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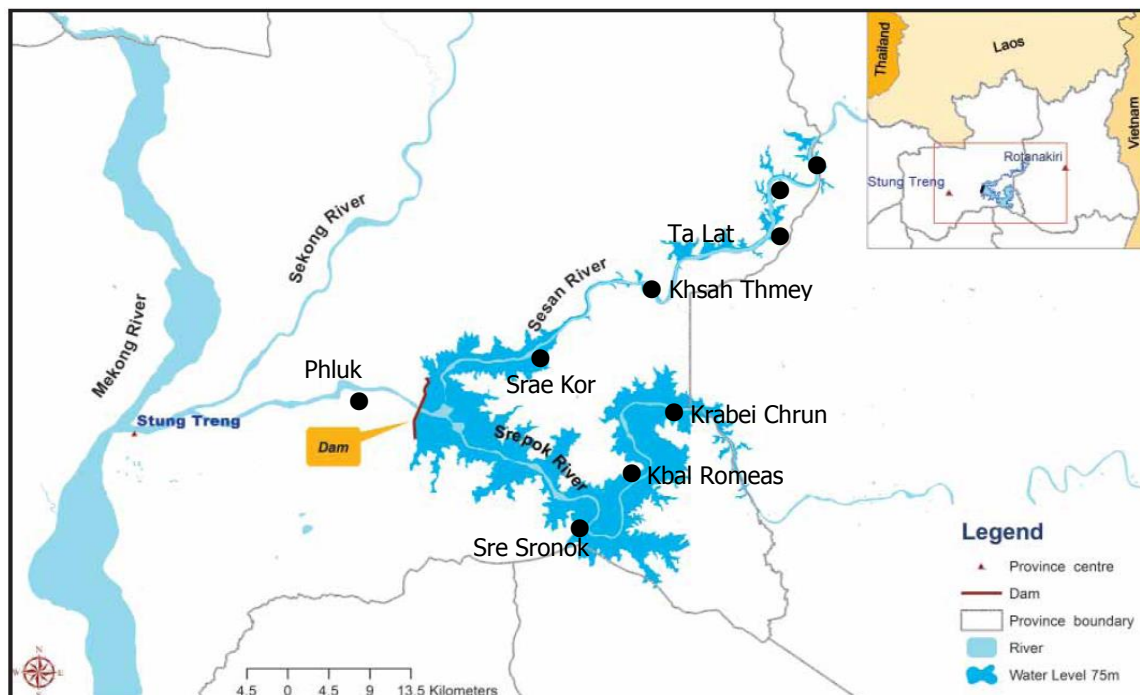
Fact Sheet

Lower Sesan 2 Hydropower Project, Northeastern Cambodia

The Lower Sesan 2 (LS2) Hydropower Project will be located on the Sesan River in Sesan District, Stung Treng Province, Cambodia, 1.5km downstream from its confluence with the Srepok River and 25km from where the two rivers meet the Mekong River mainstream. The project was approved by Cambodia's Council of Ministers in November 2012 and construction commenced in February 2014, despite its Environmental Impact Assessment (EIA) report failing to meet international best practice.

Although technically a tributary dam, LS2, if built, will have significant negative impacts on the fisheries and biodiversity of the entire Lower Mekong Basin. A 2012 study published in the *Proceedings of the National Academy of Sciences* points out that the dam will cause a 9.3% drop in fish stocks basin-wide, putting more than 50 fish species into extinction. Experts have also warned that LS2 will contribute to the changing of hydrology of the Mekong River and Tonle Sap Lake, as well as reducing sediment flows by approximately 6.0 to 8.0%. The dam will have the largest impact on fish biomass amongst planned tributary dams in the Lower Mekong Basin. Its impacts will be felt as far downstream as the Mekong Delta in Vietnam and as far upstream as Laos and Thailand.

Tens of thousands of villagers living along the Mekong River, as well as its tributaries, will experience negative impacts on their livelihoods, food security, and lives because of LS2. Recognizing the dam's adverse regional effects, the international donors of the Mekong River Commission (MRC) urged the Royal Government of Cambodia (RGC) in June 2013 to redesign the project and submit the project to MRC's prior consultation process.



Map of the LS2 reservoir and major villages in the river basin (Vichecka 2012)

Basic Features of LS2

Installed capacity: 400MW
Height: about 40m (from river bed)
Length: 8km
Reservoir size: 33,500ha
Estimated cost: 816 million USD

LS2 is a build-operate-transfer (BOT) project. The project's construction is expected to take five years. After 40 years of operation, its ownership will be transferred to RGC. According to the government's announcement, generated power will be sold to the Electricite du Cambodge (EDC), but it may still be exported to Vietnam.



Sesan River at Srae Kor Village in 2013

Developers: The Hydro Power Lower Sesan 2 Co. Ltd. , a joint venture between Cambodia's Royal Group (39%) and China's Hydrolancang International Energy, a subsidiary of Huaneng Group (51%) and EVN International Joint Stock Company (EVNI), a subsidiary of the Electricity of Vietnam (EVN) (10%)

Financers: The Hydro Power Lower Sesan 2 Company's capital (30%) and an undisclosed bank loan (70%), most likely from China.

Chronology of Events

June 2007: A Memorandum of Understanding (MOU) was signed between EVN and RGC's Ministry of Industry, Mines, and Energy (MIME) for EVN to undertake a feasibility study.

2008 to 2009: A feasibility study was conducted by an EVN subsidiary, the Power Engineering Consulting Joint-Stock Company No1 (PECC1).

January to June 2008: EIA was conducted by the Key Consultants Cambodia (KCC).

June 2010: The project's EIA was approved.

April 2011: The Cambodia-Vietnam Hydropower Company, a joint venture between the Royal Group (49%) and EVNI (51%), was established as the dam's developer. It was later registered as the Hydro Power Lower Sesan 2 Co. Ltd. (HPLS2) in 2011 by the Royal Group.

November 2012: LS2 was approved by the RGC Council of Ministers. A joint agreement for the dam's construction was signed between the Royal Group and Hydrolancang International Energy.

February 2013: The Law on Government Guarantee of Payment for the LS2 Dam was approved by Cambodia's National Assembly.

March: A local newspaper reported that Ang & Associates Lawyer Co. Ltd., a company owned by the Royal Group's Kith Meng, had begun clearing the dam's reservoir.

January 2014: The Regulation and Legal Procedure for Resolving the Compensation and Resettlement Policy was approved by the Ministry of Mines and Energy (MME, former MIME). The Compensation and Solution Policy for the Impact of the Lower Sesan 2 Project was released

byHPLS2.

February: Dam construction commenced.

March: The inter-ministerial Committee for Resolving Compensation for the Impact of LS2 (CSC) was established and approved by the Stung Treng Provincial Governor.

June-August: CRC organized meetings in each affected village to disclose the Compensation Policy to villagers. Many villagers disagreed with the compensation policy and claimed that the compensation rates are not adequate.

July: LS2 reportedly went through a significant redesign with changes to the structure and the height of the dam wall.

November: The asset survey for household's physical assets to calculate compensation started.

March 2015: Cambodian National Assembly's Environment Commission conducted an investigation visit to the dam construction site and Srekor Village, which will be inundated by LS2.

April: Construction of the resettlement site for Kbal Romeas Commune commenced. The site is located along National Road No.78 and about 20 km from their current villages.

June: CRC sent an official information letter to Kbal Romeas Commune Chief and Chrob and Sre Sronok village chiefs to proceed with the resettlement.

July: A group of the HPLS2 representatives and Stung Treng provincial governors visited Chrob and Sre Sronok villages to urge resettlement. Most of Chrob villagers started to move out.

July: Public Forum on LS2 dam was held at Stung Treng Town. Around 100 affected villagers visited the dam construction site and the resettlement site at National Road No.78. The villagers explained problems on the compensation and resettlement process and made requests to HPLS2 representatives, State Secretary of Ministry of Mines and Energy and the Stung Treng provincial governors to give guarantee for a house, to halt its construction and to conduct a research on upstream impacts.

Environmental and Social Impacts on Local Cambodian and Regional Communities

Located on very flat land, the 40m high LS2 will have a 33,500ha reservoir. According to the EIA, the project will displace 4,785 villagers in 1,059 households from seven villages in four communes. A report published in 2009 pointed out that upstream impacts might be much more serious than estimated in the EIA, with at least 78,000 villagers along the Sesan and Srepok Rivers upstream of LS2, as well as 87 villages along tributaries of the two rivers, losing access to migratory fish. The same research also found that over 22,000 villagers living downstream from LS2 would be negatively impacted as a result of changes in the river hydrology and water quality. In contrast to these assessments, the law approved by RGC in 2013 downplayed LS2's overall impacts, stating that fewer than 800 households in three communes would be relocated and compensated.

The EIA writes that six sites have been proposed to accommodate displaced villagers. Many of these resettlement villages, however, are located inside protected forests or land concession zones. RGC prepares resettlement sites, but there are concerns that the sites may be too far from where affected villagers currently live and may not be suitable for producing rice or vegetables.

Economic Feasibility

RGC expects to earn 29.5 million USD per year in tax revenue once LS2 starts to generate electricity. The dams' economic viability, however, has also been questioned, especially in light of increased occurrences of climate change-induced droughts and changes to flows due to operations of upstream dams. The Sesan River is already heavily dammed upstream in Vietnam and these dams are facing difficulty in producing enough electricity. A corollary to this is that LS2 will suffer from reduced water flows and will not be able to meet the planned 400MW capacity. In fact, the EIA report estimates that LS2's electricity generation will drop as low as to 100MW in the dry season, when Cambodia's energy demands are at its highest.

Lack of Consultation

Affected communities have not been adequately consulted with or given sufficient basic information on LS2 itself, negative impact, resettlement plans, or compensation programs. Villagers living downstream of LS2 have not been consulted with on resettlement and compensation issues during decision making process. They have been informed only after relevant plans or policies were approved. They have not been given any opportunities for discussion.

In November 2012 and February 2013, local authorities held a meeting in villages inside the reservoir area. According to villagers who attended, the authorities proposed new resettlement sites options, including a place along the Sekong River and explained that compensation would include land for house and agriculture. However, villagers complained that the information was still ambiguous and untrustworthy because detail information and written documents were not provided.



Srae Kor Village in 2013

In January 2014, the Compensation and Resettlement Policy was approved by MME. However, only local authorities and commune chiefs were provided with a single copy of the relevant documents and the documents were provided without adequate explanation. In June and July, the Implementation Committee organized a policy dissemination meeting at the affected villages. The policy document was handed to each participant, but they were informed that the policy could not be changed.

Having experienced adverse downstream impacts caused by Vietnam's hydropower dams for more than a decade, communities living along the Sesan and Srepok Rivers have been voicing opposition to LS2 for more than five years, while also asking the developers and RGC to host consultations to discuss a number of unsolved issues and consider more sustainable energy options to meet the country's electricity needs.

Recommendations

- 1) The developers and RGC should recognize LS2's severe impacts on the Mekong River's natural resources, in particular fish, and livelihoods and food security of local communities not only inside Cambodia, but also over the entire Mekong River Basin, and reconsider developing the project.

- 2) The MRC and RGC should recognize LS2's adverse impacts on the entire Mekong River Basin and consider the project not as a tributary dam but as equivalent to a mainstream dam, and submit it to MRC's prior consultation process.
- 3) LS2's negative impacts on the Mekong River's ecology as well as life, livelihoods, and culture of local communities, indigenous/minority groups in particular, who rely on the river's natural resources, should be more thoroughly assessed and weighed against the project's economic returns. These assessments should cover not only Cambodia but the entire Mekong River Basin.
- 4) Hydro Power Lower Sesan 2 Co., Ltd and RGC should publically confirm LS2's reported structural changes and conduct EIA based on the project's new design. New EIA should considerably expand its scope and assess LS2's impacts in the entire Mekong River Basin. All construction activities related to the dam should be suspended until at least new EIA is completed.
- 5) Sufficient information on LS2 and its resettlement and compensation plans should be disclosed to local communities who will be directly and indirectly affected by the project. They should be fully consulted and their views should be incorporated into final decisions.

References

- Baird, Ian G. 2009. *Best Practices in Compensation and Resettlement for Large Dams: The Case of the Planned Lower Sesan 2 Hydropower Project in Northeastern Cambodia*. Phnom Penh, Cambodia: Rivers Coalition Cambodia.
- Cambodia Daily. "Government Approves Dam on Lower Sesan," November 5, 2012. <http://www.cambodiadaily.com/news/government-approves-dam-on-lower-sesan-5159/>
- ". "Electricity Vietnam No Longer Involved in Lower Sesan 2 Dam," November 28, 2012. <http://www.cambodiadaily.com/news/electricity-vietnam-no-longer-involved-in-lower-sesan-2-dam-6363/>
- Global Times. "Cambodian, Chinese Firms to Jointly Develop Hydropower Plant," November 26, 2012. <http://www.globaltimes.cn/content/746551.shtml>
- Grimsditch, Marc. 2012. *3S Rivers Under Threat*. 3S Rivers Protection Network and International Rivers.
- International Rivers. "Cambodia's Lower Sesan 2 Dam's Draft Law Evades Costs and Concerns," Accessed on July 11, 2013. <http://www.internationalrivers.org/resources/cambodia%E2%80%99s-lower-sesan-2-dam%E2%80%99s-draft-law-evades-costs-and-concerns-7825>
- ". "Lower Sesan 2 Dam," Accessed on September 1, 2015. <http://www.internationalrivers.org/campaigns/lower-sesan-2-dam>
- International Water Power & Dam Construction. "China's Huaneng takes majority stake in Se San River II hydro project, Cambodia," February 24 2014. <http://www.waterpowermagazine.com/news/newschinas-huaneng-takes-majority-stake-in-se-san-river-ii-hydro-project-cambodia-4183165>
- Phnom Penh Post. "Lies, Threats at Dam Site," April 8, 2013. <http://www.phnompenhpost.com/national/lies-threats-dam-site>
- PECC1 & KCC. 2008. *Environmental Impact Assessment for Feasibility Study of Lower Sesan 2 Hydropower Project, Stung Treng Province, Cambodia*. Phnom Penh, Cambodia
- Vicheka S. 2012. *Lower Sesan 2 Hydropower Dam: Current Livelihoods of Local Communities (A Baseline Study)*. Phnom Penh, Cambodia: The NGO Forum of Cambodia.

Mekong Watch. *Interview at Affected Village in February 2015 Regarding Asset Measurement Survey Held on Lower Sesan 2 Dam*, June 15, 2015.

http://www.mekongwatch.org/PDF/LS2_FieldNoteRegardingAssetSurvey.pdf

------. *Lower Sesan 2 Dam Compensation and Resettlement Program Implementation Impacts on Indigenous Communities (Notes made from interviews in July 2015)*, November 5, 2015.

http://www.mekongwatch.org/PDF/LS2_NotesCompensationResettlement.pdf

Ziv, G., Baran, E., Nam, S., Rodríguez-Iturbe, I., and Levin, S. 2012. "Trading-off Fish Biodiversity, Food Security and Hydropower in the Mekong River Basin," *Proceedings of the National Academy of Sciences of the United States of America*.

<http://www.pnas.org/content/109/15/5609.full.pdf+html>

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