent decision making, flawed studies and reports were used to systematically distort and manipulate the process in order to promote certain institutional interests and predetermined outcomes.

Of particular concern, is that the involvement of the ADB not only contributed to inadequate assessment processes, but also led to economic outcomes which are totally contradictory to ADB's own stated philosophy of market driven economic reforms.

Socialising private sector risks

For the ADB, the NTH project was always more than just a dam – it was also intended to showcase the Bank's ability to work in partnership with the private sector to finance and develop large scale infrastructure projects. The ADB had been actively seeking to facilitate private sector investment in hydro development in the Mekong Region since the early 90s, partly through forums such as the Greater Mekong Subregional Cooperation Program.

Commercial lenders and financiers, however, tend to regard hydro dams as high risk, low return investments, with a reputation for major

cost over-runs and delays due to environmental problems and public opposition. They have therefore been unwilling to risk their capital on large hydro power projects unless certain costs and risks can be 'socialised' and shifted onto the public sector (Ryder 1999).

It is not within the scope of this paper to provide a detailed description or analysis of the complex financing and contractual structure of the NTH project. It is clear however, that without the involvement of the ADB as co-financier and sponsor of the project, it would not have been able to attract the necessary private sector backing.

The ADB, along with other publicly funded institutions such as the Nordic export credit agencies (which provide concessional credit and guarantees to companies from Nordic countries to facilitate export), has effectively transferred key project costs and risks from the private investors to the people and Government of Lao PDR, while ensuring that the returns to the private developers are virtually guaranteed.

As a result, tax payers in donor countries and the people of Laos have been forced to shoulder risks that the private sector prudently refuses to take.

In this context, it is not difficult to see why it is in the interests of the ADB and project developers to externalise non project costs such as environmental and social impacts, while inflating projected economic benefits and returns. In a project where the main stated justification is economic revenue flows for the development of a poor country, it would appear that the rigorous and transparent economic analysis which is essential to ensure sound long term economic development has been undermined.

If these commercial projects are as economically beneficial and safe as ADB would have us believe, why isn't the market allowed to prove that? Why doesn't the ADB work with the Lao government to develop a strong regulatory framework and a credible and transparent assessment process which ensures that the interests of Laos and the Lao people are protected in these deals?

One can only ask – whose interests are really served?

Conclusion

Now, more than four years after project construction was completed, the ADB and the THPC continue to prevaricate about the impact of the project and about who has the responsibility to compensate villagers for losses to their livelihoods, fisheries and natural resources. The THPC continues to resist calls for an increase in the minimum flow of the Nam Kading, claiming that there is insufficient evidence that increased down stream releases would be beneficial. Instead, new studies and consultant reports are commissioned, and more foreign experts are brought in to draw up 'mitigation matrixes' and introduce novel aquaculture systems.

Meanwhile, villagers continue to suffer from losses to their food security and cash income base and have not yet received any direct compensation for these losses. In effect, very poor rural villagers continue to subsidise the profits of the Theun-Hinboun Power Company. In a country where there is no independent regulatory system and limited space for criticizing official policy, the lives of local people continue to be trammeled by powerful economic interests and the vagaries of the 'expert' culture.

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Watershed Report, 1999, 'Always very little, always very late: The ADB and the Theun- Hinboun Hydroelectric Project', *Watershed* 4(3).

On line references

Further information on the Theun-Hinboun project is available from the following websites:

International Rivers Network:
http://www.irn.org/programs/mekong/

Probe International:
http://www.probeinternational.org/pi/Mekong/

Asian Development Bank:
http://www.adb.org/Projects/TheunHinboun/

Oxfam/Community Aid Abroad:
http://www.caa.org.au/campaigns/adb/