

Comments to the Korean Foundation for Quality Regarding the Yunnan Gongguoqiao Hydropower Project

June 28, 2011

Project Overview:

- **Project Title:** Yunnan Gongguoqiao Hydropower Project
- **Status:** Under construction
- **Location:** Dalishu Village, Yunlong County, Dali Bai Autonomous Prefecture, Yunnan Province
- **Project Participants:**
 - Huaneng Lancang River Hydropower Co., Ltd. (China)
 - Vitol S.A. (Switzerland)
- **Claimed Total Installed Capacity:** 900 MW (4*225 MW)
- **Claimed Annual Emission Reductions:** 1,974,939 tCO₂e/year
- **Planned starting date of the first credit period:** January 1, 2012 or date of registration

The Yunnan Gongguoqiao Hydropower Project is the northernmost dam in an eight-dam cascade on the Lancang River, which emerges from the Tibetan Plateau and becomes the Mekong River in Southeast Asia, upon which millions of people depend. As of 2010, there are several dams in various stages of operation on the Lancang within Yunnan: Manwan, Dachaoshan, and Jinghong (completed); Xiaowan and Nuozhadu (underway); and Ganlanba, Mengsong, and Gongguoqiao (preliminary work). The dams that have already been constructed have undergone serious criticism,¹ and the Gongguoqiao project will likely come under the same kind of fire.

Summary of Concerns:

Gongguoqiao is unlikely to be a sustainable project, has poor additionality and feasibility arguments in the PDD, and does not meet the criteria of the World Commission on Dams, with which projects seeking approval by the Swiss government (a project participant) must comply. As part of a controversial cascade with serious and unresolved impacts to downstream countries, Gongguoqiao and other dams on the cascade should not be rewarded by the CDM with carbon credits.

1) Sustainable Development

1.1 Local benefits

According to Section A of the PDD, the project will “enhance the local electricity infrastructure to promote the local economic development.” This is highly unlikely since most of the electricity from the Lancang cascade would go into the China Southern Power Grid and feed the cities and industries in Guangdong Province, which has an enormous

¹ <http://www.internationalrivers.org/en/node/354>

energy market, greater than Yunnan Province. The central government has decreed that the bulk of the output of all Yunnan's dams will be sold to the rapidly industrializing eastern province of Guangdong, and the balance to neighboring Vietnam and Thailand. All this was laid out in Beijing's 10th Five Year Plan (2001-05). Additional targets were set for hydro exports to Vietnam and Thailand.²

1.2 Upstream impacts

While the PDD notes the possible environmental consequences of the dams to the upstream and downstream ecosystems under Section D, it ignores the issues of sedimentation and soil erosion, which have plagued other dams in this cascade. Sediment in the Lancang mainstream, already great, is likely to increase due to larger and more frequent landslides and other effects brought about by the dams and their reservoirs.³ The useful lifetime of all the dams in the cascade is likely to be much shorter than what has been proposed.

1.3 Downstream Impacts

The eight-dam cascade will drastically change the river's natural flood-drought cycle and block the transport of sediment, affecting ecosystems and the livelihoods of millions living downstream in Burma, Thailand, Laos, Cambodia and Vietnam. Impacts to water levels and fisheries have already been recorded along the Thai-Lao border.

Since the first dam was built and operated on the Lancang River, ecosystems in downstream areas particularly along Thai-Lao border have been drastically disturbed.⁴ This resulted in unusual water fluctuations, extreme flood and drought. Altered water levels created inevitable impacts on fish migration, fisheries, and livelihoods of riverine communities in the Lower Mekong. The Mekong fisheries provide between half and four-fifths of the animal protein that people eat and up to 90 percent of rural communities are involved in fishing activity. Globally the Mekong River basin is the largest inshore fishery in the world. It contributes about 2 percent of the global fish catch. Altering the flow of the Lancang-Mekong thus threatens the food security of millions of people downstream.

2) WCD Compliance

2.1 Public acceptance consultation

In order for hydropower projects over 20 MW to qualify for carbon credits within the EU, the project must be compliant with the World Commission on Dams. However, few projects in

² "Probe International Special Report: Skyscraper dams in Yunnan." Probe International Special Report, 12 May 2006. <http://www.probeinternational.org/written-probe-international/probe-international-special-report-skyscraper-dams-yunnan>

³ Roberts, T. "Downstream Ecological Implications of China's Lancang Hydropower and Mekong Navigation project," 1 January, 2011. <http://www.internationalrivers.org/en/node/1965>

⁴ Southeast Asia Rivers Network, "Downstream impacts of Hydropower and Development of an International River: A Case Study of Lancang-Mekong," November 2004. http://www.livingriversiam.org/mk/mek_down_impact_en.pdf

China ever meet the WCD criteria regarding demonstrating acceptance and having a consultation period during project preparation.

Section E of the PDD fails to mention any consultation period during the project preparation stage. Its description of the public participation process also fails to mention whether information about the project was released early to allow stakeholders to make informed decisions in their surveys. The total number of resettled people is not mentioned, and 102 out of the 299 total survey respondents were not resettled residents. Additionally, no grievance mechanism was mentioned for the project's relocation process. All this needs to be verified before the project can be considered for validation, and for meeting the CDM's sustainable development criteria.

3) Additionality

Under Section B.5, on page 18 of the PDD, only Dachaochan is listed for the common practice analysis. None of the other projects in the cascade, such as Jinghong, Xiaowan or Nuozhadu were mentioned, even though the 1,500 MW Jinghong is a later project with likely a later investment start date later than February 10, 2002 (the date of China's policy "Separate power plants," page 17 of the PDD). This would make Jinghong similar to the Gongguoqiao project, showing that dams such as Gongguoqiao are common practice in the area.

Gongguoqiao was under consideration as part of the entire cascade as early as 1992.⁵ Various reports have shown that the Manwan, Xiaowan, and Dachaochan have all been funded by State Energy Investment Corporation, the China Development Bank, Construction Bank of China, Industrial & Commercial Bank of China, and the Yunnan provincial government.⁶ It is highly unlikely that the project developers of Gongguoqiao would have proceeded with the project without the promise of financing from one of these institutions. Therefore, the project is unlikely to be additional.

4) Feasibility

According to a 2003 *Power in Asia* article, the Dongsong Electric Power Development Company signed an initial agreement with the local government authorities of Yunlong county in Yunnan province to do a joint investigation of the feasibility of the 750MW Gongguoqiao hydroelectric power project on the Lancang river, according to a Xinhua news agency report citing an official from the Yunlong Development Planning Commission. Given the difference between the original 750 MW and the 900 MW as described in the PDD, it is highly questionable that the results of the investment analysis and feasibility study on other aspects will still hold if the number is suddenly increased by 150 MW. Secondly, if the planned capacity was indeed 750 MW at the time when the FSR was approved, then the

⁵ "How China plans to harness the Lancang," *Power in Asia*, 27 July 1992.

⁶ Dore, J. and Yu, X (2004). "Yunnan Hydropower Expansion: Update on China's energy industry reforms and the Nu, Lancang and Jinsha hydropower dams." Chiang Mai University's Unit for Social and Environmental Research. <http://www.internationalrivers.org/en/node/1067>

decision made by the project owner to develop the project as a CDM project in August 2007 must be based on this number as well, rather than 900 MW.

5) Emissions Reductions

It is unclear that the dams on the Lancang River will significantly reduce emissions and displace fossil fuel plants. In 2006, due to China's water shortage and the low flows to Manwan and Dachaoshan, the Yunnan grid company that operates the dams (a subsidiary of China Southern Power Grid) had to cut back hydro exports to Guangdong by 200 MW while importing 300 MW of coal-fired power from neighboring Guizhou Province to meet demands within the province.⁷ The recent droughts in China and the resulting decrease in hydropower productivity shows that hydropower is not a dependable energy source in light of climate change's impacts on water availability and the frequency of droughts and floods.

In 2004, a Guangdong team of experts noted concerns regarding the "uncertainty and reliability issues associated with southwestern electricity imports such as seasonality of southwestern hydropower, compatibility with planned dispatch and Guangdong load curve, and increase in power demand within western areas."⁸ In particular, water shortages have "not been considered by central government planners when they decide how much Guangdong's demand will be set aside for southwestern hydro imports." Nowhere in the PDD (not even in the monitoring plan Section B.7.2) are mitigation measures mentioned to deal with this type of situation.

Conclusion

Gongguoqiao is unlikely to be a sustainable project, has poor additionality and feasibility arguments in the PDD, and does not meet the criteria of the World Commission on Dams. As part of a cascade that will seriously impact the water flow and food security of downstream countries in Southeast Asia, neither Gongguoqiao nor any of the projects within the cascade should be rewarded by the CDM with carbon credits.

For more information, contact:

Katy Yan, Climate Program Associate, katy@internationalrivers.org

Pianporn Deetes, Mekong Campaigner, pai@internationalrivers.org

⁷ *China Power News Network*, 31 March 2006. <http://www.probeinternational.org/written-probe-international/probe-international-special-report-skyscraper-dams-yunnan>

⁸ "Probe International Special Report: Skyscraper dams in Yunnan." Probe International Special Report, 12 May 2006. <http://www.probeinternational.org/written-probe-international/probe-international-special-report-skyscraper-dams-yunnan>