

An Analysis of Nam Theun 2 Compliance with World Commission on Dams Strategic Priorities

Executive Summary

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Updated February 2005

The World Commission on Dams (WCD), an independent, multi-stakeholder process sponsored by the World Bank and IUCN, was established to review the development effectiveness of large dams and assess alternatives; develop a framework for assessing options and decision-making processes for water and energy services; and develop internationally acceptable criteria and guidelines for planning, designing, construction, operation, monitoring, and decommissioning of dams. In November 2000, WCD Commissioners released their final report, *Dams and Development: A New Framework for Decision-Making*.

The World Bank has stated that it will use the WCD report “as a valuable reference to inform its decision-making process when considering projects that involve dams.”¹ Additionally, World Bank donors, in the 2002 report of the Bank’s International Development Association (IDA) 13th Replenishment, “noted the Bank’s early support for the World Commission on Dams and asked that IDA take into account the core values and strategic priorities suggested by the WCD for preparing and evaluating dam projects.”² In November 2004, IUCN members – including governments and non-governmental organizations – adopted a motion on “Financial institutions and the World Commission on Dams recommendations.” This recommendation urges financial institutions to assess all proposed dam projects in the context of WCD strategic priorities and to decline support for dam projects that do not respect WCD strategic priorities.³ It is with these statements in mind that the following analysis has been prepared.

Nam Theun 2 is the largest and most controversial of the hydropower projects planned for Laos. Situated in Khammouane Province in central Laos, and only approximately 40 km upstream from the already completed Nam Theun-Hinboun Hydropower Project, the \$1.3 billion BOT (Build-Operate-Transfer) scheme is being developed by three companies in association with the Government of Laos (GoL). In November 2003, the Nam Theun 2 Power Company (NTPC) signed a power purchase agreement with the Electricity Generating Authority of Thailand (EGAT), paving the way for the project’s development. NTPC and the GoL are awaiting a decision on financial assistance and guarantees from the World Bank, which are necessary to secure financing from other commercial lenders and public institutions. The World Bank is expected to take a decision on whether or not to support Nam Theun 2 before May 2005.⁴

¹ The World Bank, “The World Bank and the World Commission on Dams Report Q&A,” March 2001.

² World Bank Executive Directors, International Development Association, *Additions to IDA Resources: Thirteenth Replenishment, Supporting Poverty Reduction Strategies*, July 2002, p. 18.

³ IUCN RECWCC3.087 “Financial institutions and the World Commission on Dams recommendations,” approved November 2004. Available at: http://www.iucn.org/congress/members/adopted_res_and_rec/REC/RECWCC3087-%20REC024%20Rev.pdf.

⁴ The power purchase agreement deadline for reaching financial closure is May 8, 2005, after which date NTPC will be required to pay penalties to EGAT.

An analysis of Nam Theun 2's compliance with the WCD strategic priorities shows that the project fails to comply with six of the seven strategic priorities outlined in the WCD report. On this basis, it is recommended that the World Bank should not provide guarantees and other assistance for Nam Theun 2, but instead should work immediately on developing alternative plans for conserving the watershed area and improving the livelihoods of people living on the Nakai Plateau.

Strategic Priority 1 – GAINING PUBLIC ACCEPTANCE

The overall thrust of the WCD's approach is that there needs to be a fair, informed and transparent decision-making process. The right of indigenous peoples to free, prior and informed consent must be recognized. Access to information and legal support is key for affected communities and agreements should be negotiated based on informed participation.

For such a process to exist, there must be a well-developed civil society, access to independent sources of information, and the ability for local people to have informed input into the process without fear of retribution. Unfortunately, such a political climate does not exist within Laos. There is no independent media in Laos, and there are no independent local NGOs. The government continues to commit serious human rights abuses, and critics have been arrested and imprisoned. The legal system is at a rudimentary stage of development and there is no independent judiciary. In such a political environment, it is difficult to see how a truly open and participatory decision-making process could take place.

More than 6,200 indigenous people living on the Nakai Plateau will be resettled to make way for the dam. While numerous discussions have occurred with communities living on the Nakai Plateau, the processes that have taken place are not compatible with the concept of free, prior and informed consent as defined by the WCD and by international human rights conventions. The decision to build the dam was made and logging on the Plateau commenced well before those affected were involved in any participation processes. Most of the discussions with villagers have occurred in the context of improving resettlement outcomes, rather than debating whether or not the project is appropriate or desirable. Furthermore, affected communities have not had access to independent legal or other professional support.

More than 100,000 people living along the Xe Bang Fai will be affected by increased water flow in the river. Discussions on the project with Xe Bang Fai villagers were only initiated in mid-2004 and many people have still not been consulted about the project, let alone given their consent or agreement to it.⁵ There continue to be questions about the accuracy of information that has been presented to Xe Bang Fai communities regarding the negative impacts that the Nam Theun 2 dam will have on the river.⁶

The Lao population as a whole is affected by the risks assumed by the government for Nam Theun 2, in terms of debt incurred, management of project revenues, and the project's environmental and social impacts. There has been no meaningful public participation process or open and informed debate amongst Lao society as a whole, despite more than a decade of project preparation and several staged meetings in Vientiane.

⁵ Nam Theun 2 Social Development Plan, November 2004, Vol 1, Ch. 4, p. 26.

⁶ See, for example, http://www.namtheun2.com/faq/faq_env.htm and Les Amis de la Terre, Campagna per la Riforma della Banca Mondiale, Bank Information Center, and Environmental Defense, "NGO Visit to Nam Theun 2 Hydroelectric Project in Laos," December 2003, p. 6.

Of all the groups who will be affected by the Nam Theun project, communities who live downstream from the dam site and fish in the Nam Theun and its tributaries seem to have been the least informed about the project. These villagers rely on fish and other aquatic products for income and food supply, and rank these activities second or third in terms of household food security after rice and vegetable cultivation.⁷ The project developers now admit that at least 1,500 families living along the lower Nam Phao will experience 60 percent declines in their fish catches as a result of the project.⁸ With flows to the Nam Theun reduced to 2 cubic meters per second (cu m/sec) – which represents only a fraction of the natural flows in the river– impacts on fisheries are likely to be severe. However, most of these communities have yet to be consulted about the Nam Theun 2 project.

Consultations with villagers whose lands and assets will be acquired permanently or temporarily for project construction were only initiated at the end of 2004 and have not yet been completed.⁹ As with other villagers in these areas, they have only recently received information on Nam Theun 2 and have not given their free, prior and informed consent to the project.

Strategic Priority 2 - COMPREHENSIVE OPTIONS ASSESSMENT

The World Bank has been promoting the dam as an income generator for Laos since 1986. Yet no participatory, comprehensive assessment of *alternatives to hydropower* as a means for generating foreign exchange has ever been completed for Laos. The Nam Theun 2 Study of Alternatives simply compared various power export schemes, all except one of which were hydropower projects. The claims that Nam Theun 2 is the best means of protecting the watershed area, of providing sustainable livelihood options for Nakai Plateau villagers, or even of generating foreign exchange for Laos, are not based on a comprehensive and participatory analysis of alternatives as called for by the WCD. For example, the limited economic information that is available about the project indicates that the revenue streams for Laos are projected to total no more than 5 percent of government revenues until 2019.¹⁰ There has been no assessment of lower-risk options that might generate similar revenue streams for the country.

There is no evidence that Nam Theun 2 is the best option for meeting Thailand's needs for energy either. According to research conducted by the Energy Committee of the Thai National Economic and Social Advisory Council, EGAT– the buyer of Nam Theun 2's power – has overestimated energy demand growth in its Power Development Plan for 2004-2015, which includes the purchase of power from Nam Theun 2. Additionally, a study commissioned by the World Bank but never disclosed shows that feasible demand side management, energy conservation measures, and renewable energy generation in Thailand would “exceed the output of NT2 and would provide energy to the customer at a cost approximately 25% less than NT2.”¹¹ This World Bank study and the Alternative Power Development Plan produced by the Thai National Economic and Social Advisory Council indicate that there are less expensive options for meeting Thailand's energy needs than Nam Theun 2.

⁷ Nam Theun 2 Environmental Assessment and Management Plan, Addendum, Riparian Release Study, January 2005, p. 3.

⁸ Ibid, Table x-13.

⁹ Ibid, Vol 4, Ch. 6, pp. 2-3.

¹⁰ World Bank, “Nam Theun 2 Economics Interim Summary Report,” August 21, 2004, p. 18.

¹¹ “Nam Theun 2 Hydropower Project: Impact of Energy Conservation, DSM and Renewable Energy Generation on EGAT's Power Development Plan,” August 28, 2004.

Strategic Priority 3 – ADDRESSING EXISTING DAMS

WCD guidelines stipulate that outstanding issues with existing dams must be resolved before additional dams are built in the same river basin. The Nam Theun-Hinboun dam, located approximately 40 km downstream of the proposed site of the Nam Theun 2, was funded by the Asian Development Bank (ADB) and completed in 1998. Theun-Hinboun has had severe impacts on the livelihoods of more than 25,000 people living downstream and upstream of the dam, including declines in fish catches of between 30 and 90 percent, destruction of vegetable gardens and dry-season drinking water sources, loss of fish nets and increased difficulties with transportation.

For the past four years, the Lao-based Theun-Hinboun Power Company has invested significant resources in mitigation measures and compensation for the impacts of the Theun-Hinboun hydropower project. While the company has made “good progress,”¹² according to a third-party review panel, there are serious concerns about the effectiveness and long-term sustainability of its program to restore affected people’s livelihoods. The panel found that “the poorest sectors of the impacted communities, and those heavily reliant on living aquatic resources for their livelihoods and diets ... have not been adequately included in project activities to date.”

Additionally, roughly 9,000 villagers have been impacted by the Asian Development Bank-funded Nam Leuk dam in central Laos. They have suffered losses to drinking water supplies and fisheries. Fish catches reportedly dropped 50 to 95 percent along the Nam Leuk and Nam Xan rivers after the dam was completed. As a result, the ADB says it is “quite possible” that families “lack alternative income sources and adequate protein intake.”¹³ Without recourse mechanisms, affected communities had nowhere to turn when promises were broken.

Furthermore, when Nam Leuk was approved, the ADB boasted that 1 percent of export revenues would be used to protect Phou Khao Khouay National Park, one of the country’s most important protected areas and home to endangered tigers and elephants. However, inadequate management of the park and improper disbursement of funds has threatened the long-term sustainability of Phou Khao Khouay. These issues will likely remain unresolved until the ADB establishes clear mechanisms to ensure compliance with social and environmental conditions after projects have been completed.

Another 23,000 villagers have been affected by the Nam Song, Nam Mang 3 and Houay Ho hydropower projects. They have suffered losses in terms of food security, cultural heritage, water supply and other aspects of their daily lives. If the GoL, ADB, and the dam developers cannot ensure that Lao citizens affected by much smaller hydropower projects are adequately compensated for their losses, then it is difficult to see how the World Bank can guarantee that those affected by Nam Theun 2 will not be left worse off.

Strategic Priority 4 – SUSTAINING RIVERS AND LIVELIHOODS

The WCD states clearly that there must be good baseline information gathered over several years before a decision to build a dam has been taken, and that dams should provide for environmental flow releases to help maintain downstream ecosystems. Independent technical reviews of the Nam Theun 2 project’s social and environmental plans indicate that sufficient

¹² Draft Final Review of the Environmental Management Division for Theun-Hinboun Power Company Limited, 2004.

¹³ Asian Development Bank Operations Evaluation Department, “Project Performance Audit Report on the Nam Leuk Hydropower Project in the Lao PDR,” 2004.

baseline data on critical aspects such as hydrology, fisheries, and water quality has not been collected.¹⁴

The review of the project's hydrologic data found the analysis to be so deficient that it is impossible to predict how much water will be available for power generation.¹⁵ The reviewers determined that the lack of long-term stream flow and rain flow monitoring, coupled with questionable statistical analysis techniques, makes Nam Theun 2 "high risk for meeting its power generation predictions and for estimating potential project impacts." In addition, the project developers have undertaken no analysis of how global climate change might affect flows in the Theun River.

Professor Guy Lanza, who reviewed the water quality data for the project, found that the baseline water quality data provided for the project area is extremely limited.¹⁶ The data is not sufficient for estimating water quality changes in general, or for accurately calibrating water quality models. Specifically, the lack of adequate data available for the project area prohibits accurate predictions of the water quantity and quality changes that will occur in the proposed Nakai Reservoir, as well as in the Nam Theun, Nam Kading, Xe Bang Fai, Nam Kathang, and Nam Phit rivers.

One of the major concerns is the impact of the Nam Theun 2 dam on the fisheries of the Nam Theun, Mekong and Xe Bang Fai rivers, which sustain the livelihoods of more than one million people in central Laos. The official prediction of fisheries impacts for the downstream rivers is based on only three field surveys, all conducted during the dry season. As a result, fish species present in the Xe Bang Fai are likely underestimated and no study of fish migrations in either the Nam Theun or Xe Bang Fai river basins has been undertaken. The environmental assessment also ignores the importance of other aquatic organisms in the riverine ecology and food chain, and therefore fails to consider the implications of the loss of these resources for the food security and livelihoods of the people of the Xe Bang Fai basin. Baseline studies on existing livelihoods of communities living along the Xe Bang Fai will only be completed after project approval. The measures proposed by NTPC to mitigate and/or compensate villagers for the impacts described above appear to be, in many cases, misguided, untested or inadequate.¹⁷

Downstream of the dam on the Theun River, NTPC has guaranteed a minimum release of only 2 cu m/sec, a fraction of the water volume naturally available in the Nam Theun.¹⁸ This figure was selected based on financial considerations before a riparian release study was even conducted. This could not possibly be considered sufficient to maintain downstream ecosystem integrity as recommended by the WCD. In fact, the Nam Theun 2 Social Development Plan admits, "it is assumed that most of the current fish population will disappear, due to the changes

¹⁴ Technical reviews available at: <http://www.irn.org/programs/mekong/namtheun.html>

¹⁵ Peter Willing and Karla Knoop, "Review of Hydrology Component Of Environmental Assessment and Management Plan (EAMP) For Proposed Nam Theun 2 Hydropower Project," January 20, 2005. Available at www.irn.org/prorams/mekong/namtheun.html.

¹⁶ Professor Guy Lanza, PhD, "Review of the Water Quality Assessment (EAMP), Proposed Nam Theun 2 Hydroelectric Project," February 2005. Available at: www.irn.org/prorams/mekong/namtheun.html.

¹⁷ David Blake, "A Review of the Nam Theun 2 Environmental Assessment and Management Plan as it pertains to impacts on Xe Bang Fai fisheries," January 2005; and David 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: www.irn.org/prorams/mekong/namtheun.html.

¹⁸ According to latest draft of the EAMP, average discharges in the Nam Theun at the dam site range from a low of 31.9m³/sec in the dry season to a high of 734 m³/sec in the wet season (Nam Theun 2, Environmental Assessment and Management Plan, November 2004, Ch. 3, p. 45.)

in hydrology and hence in natural habitats.”¹⁹ It is not clear what compensation and mitigation measures will be available to which villagers in the Nam Theun downstream area.

Finally, the impoundment of the Nam Theun to create a massive reservoir will have significant impacts on fisheries on the Nakai Plateau. Many migratory and riverine fish species will be unable to thrive in the reservoir. However, the Social Development Plan presents the Nam Theun 2 reservoir fishery as one of four livelihood options for the 6,200 people displaced by the project, which is a “is a precarious gamble at best” given that the reservoir could be “largely devoid of life except for invasive aquatic weeds and small islands of survivor fish species near the tributary mouths.”²⁰

The paucity of research and analysis undertaken thus far makes it difficult to predict just how serious the impacts of the project on fisheries, and therefore on communities’ livelihoods, are likely to be. However, using the impacts at Theun-Hinboun as a guide, it can be assumed that Nam Theun 2’s impacts on fish populations and resource dependent communities are likely to be severe. The mitigation and compensation options for displaced and downstream villagers – from reservoir fisheries to aquaculture to community-based production forestry – are largely untested and have a high risk of failure.²¹ There are no contingency plans or guarantees for communities if these proposed livelihood measures fail.

Strategic Priority 5 – RECOGNISING ENTITLEMENTS AND SHARING BENEFITS

The WCD states that the risks for all people affected by the project should be assessed prior to project approval. The risks for the thousands of people living along the Xe Bang Fai who are expected to lose their fisheries and other livelihood sources has not been calculated as part of the project’s risk assessment. The WCD also requires that all adversely affected people negotiate formal and legally enforceable agreements guaranteeing their rights. This has never occurred for Nam Theun 2, and the concept of a legally enforceable mitigation agreement between affected peoples and project developers is virtually unheard of in Laos.

Furthermore, there are no independent organizations in Laos that are able to monitor the project and the commitments made by the GoL and NTPC if the project goes forward. The legal system is not sufficiently developed to provide possible remedies for affected people should the commitments made by NTPC and the GoL fail to materialize. The only avenues for independent monitoring are through international NGOs or other observers based outside the country, a poor and unacceptable substitute for local civil society groups and community-based monitors.

Strategic Priority 6 – ENSURING COMPLIANCE

During project preparation, the World Bank has been unable to ensure compliance from the Lao government on key issues such as logging. Despite World Bank stipulations to the contrary, the Nakai Plateau has been heavily logged, and logging has even occurred in the community forestry areas designated for the resettled communities. If the World Bank is unable to ensure compliance with conditionalities imposed prior to project approval, it is difficult to see how the Bank will be able to ensure compliance once money and guarantees have been disbursed and the project is under construction.

¹⁹ Nam Theun 2 Social Development Plan Addendum, January 2005, Vol. 3, Ch. 1, p. 6.

²⁰ Eric Theiss, “Reservoir Fisheries Predictions for the Nam Theun 2 Hydroelectric Project,” Sustainable Environment Foundation, February 2005. Available at www.irn.org/prorams/mekong/namtheun.html.

²¹ For more information, see Nam Theun 2 independent technical reviews available at www.irn.org/prorams/mekong/namtheun.html.

While the Concession Agreement outlines the GoL's and NTPC's obligations for social and environmental mitigation measures and some performance bonds have been proposed, there is no independent legal system in Laos through which these commitments to affected communities can be upheld. Based on past performance, serious doubts persist about the GoL's commitment to meet these obligations or other conditions imposed by the World Bank. Recent World Bank, International Monetary Fund, and ADB reviews have documented the GoL's commitment and capacity failures leading to missed reform targets and unfulfilled commitments.²² There is no indication that World Bank loan disbursements or guarantee enforcement for Nam Theun 2 will be linked to fulfillment of GoL and NTPC obligations.

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²² See, for example, World Bank Operations Evaluations Department, *Project Performance Re-Assessment Report, Lao PDR, Second Structural Adjustment Credit*, June 24, 2004; International Monetary Fund, *Staff Report for the 2004 Article IV Consultation*, November 17, 2004; Asian Development Bank, *Technical Assistance to the Lao PDR for Preparing the GMS: Nam Theun 2 Hydropower Development Project*, November 2003; IMF Fiscal Affairs Department, *Lao PDR Public Expenditure Management Reform*, 2003; and World Bank, Asian Development Bank, IMF, *Lao PDR Public Expenditure Review*, 2002.