## Lower Sesan 2 dam Cambodia

**Sectors:** Hydroelectric Power Generation

#### On record

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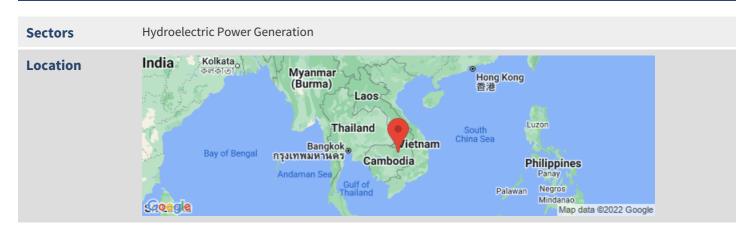
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#### **Project website**



### **About Lower Sesan 2 dam**

Located on the Sesan River, just below the confluence of the Srepok River in Cambodia's Stung Treng Province Province, the large 400MW, \$816 million Lower Sesan 2 hydropower dam will block two of the largest rivers in the Mekong River Basin, the Sesan and Srepok Rivers, forcing thousands of people to relocate. The Lower Sesan 2 dam will also severely diminish the fish stocks in the region, as well as others throughout the Mekong River Basin, near the Tonle Sap Lake in Central Cambodia, and the Mekong Delta in Vietnam. The proposed dam will also effect:

- Natural resources on river banks, along with natural vegetation, fish varieties, and fauna dependent on the rivers will be affected and lost;
- Social infrastructure, such as schools, roads, pagodas, health centres, etc., will be destroyed;
- Farmland will be flooded and lost;
- Water quality will be severely negatively affected;
- Water flow will forever be altered and fluctuate irregularly, interrupting people's livelihoods;
- Fish migration will be affected, and fish varieties will disappear;
- People's tradition and customs will be affected, and children's education will be interrupted;
- Communities are also concerned that insufficient compensation will be provided, and are worried sustaining their livelihoods.

### **Latest developments**

**Guarantee of Payments Agreement Signed for Lower Sesan 2** 

Feb 15 2013

### What must happen

Financiers should withdraw their investment in the Lower Sesan 2 project, which will degrade the Sesan and Srepok rivers and destroy the livelihoods of thousands of local Cambodian communities. Further they should:

- Respect the wishes of local communities who do not want the dam development to proceed.
- Uphold national laws of the Cambodian government and involved companies.
- Follow the procedures and recommendations as stated in the respected World Commission on Dams guidelines on dam approval processes, construction, and operation.

## **Impacts**

### Social and human rights impacts

There are several social concerns attached to this project:

- The dam is likely to flood seven villages in four communes. Approximately 4,574 people comprising 1,052 families will then have to be resettled into new locations.
- At least 38,675 people, including a large number of indigenous peoples, included in at least 86 villages located along the Sesan and Srepok Rivers and in the reservoir area would lose access to the vast majority of their fisheries resources due to the dam blocking fish migrations from the Mekong and Sekong Rivers up the Sesan and Srepok Rivers. In addition, at least 87 villages in Cambodia located along tributaries of these two rivers would also lose access to migratory fish. In total, at least 78,000 people living above the Sesan 2 dam site are expected to lose access to migratory fish
- 1,290 ha of agricultural land will be lost equalling approximately 25% of total agricultural land in the Sesan district.
- 3,000 workers are expected to be employed to build the dam and many of these people are likely to come from outside provinces which may lead to problems and impacts to communities and local cultures.
- If people lose their livelihood they may have to migrate outside of the community to work resulting in families and communities breaking down.
- The amount of useable or drinkable water will decline.
- Health problems may also arise. If a free flowing river suddenly becomes a stagnant reservoir this will signal a change in water
  quality and an increase in health problems: increase in mosquito breeding habitat, Malaria, Dengue Fever, toxic algae, skin
  rashes, respiratory problems, and other illnesses
- There will be a massive loss of the number and quantity of different fish species, as the dam will block fish passage to upstream Sesan and Srepok Rivers. People in Cambodia typically rely on fish as their food staple and main source of protein. If there are not sufficient fish in the rivers nutritional and other health issues may increase.

The list of human rights concers are as follows:

- The knowledge of communities who will be directly affected by the LS2 dam is very limited as they have had limited opportunity to be involved in the planning process.
- Community opposition to the project is evident. Indigenous community in Ratanakiri have sent statements and letters to local and national authorities, governing bodies, and the dam developers themselves.

- Independent research (refer Baird 2009) conducted with villages in the project area concluded that 100% of the people who participated in village meetings clearly indicated that they are opposed to the LS2 dam.
- There currently exists no clear information regarding resettlement and compensation plans for the LS2 dam and affected communities. According to a presentation given by PECC1 and KCC during 2008 (the company who conducted the environmental impact assessment), affected communities will be provided with a new wooden house, some farmland, and some infrastructure. It remains to be seen if the government or companies will meet their resettlement requirements. People are worried about impacts to their livelihoods, which are difficult to replace.
- Cambodia does not have a resettlement law. There is currently a draft version of the law but this has not yet been approved by the National Assembly indicating that there are no clear guidelines to follow. In this respect the policies of the company will likely be used rather than national guidelines meaning that resettlement is often unfair and compensation is not based on the full replacement value.
- Experience in Cambodia shows that most EIA reports are not public or performed in a transparent manner and it is difficult to know if an EIA has even been completed.

Some of the gender concerns are as follows:

- Responsibility to collect water and food preparation falls to the women in the household so if water quality decreases and becomes inadequate for consumption, health impacts will be experienced by women first.
- Also if there is less water in the river, or if the relocation areas are farther from the river, then women will have to travel further to collect water.
- Children are also at risk because they spend a lot of their time playing in, and beside the river.

### **Environmental and climate impacts**

There is a list of environmental concerns as well:

- The dam site is very flat and therefore the height of the dam will be 75 metres above sea level. The reservoir area of the dam will be extensive and also shallow and will flood 33,560ha of land.
- Much land will be lost when the reservoir floods:
  - 305km<sup>2</sup> of forests, which are used to collect non-timber forest products
  - o 7km of the National Road #78
  - o 7,086ha of forest in the new resettlement area
  - Since March 2013 there have been reports of a lot of illegal logging taking place outside of the dam's demarcation zones by Cambodia's Ang & Associates Lawyer Group (a company owned by Royal Group's Kith Meng). Logging was halted in late 2013 following the order of a government investigation, however, it is reported that the investigation never took place and illegal logging has since continued.
- Rare and endangered species of flora and fauna will be lost
- The river's water flow in terms of quantity and quality will forever be altered
- There will be a massive loss of the number and quantity of different fish species, as the dam will block fish passage to upstream Sesan and Srepok Rivers. Over 100 fish species are found in the river and 66% of these fish are migratory species therefore if the dam is built, most of these species will disappear from upstream locations. A 2012 study by the Proceedings of the National Academy of Science stated that the project would led to the destruction of 9.3% of the Mekong River Basin's fish biomass and led to the extinction of more than 50 fish species.
- The dam will block much needed sediment and nutrient flows to downstream water users, experts have estimated that between 6 to 8% of the Mekong River Basin's sediment flows would be blocked.

### Other impacts

After 25 to 30 years of operating a dam, the sediment loads in the reservoir will steadily build making the reservoir shallower. This will also reduce the capacity of the dam to produce electricity and reduce the financial viability of the dam and may cause financial

problems in the future.

Overall, if the Lower Sesan 2 project goes ahead, it will cause serious negative environmental, social, and health impacts.

The Lower Sesan 2 dam is a big project; 400MW and 75 metres high and estimated to cost USD816 million indicating that this is a developers dream, but independent research and lessons learned from other hydropower projects in the region show that this will become a community's nightmare.

### **Governance**

### Other applicable regulations

ANZ has a focus on corporate responsibility and has formed a Corporate Responsibility Committee. A strategic leadership body with Management Board mandate which performs an oversight and advisory role in achieving the Group's corporate responsibility agenda and priorities. ANZ (Australia) website states:

- "If a client or transaction is judged to have the potential to impact ANZ's reputation or involves material issues of concern to our stakeholders, the decision is escalated to ANZ senior management through avenues such as our Reputation Risk Committee", and.
- "ANZ has developed a series of social and environmental management policies which set out how ANZ will engage with customers in socially and environmentally sensitive sectors".

ANZ Royal's website states:

- "our aim is to create long-lasting and mutually beneficial partnerships with organisations that are making a valuable contribution to the development of Cambodia", and,
- which "...focuses on contributing to our [Cambodian] community".

Durig 2004, ANZ Group Managing Director Asia-Pacific, Mr Elmer Funke Kupper was quoted as saying "The joint venture also allows us to contribute to Cambodia as its economy moves toward higher growth and supports the emerging interest of Australian, New Zealand and Asian businesses in developing tourism, trade and investment links with Cambodia".

## **Brief history**

Cambodia and Vietnam initially started talking about the possibility of building this dam in August 2006. In 2007, a memorandum of understanding between Cambodia's Ministry of Industry, Mines and Energy and Electricity of Vietnam was signed, including the undertaking of an environmental impact assessment and a feasibility study for the Lower Sesan 2 project. Study on this dam began in 2008 by EVN with Key Consultants Cambodia (KCC) conducting the Environmental Impact Assessment, and Power Engineering Consulting Company 1 (PECC-1) responsible for developing the resettlement and compensation policy. In 2012, Cambodia's National Assembly approved the project for development. Construction began in early 2013 and is being built by the Hydropower Lower Sesan 2 Co., Ltd, which is owned by Cambodia's Royal Group and China's Hydrolancang International Energy Co., Ltd (90%) and Vietnam's Electricity of Vietnam (10%). Financing from the project is coming from company's capital (30%) and an undisclosed Chinese bank loan (70%), which is believed to be from China Development Bank. While ANZ Bank Cambodia is not financing the project, they are 45% owned by Cambodia's Royal Group.

## **Updates**

### **Guarantee of Payments Agreement Signed for Lower Sesan 2**

#### Feb 15 2013

On February 15th, Cambodia's National Assembly approved the Lower Sesan 2 Dam's Guarantee of Payments into law. This law offers government guarantees to the project developers in the event that Electricite du Cambodge fails for pay for electricity it promised to purchase or in case of a political force majeure.

### **Lower Sesan 2 Dam Approved**

#### Nov 2 2012

In November 2012, the Cambodian government approved the Lower Sesan 2 Dam as a joint venture between Cambodian, Chinese and Vietnamese investment.

### **Latest update**

#### May 26 2011

On May 19th, 2011, hundreds of villagers from communities along the Sesan river met in Ratanakkiri's Veun Sai district yesterday to protest the dam. Read more about the protests here.

Recently, on 24 April 2011, Cambodia's Royal group announced the plan to process with its Vietnamese partner on a US\$700 million hydroelectric plant along the Lower Sesan River. It is expected that commercial operations will begin in 2017. Read more.

In November 2010 the government of Cambodia approved the Environmental Impact Assessment (EIA) and negotiations are currently underway to agree a power purchasing agreement for the project. In January 2011, Vietnam's Ministry of Planning and Investment licensed Electricity of Vietnam (EVN) to make a US\$800 million investment into the project. Construction is expected to start later this year, in 2011. When completed, the power plant will have a capacity of 400 MW with an average output of 1,998 GWh per year.

## **Financiers**

### **Banks**

### **China Development Bank** China profile

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Uncategorised

According to the Law on Authorization of Payment Warranty of Royal Government of Cambodia for the Hydro Power Lower Sesan 2 Company, passed by the National Assembly in 2013, Cambodian Royal Group of Companies will be providing 30% of the financing for the dam and 70% will be provided in the form of a loan a Chinese bank, understood to be China Development Bank (Source: Phnom Pehn Post).

ANZ (Australia) has a joint venture, ANZ Royal Bank, with Cambodian-based Royal Group of Companies, one of the main backers of the Lower Sesan II dam. ANZ Royal is 55% owned by ANZ and 45% by the Royal Group of Companies. However nether ANZ nor ANZ Royal Bank are involved in financing the dam.

source: International rivers

# **Related companies**