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### **1. Lower Sesan 2 EIA Review**

The NGO Forum on Cambodia in cooperation with an international expert has reviewed the Environmental Impact Assessment (EIA) for Feasibility Study of Lower Sesan 2 Hydropower Project, Stung Treng province, Cambodia, which was prepared by Key Consultants Cambodia (KCC) with Power Engineering Consulting Joint Stock Company 1 – Vietnam, in October 2008.

The purpose of this review is to provide comments on the adequacy of the EIA for decision making by the Ministry of Environment (MoE) as well as the Electricity Authority of Cambodia (EAC), Ministry of Industry, Mines and Energy (MIME), and Ministry of Economics and Finance (MEF), and Ministry of Water Resources and Meteorology (MoWRAM) the lead agencies responsible for EIA standards and approval, project licensing, project oversight, project performance, and overall compliance with Cambodian law. This review is not intended to be exhaustive but rather is designed to flag key deficiencies and issues concerning local communities living along the Sesan and Srepok rivers, as well as the broader economic and democratic interests of Cambodian consumers and citizens.

### **2. Project Description**

The Lower Sesan 2 hydro dam is proposed for construction on the Sesan River about 25 kilometres upstream from Stung Treng town, and about 1.5 kilometres downstream of the confluence of the Sesan and Srepok rivers. Both rivers originate

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in Vietnam's central highlands then flow through Stung Treng and Ratanakiri (and Mondulakiri) provinces in northeast Cambodia, which makes hydropower development along these two Mekong tributaries an international and transboundary concern.

If built, the Lower Sesan 2 dam would flood 335 square kilometres of Cambodian territory, displace more than 1,000 families or 5,000 people, and affect dozens of villages along both rivers, upstream and downstream.

The design includes an installed generating capacity of about 400 MW although its firm (or reliable) generating capacity is projected to be only around 100 MW. The stated purpose of the project is to supply electricity to surrounding provinces and to Vietnam.

The project is expected to be built on a Build-Operate-Transfer basis and will require an investment of approximately US\$816 million. According to a 2007 Memorandum of Understanding [Annex 1A] between Cambodia's Ministry of Industry, Mines and Energy (MIME) and Electricity of Vietnam (EVN), EVN will conduct a feasibility study for the Lower Sesan 2 project, including an EIA, and submit it to MIME. EVN will also setup a company under Cambodian law tentatively called the "Lower Sesan 2 Power Company." EVN will then invest in the project through its Cambodian-based subsidiary following completion of the feasibility study (and EIA) in 2009. The project is expected to take four years to complete.

### **3. General Comments on EIA Process**

The main purpose of Environmental Impact Assessments and associated public consultation processes is to help government decision makers determine whether or not a proposed (typically large-scale) infrastructure investment is in the public interest. Determining what constitutes "public interest" is an important and often contentious exercise requiring broad-based public input because so many interests are typically affected. One of the best guiding principles should be to "do no harm." That is, where investments are expected to cause damages, project proponents are or should be obligated to mitigate or compensate for those damages out of the project proceeds/revenue stream. Projects must also be deemed legal, in that they meet the terms and standards set out in law. Under Cambodia's land law,

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for example, no individual can be deprived of their land unless it is deemed in the public interest. This law puts the onus on Lower Sesan 2 proponents – and by extension their EIA consultants and Cambodia’s regulatory authorities – to demonstrate that the proposed project serves the Cambodian public interest. Otherwise, the resettlement of Cambodian citizens to make way for the Lower Sesan 2 project could be deemed unlawful and give rise to legal action against the project owners and investors.

Typically the “public interest” associated with large-scale infrastructure investments is determined using a combination of cost-benefit analysis, environmental assessment, and public participation mechanisms. Government oversight is critical to ensure that the entire process is fair, open to public participation, transparent, and honest in its technical, economic, and environmental appraisal. A credible EIA process explicitly recognizes that there will be competing and often conflicting interests affected by the project but that final decisions must ultimately be based on respect for the rights of citizens most affected and the rule of law. Again, the principle of “do no harm” should always guide decision makers in their assessment of proposed investments.

Lower Sesan 2 proponents may view the EIA process as a costly and burdensome exercise thrust upon them, especially given that hydropower development is already a top priority for the Cambodian government, and that demand for electricity in Cambodia and Vietnam exceeds available supply. They may insist that their EIA meets the Ministry of Environment’s guidelines and that it is time the Cambodian government issued a license allowing construction of the Lower Sesan 2 dam without further delay.

What should matter in public policy decision making, however, is not so much what the project proponents feel entitled to but whether the proponents’ EIA passes the test of public scrutiny and acceptability. Does it satisfy the people whose lives and future prospects are directly threatened by the project? Or are there outstanding questions and concerns about the project’s impacts, the proposed operation, as well as mitigation and compensation measures, and the EIA process in general? It is within this context that the Lower Sesan 2 EIA must be judged.

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Cambodian authorities will appreciate that the Sesan 2 EIA has lacked public credibility from the outset due to Electricity of Vietnam's record of failure to compensate and/or mitigate damages caused within Cambodian territory by EVN hydro operations on the upper Sesan and Srepok rivers in Vietnam. Cambodians harmed by EVN-owned dams have waited more than a decade for compensation and mitigation measures, and are still waiting.

It is within this context of past failures that the Lower Sesan 2 EIA must ultimately be judged by Cambodian citizens, government authorities, and elected government representatives, before any further approvals are granted to the developers.

### **4. Specific Comments and Recommendations**

The NGO Forum on Cambodia has reviewed the Environmental Impact Assessment (EIA) for the Lower Sesan 2 Hydropower Project in Stung Treng province, which was prepared by Key Consultants Cambodia (KCC) for the Hanoi-based Power Engineering Consulting Joint Stock Company 1 (PECC-1) in October 2008. Based on our review of the EIA report and knowledge of EIA standards and practice in Cambodia, neighbouring Mekong countries, and internationally, we submit the following specific comments and recommendations:

- The EIA does not provide conclusive evidence that the project can profitably deliver electricity at lower prices than its competitors due to incomplete information about project costs and risks.
- The EIA fails to comply with draft EIA guidelines 6 and 10 as set out by Cambodia's Ministry of Environment (MoE).
- The EIA fails to present a policy or institutional or regulatory framework that would support the proponents' claims that compensation and mitigation will be effectively implemented.
- The EIA fails to include a review of less damaging power supply alternatives.
- The EIA provides no evidence that the Cambodian authorities will be adequately prepared to implement a project of this scale without victims or uncompensated damage.

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- The benefit/cost ratio for the project is presented without substantiation – this information must be disclosed in detail for public review and independent verification.
- No public consultations were done beyond the area that will be submerged or partially submerged by the project; this effectively excluded tens of thousands of project affected people from the EIA process.
- The mitigation plans and cost estimates have not been disclosed and verified by people in all dam-affected jurisdictions.
- MoE and Electricity Authority of Cambodia (EAC) should postpone all further approvals for Lower Sesan 2 until the EIA is revised and approved in all project affected jurisdictions within Cambodia.

Further work on the EIA and public consultation should, at a minimum, include:

- a national public consultation process designed to include all project affected jurisdictions in Cambodia, including representation from electricity consumers/ratepayers, competitive power suppliers, and potential investors in competitive alternatives.
- a draft contractual framework that outlines compensation standards and procedures for payment, grievances, etc.
- a detailed plan for implementation showing lines of accountability, enforcement and compliance mechanisms; and
- a policy and regulatory framework governing the Vietnamese-owned company that will be responsible for building and operating Lower Sesan 2 during the BOT contract period.

### 5. Key EIA Deficiencies

In this section we review in further detail a number of fundamental deficiencies in the Lower Sesan 2 EIA report as follows:

- **Inadequate public consultation**

The only valid test of EIA credibility is through public consultations. EIAs without public consultation are essentially a meaningless exercise. In this case, the Lower Sesan 2 EIA estimates that 30,000 people living upstream will be negatively affected by construction and operation of the Lower Sesan 2 dam, and tens of

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thousands more downstream. However, only a few hundred people were consulted, and without proper documentation. By any standard, this is unacceptable. Lower Sesan 2 will flood more than 300 square kilometres, affecting dozens of villages in many jurisdictions along the Sesan and Srepok rivers, and beyond to Tonle Sap and the Mekong delta. Without detailed input from affected people and elected representatives in the affected jurisdictions, project proponents cannot competently design mitigation and compensation measures. Nor can they present a realistic appraisal of project risks and costs to potential investors and electricity ratepayers. The EIA consultants appear to consider public consultations as a one-time token exercise to comply with the EIA guidelines, when it should be built-in as a permanent feature of an investment project of this magnitude.

- **No review of electricity supply alternatives**

The EIA report fails to provide a comparison and review of competitive electricity supply alternatives that could deliver an equivalent amount of reliable generating capacity within the next four years. The EIA tends to assume that since hydropower development is a top priority for the Cambodian government, Lower Sesan 2 proponents need not “compete” with other would-be suppliers for access to Cambodian ratepayers, or that no questions need be asked about the desirability of the project and its overall contribution to the Cambodian economy compared to alternatives. The EIA estimates resettlement and compensation costs for Lower Sesan 2 will cost more than US\$50 million; this amount of capital could purchase a 50-MW power plant that could be installed and operating within months, and running on any number of commercially available fuels, at least until Cambodia brings its natural gas onshore and finishes completion of its approved hydropower projects already under construction. Before the Cambodian government commits electricity ratepayers to the US\$816 million Sesan 2 dam, they have the right to know what their options are, including a combination of smaller scale hydro, solar facilities, and gas-fired units. The EIA fails to deliver this information.

Although the MoE’s draft guidelines do not require such a review of alternatives, a comparison of project costs and benefits with other power supply options is critical for determining whether the Lower Sesan 2 serves the “public interest.” Given its extraordinary capital requirements and extensive environmental damage for a

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modest 100 MW of reliable power output, Cambodians should know what their options are.

If the MoE will not insist upon such a review then it is entirely within the EAC's mandate to initiate such a comparison and review as part of its pre-licensing procedures. Both MoE and EAC have the authority to reject the project proposal as planned as unworkable/unfeasible, and to encourage the project developers to seek out less environmentally damaging, economically viable alternatives.

- **Inadequate information about mitigation costs**

One of the most important sections of the EIA report – cost estimates for resettlement, compensation, and mitigation is buried at the end of the report in Annex 6, and inaccurately labelled as “cost estimation for environmental mitigation and monitoring.” This 4-page cost estimate does not include a line by line explanation and breakdown of costs, which should be disclosed for public review. Without this information, the economic viability or desirability of the project cannot be verified.

The EIA report includes KCC's cost estimate for mitigating negative impacts as US\$127 million. It also includes an estimate from Vietnam based on past hydro projects as US\$78 million. The EIA report does not explain which estimate was used in the benefit-cost analysis or incorporated into the total investment cost.

- **No BOT contractual framework for allocating costs, risks, revenues, and responsibilities among relevant parties**

The most important documents for potential investors in a large-scale infrastructure project of this type with serious and long-term environmental effects are those that describe the contractual arrangements between the project owner, the Cambodian government, and other affected parties. These documents typically provide detailed information about the allocation of responsibilities, environmental liabilities, risks, and revenue. A full-scale public review of the Lower Sesan 2 BOT contractual documents is required prior to granting approval to build and operate. This should have been included in the EIA report for public review at the earliest stages of project appraisal. MoE and the Electricity Authority of Cambodia should jointly arrange such a comprehensive review before making any further

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arrangements with the project proponents in Vietnam. The question of whether this is a good deal for northeast Cambodians and Cambodia as a whole should be thoroughly and honestly reviewed by Cambodians for Cambodians.

- **Economic viability not proven/questionable costs in project budget**

The proponents' economic rationale for investing more than US\$800 million in a single power project has not been adequately explained. Certain costs, such as US\$30 million for reforestation and an undisclosed amount for compensating forest concession holders in the project area remain highly questionable as are the expected economic benefits for Cambodia. It's not clear why the EIA includes a budget of US\$5,325,000 for de-mining given that there is no known presence of unexploded ordinances and bombs in the project area. Note ordinary Cambodians will be expected to pay for these costs and have the right to know what they are and whether they are justifiable.

- **No regulatory framework for ensuring citizens rights are protected**

The EIA fails to include a regulatory framework for ensuring the rights of affected people are protected. It provides a list of the country's legislation but fails to say how the project owners will be held to account under these laws, and what mechanisms the citizens of Cambodia will have to seek redress for uncompensated damages. The EIA relies on statements of intent only, for example, that the responsible authorities will ensure that compensation "is correct and accepted by affected people." Clearly this is inadequate: regulatory mechanisms are required to prevent corruption and other abuses, and to build accountability into the project at every stage.

- **No evidence that the project owners and government authorities have the capacity to implement Lower Sesan 2 dam without significant damage to countless people's health, property, livelihoods, and economic future in northeast Cambodia.**

The EIA report clearly indicates there will be serious and long-term negative consequences for northeast Cambodia and tens of thousands of people if the project goes ahead as planned. Yet there is no indication in the EIA how local or national-level authorities will be prepared to handle expected problems: everything



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from conflicts over resources and resettlement pressures, to serious water quality-related illnesses, malnutrition, and the permanent loss of agricultural and fishing livelihoods. To date when confronted with flooding problems in Stung Treng province, officials simply declare a state of emergency and appeal for donor aid – as happened in early August when a hydro dam opened its flood gates in neighbouring Attapu province (Cambodia Daily, August 5, 2009).

The EIA report provides no evidence to suggest how the Cambodian authorities will be adequately prepared to handle a project with multiple and long-term negative impacts on public health, poverty, and the economic future of northeast Cambodia. The assumption that somehow the project owner will take responsibility is unrealistic. EVN and the Vietnamese authorities have done little or nothing to assist Cambodia in addressing negative impacts caused by hydro operations on shared Mekong tributaries in the last decade. Therefore, this responsibility will automatically fall to the Cambodian authorities. There is nothing in the EIA report to suggest the authorities are any better prepared to handle negative impacts than they were when the first large hydro dam was built on the Sesan River on the Vietnamese side in 1996. People affected by that dam have yet to receive any assistance or compensation from authorities on either side of the border. When they complain about dam-related impacts the response has ranged from inconclusive water quality testing, to a few promises of action followed by silence and inaction.

If indeed the MoE and its counterparts that makeup the resettlement committee is charged with protecting the immediate and long-term interests of Cambodians and the environmental resources upon which they depend, and not the interests of the project developers, then they should insist upon a higher quality of preparation for large-scale infrastructure projects, starting with a much more detailed appraisal of project costs in close collaboration with affected people and jurisdictions.

### **6. Review of Chapter VI: Environmental Impacts and Mitigation Measures**

In this section The NGO Forum on Cambodia (hereafter referred to as “NGOF”) reviews some of the EIA findings on major negative impacts associated with the Lower Sesan 2 project, and what can or cannot be done about them. (The EIA findings presented in italics are either direct quotes or paraphrased by NGOF.)

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NGOF: The EIA report indicates there are three separate estimates of environmental costs for Lower Sesan 2 – one by PECC1, one by KCC, and one based on current application in Vietnam. These cost estimates are not presented in detail in the EIA report. Nor is there an explanation of what benefits and costs were used to calculate project benefit-cost ratios. The EIA report simply presents a B/C ratio of 1.11 ranging to 1.20 – this means that for every \$100 invested in the project, the profit will be \$11 to \$20. A complete breakdown of the figures used to arrive at this conclusion is missing from the report. With more complete cost information and depending on whose estimate of costs is applied, the Benefit-Cost Ratio could well turn out to be negative, in which case the project would be uneconomic. It is essential that Cambodians are given the opportunity to review the proponents' analysis of benefits and costs in their entirety. The summary presented is an inadequate basis for public review and decision making.

NGOF: The EIA report presents a total cost for resettlement and environmental mitigation of approximately US\$125 million. This is an extraordinary amount of capital required just to compensate for damages caused by dam construction and operation; it is important to understand that this expenditure will not generate economic growth but merely attempt to restore livelihoods without any guaranteed benefits for affected people whatsoever. Cambodians should have the final say on this project once all costs are disclosed; less costly and more productive electricity investments should be explored as alternatives to Lower Sesan 2.

### **Flooded land and related conflicts**

*EIA: The land around the project is relatively flat thus making the proposed reservoir area very large. To minimize the significant environmental and social impacts the dam height should be minimized as far as possible. . . . Reasons for the final minimum height of the dam and why it cannot be lower will be provided and made publicly available. . . . There are two alternative dam sites and use of either site will cause significant environmental impacts.*

NGOF: The question whether or not huge tracts of land in northeast Cambodia, including parts of nationally-designated wildlife sanctuaries, should be submerged for the purpose of hydropower production in Stung Treng province should be openly debated and decided by elected district-level, provincial-level and national-

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level government representatives in a fully transparent and democratic manner, and with respect for the rights of indigenous people depending directly upon that land and related resources. It is not enough for the EIA to simply promise a public justification of the proponents' choice of design and dam site location.

Cambodians must have the opportunity to decide whether this project as proposed should go forward, and under what conditions and terms. Or they should have the opportunity to instruct the project developers to seek out less damaging alternative hydro sites, particularly in areas where the land is not so flat and the environmental damage is likely to be less extensive. We note that Cambodia's water resources policy favours development of all scales of hydro, not only large scale, and particularly projects that help reduce poverty in local communities. Alternative scales of hydro should be explored.

### **New resettlement areas**

*EIA: New resettlement areas [that don't conflict with existing land and forest concessions] shall be selected where impacts on the social and environmental resources in the area are minimized. Further consideration will be given to the proposed locations of the relocation areas in this respect, particularly where they encroach on ecologically sensitive areas and are near a protected area.*

NGOF: Clearly from this statement, the project owners and relevant government authorities have not yet worked out whether or not resettlement of affected people is even feasible, both in terms of environmental impacts, or the potential for restoring lost livelihoods after resettlement, and the cost of doing so. Without this detailed information, the economic feasibility of the project cannot be accurately assessed.

*EIA: Planning and budgeting for emergency aid and compensation will be provided to affected people [in the event of] a dam collapse caused by natural factors.*

The EIA report fails to include this as a project cost. Nor does it specify who will take responsibility for providing this aid and compensation, and which authorities will ultimately be responsible for ensuring that money goes directly to affected people. Without such detailed information, the economic feasibility of the project cannot be accurately assessed.

### **Fisheries**

*Either of the two alternative dam sites on the Sesan River will stop the fish migration in both rivers. . . . the feasibility study report for the dam design does not include any structures for fish passage or other methods to prevent the impact on the fish in Sesan and Srepok rivers. Even if there were structures proposed, the difference these would make to migrating fish is unknown.*

The EIA report correctly asserts that there are no known effective mitigation measures for undoing the damage to migratory fish once dams block migration routes.

*It is very likely that the dam will stop all these fish going up/down the rivers in the future impacting not only on the ecology of the rivers but on the diets and livelihoods of the 30,000 people or so living in villages on the rivers upstream of the dam site. It is estimated that each family may consume as much as US\$200 to 400 worth of fish each year.*

The EIA report estimates the loss for 30,000 people living upstream of the dam at US\$200 to 400 worth of fish each year. Assuming the average family size is five this works out to a total loss of US\$1.2 to 2.4 million per year. Note: this amount is very likely to be a significant underestimate of actual losses because this figure does not include the fish catch losses incurred by people downstream. The EIA report indicates that fisheries in the Mekong downstream, the Mekong delta in Vietnam as well as the Tonle Sap will be affected. Also note that

*Mitigation: Adequate annual compensation based on the fish lost will be provided to families along the Srepok and Sesan rivers which are predicted to be impacted by the loss of fish because about 95 percent of their daily protein compensation is depending on the fish from the rivers. The compensation may be given in terms of livelihood improvement initiatives but full annual compensation will be given by the project owner until it can be shown that any livelihood initiatives are being successful and are sustainable. This determination shall be made by an independent evaluator.*

NGOF: Before promising to bring in an independent evaluator to assess what is or is not “sustainable” and “successful,” Cambodians have the right to know how the

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Cambodian government intends to ensure that the project owners will pay “full annual compensation” for lost fishing income and catches. How will affected families be expected to present proof of lost fish catches or income? What happens if 100,000 people provide proof of losses but the company only budgeted for 30,000 people? Where is the legal and contractual framework to ensure that the project owners pay out compensation, and that all affected people are fairly compensated at full market value for their losses?

### **Mitigation for lost livelihoods**

*Agricultural support program shall be provided to the affected people with adequate period that can sustainable livelihood of the people. The programs include animal raising such as cattle, chicken, duck and other animals.*

NGOF: It is very easy for project proponents to recommend such “livelihood programs” but very difficult, costly and time-consuming to implement successfully, as experience at hydro dams in Lao PDR over the last decade indicates. We would have more confidence in such recommendations if the project owners could provide evidence that such programs have worked elsewhere in Cambodia or neighbouring countries. The EIA report provides no indication that the Cambodian authorities are prepared to oversee such programs. Will the BOT contracts require the Cambodian government to borrow funds from Western donor agencies to cover the costs of these programs – as is the case at the Nam Theun 2 hydro project in Lao PDR? If the government borrows funds to pay for mitigation programs, rather than have Electricity of Vietnam pay out of its project revenues, how will the government repay those funds? Why should these costs be borne by the Cambodian government and ultimately the Cambodian tax payer? This should all be publicly explained in Cambodia and subject to public approval prior to any further approvals of the Lower Sesan 2 project.

Without a contractual framework between the project owners and the government of Cambodia on compensation, affected people have little hope of ever seeing fair compensation, given the record of Electricity of Vietnam to date. Regulatory oversight procedures should be established and approved by government authorities, elected government representatives and affected people prior to any further approvals of the project.

### **Land conflict**

*EIA: The proposed reservoir will submerge five land concessions and one forest concession companies that already have a license and are in operation – for a total of 10,399.758 hectares. The project executive company together with MIME shall cooperate with responsible institutions to solve the land conflicts.*

NGOF: What is not clear is whether or not these concession holders are entitled to compensation and if so at what rate and terms? Without this information, and a legally binding contractual framework for paying out compensation, an accurate assessment of the project's economic viability cannot be made. Local people might reasonably argue that it is they who are entitled to compensation for the loss of land to the Sesan 2 reservoir, rather than the concession holders as it was once their land prior to having been converted into concessions. The EIA report fails to demonstrate that the authorities will be prepared to handle these issues with competence before final project approval.

### **Resettlement**

*EIA: Approximately 5,000 people or 1,000 households will lose everything to the dam's reservoir, including houses, gardens, rice fields, wells, schools, pagodas and other community facilities. In addition, the EIA says the proposed new resettlement areas “conflict with forest concessions” and wildlife habitat.*

*New resettlement sites are recommended and should be of an equivalent quality or better to what they have at present. The new resettlement sites shall be located where no adverse impacts on the natural and social resources occur.*

*Compensation for property should reflect the real costs in the local market and be provided before construction begins. Compensation and resettlement is to be carried out in accordance with a resettlement report prepared by the PECC-1 study team.*

The EIA report should clearly present what these “real costs” are – only a summary of cost estimates is provided without a breakdown or explanation is provided.

### **Water quality**

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*EIA: The poor quality of river water in construction period will affect downstream domestic water supply of Phluk community as well as the Stung Treng water supply. The communities in downstream will [have to] spend some more money for treating water, especially Stung Treng town water supply. The poor water quality will directly affect the health of people using Sesan river water without treatment, particularly in Phluk commune, where people are concerned about the health effects of using untreated water, such as skin and eye infections, diarrhea, etc.*

*Mitigation: Water quality examination upstream and downstream of the project site shall be done regularly to ensure the quality of water during construction does not seriously impact aquatic wildlife and human beings who use the Sesan River water downstream of the project.*

NGOF: Water quality testing does nothing to “ensure the quality of water” in the Sesan river. The EIA report should recommend that the project owners pay for the cost of water treatment downstream as well as health services, medicine etc in the event of illnesses related to dam construction and operation. These costs could negatively affect the project’s economics and should be assessed and incorporated into the project economic analysis prior to any final decision making.

### **Social and economic development**

*EIA: The people along Sesan and Srepok rivers are dependent on farming, fishing, collecting forest by-products and animal raising for their livelihoods. In the project operation period approximately 300,000 people will be affected by the loss of these resources.*

*Communities are expected to lose forest, agricultural products (rice, fruit trees, other crops and vegetation), jobs (boat operators), and decrease in fish production which is very important food (after rice) for the people in the project area as well as in Stung Treng and Ratanakiri province upstream and downstream of the dam site. Therefore the impact on the livelihoods of the people living upstream of the dam site is very significant. **Indeed from the KCC social survey in Feb 2008, 85 percent of people interviewed in the proposed project area indicated that they did not want the dam constructed as it would affect their lives so much [emphasis added].***

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*The project will also affect people's health (poor water quality), decreased fish production, destroyed vegetable gardens on river banks and shoreline, and sometimes killing animals and villagers because of changing flow regimes and sudden flooding caused by water releasing from dam during operation.*

*Mitigation measures: The project executive company will be responsible for compensation to the direct and indirect affected people upstream and downstream of the project area including communities along the both rivers in Ratanakiri province. The compensation shall include: new career capacity building, small business fund, agricultural system development programs and other community development funds. Annual compensation fund equivalent to the annual fish losses in both rivers (US\$2.56 million)*

NGOF: What about forest and forest by-product income losses, rice fields and other crop losses? What role, if any, will local people have in deciding what constitutes fair compensation? Who will oversee compensation arrangements independent of the project owners?

### **Water supply**

*EIA: The effect from power water quality or quantity will lead to economic loss for families due to the health risk and high cost of water supply. Mitigation measures include: treatment of the reservoir water, ensure adequate environmental flow is maintained downstream of the dam at all times.*

NGOF: Who decides what is appropriate, when and at what cost to whom? Again, no regulatory framework is presented for deciding on an appropriate environmental flow – this recommendation affects the dam's power output and therefore its economic viability. Without an assessment of different environmental flow scenarios and their impact on project revenue, the economic feasibility of Lower Sesan 2 cannot be confirmed.

### **Cumulative impacts**

*EIA: a total of five dams are in operation or under construction along the Sesan, and another three are in the planning stages for the Sesan River, including Sesan 2. Along Srepok 3 are in operation or under construction and another 5 are in the planning stages. ...fluctuation of water levels in the rivers is already happening*



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*with adverse affects on downstream ecology and people living near the rivers. All the hydro projects on the Sesan and Srepok are affecting livelihoods already. Cumulative impacts caused by the combination of hydro plants on both rivers include: health risks with poor water quality, significant decrease in fish production, loss of vegetable gardens, damaged property and loss of life of animals and villagers due to changing flow regimes and sudden flooding caused by water releases from dams and loss of forest areas used for forest by-product collection.*

*Mitigation measures: good cooperation between both governments to protect communities from any risks caused by projects upstream. Each project owner will be responsible for compensation in term of monetary and other livelihood support to affected peoples.*

NGOF: The governments of Cambodia and Vietnam have been promising “good cooperation” on mitigating dam damages in northeast Cambodia for more than a decade, without many positive results for affected villagers. Project approval based on assertions that project owners will be “responsible” would put too many people at risk.

### **Rural infrastructure**

NGOF: The EIA wrongly describes the replacement of rural infrastructure destroyed by the project as a project benefit. You cannot destroy people’s infrastructure and then call it a “benefit” when it is replaced. The cost of replacing destroyed assets and services should be part of the resettlement and compensation budget, and included as a cost not a benefit.

### **Additional budget questions**

NGOF: The EIA report does not specify how much money will be paid to the six concession companies and whether or not this money will come from the Cambodian government or project revenue.

NGOF: The EIA report fails to explain how the US\$30 million for “reforestation” will be allocated, where, for what purpose, and to whom. This information must be made public.

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NGOF: The EIA report estimates that up to \$2.5 million in cash must be paid out annually to 30,000 people living upstream for loss of fisheries. No reference is made to the tens of thousands of people downstream whose livelihoods are also at risk. The report says only that compensation must be paid out to these 30,000 people upstream until livelihood replacement programs are proven “successful” and “sustainable.” It’s not clear whether this figure for direct cash compensation is included in the estimate of resettlement and compensation costs. A complete line-by-line explanation of compensation payments and other program costs is required for public review. Project affected people and Cambodians in general have the right to know what compensation will be paid out to whom before any final decisions are made to build Lower Sesan 2.

### **7. Recommended Course of Action**

**Based on our review, we find the Lower Sesan 2 EIA to be an inadequate basis for sound investment decision making and therefore recommend that all further approvals and negotiations related to the Lower Sesan 2 project be suspended until such time as the proponents revise the EIA to the satisfaction of all project affected people in all affected jurisdictions or abandon the project in favour of less costly and risky electricity supply options.**

**End**