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## Mekong dying: China wants more than just electricity from dams



*What's left after a house collapses into the river due to erosion in Soc Trang Province, partly caused by dam construction on the Mekong River, July 2019.*

Photo by VnExpress/Thanh Nguyen.

**For China, upstream Mekong River dams are more than electricity generators; they can deal with water shortages and are a political pressure tool.**

Of the 19 hydropower projects it has built upstream the Mekong River, which also flows through Myanmar, Laos, Thailand, Cambodia and Vietnam, China has completed building 11 and put them into use.

But the northern neighbor of Vietnam does not build them all for electricity, Asia expert Brian Eyler told a conference held in Hanoi Tuesday to discuss the impacts of Chinese policies on the Mekong River.

"It has been found that China has wasted electricity generated at its hydropower projects along the Mekong River's upstream," said Eyler, director of the Asia Program at U.S.-based Stimson Center, a nonprofit, nonpartisan think tank which aims to enhance international peace and security through a combination of analysis and outreach.

In Yunnan, a province in southwestern China, due to a lack of power grid to transmit electricity to the east of the nation, electricity waste has been an issue for years, he said.

In his book "Last days of the Mighty Mekong" published in February this year, Eyler said Yunnan Province currently wastes much of its hydropower due to congestion in China's national grid and a political economy that still favors coal as a main source of power generation in coastal provinces.

To illustrate, between 2013 and 2015, wasted hydropower capacity in Yunnan Province rose tenfold, the book said.

"During 2014's monsoon season, because China's power grid could not absorb all hydropower generated from the battery of Yunnan's dams, hydropower firms like Hydrolancang were losing more than 100 million yuan (\$12 million) per day. In 2016, Yunnan's dams reportedly wasted 300 terawatt hours of electricity. In the same year, Thailand consumed half that amount," the book says.

Furthermore, *Reuters* had said in a report in March last year that grid deficiencies and weak local demand have meant that Yunnan's existing plants run at less than optimal levels.

The province's governor, Ruan Chengfa, told the wire service that it was "in pain" because of weak grid coverage. "We are not using green energy to the full, and we are suffering about 30 billion kilowatt-hours of wasted hydropower every year."

Then why does China want to build more dams along the Mekong River's upstream, where it is called Langcan River?

"I think the answer is that Beijing is storing water for future use," Eyler told the conference, held by Vietnam Institute for Economic and Policy Research (VEPR) under the University of Economics and Business of Vietnam National University Hanoi, and Friedrich Naumann Foundation (FNF).

He predicted that China could face water shortages in the next three decades because the ice fields on the Himalayas are melting faster due to global warming.

Even if carbon emissions are dramatically and rapidly cut and succeed in limiting global warming to 1.5 degrees Celcius, 36 percent of the glaciers along in the Hindu Kush and Himalaya range will have gone by 2100.

If emissions are not cut, the loss soars to two-thirds, according a report published in February by the Hindu Kush Himalaya Assessment, a long-term, integrated science-policy initiative coordinated by the International Center for Integrated Mountain Development (ICIMOD). The center aims to promote enabling policies, sustainable solutions and more robust regional cooperation in the Hindu Kush Himalaya (HKH) region to sustain mountain environments and livelihoods.

The glaciers are a critical water store for the 250 million people who live in the Hindu Kush-Himalaya (HKH) region, and 1.65 billion people rely on the rivers that flow from the peaks into India, Pakistan, China and other nations, the report said.

With the building of Mekong dams, China might also want to create a branch for water to flow from the Lancang River into the Yangtze River, Eyler said.

### **Dams as a pressure tool**

And China does not stop at the upstream developments. In downstream Mekong River, around 400 more hydropower projects are going to be built, including 300 in Laos, which will go up thanks to investments from China and Thailand.

Attending the conference, economist Pham Chi Lan said China was also using its dam projects to create political pressure on downstream countries like Vietnam, Laos and Cambodia.

Whatever China's motivations, the upstream dams it has built has had huge adverse impacts downstream, Eyler said.

Those dams hold back water and prevent it from flowing into downstream areas, thus reducing the amount of sediment and fish that are supposed to move from upstream to downstream every annual flood season.

Last summer, the Mekong Delta of Vietnam, which spreads over 40,577 square kilometers (over 10 million acres) and is currently home to 21.49 million people and is one of the largest and seemingly lowest delta plains in the world, was hit by drought that lasted months.

The annual flooding season usually hits the region in late July or early August and stays until November, blessing it with extraordinary fertility as it typically deposits silt from

upstream areas. When annual flooding does not happen or when it's late, cropping and fishing activities in the Mekong Delta are disrupted.

This summer, the region did not get any flooding until the middle of last month, because China insisted on holding back water in its Jinghong Dam, which Eyler said "was a bad decision."

A group of scientists from Dutch Utrecht University discovered recently that the Mekong Delta has an "extremely low mean elevation" of around 0.8 meters above sea level, which is dramatically lower than the 2.6 meters assumed earlier from NASA's Shuttle Radar Topography Missions data.

It estimated that at its current rate of subsidence the delta could see seawater covering the 0.8 meters within 57 years, requiring the relocation of over 12 million people living in areas that would be inundated by the sea following a rise of one meter.

The study also pointed an accusing finger at a series of dams along the Mekong River, saying that "while ongoing land subsidence increases the rate of relative sea level rise, the sediment load of the Mekong River to counterbalance relative sea-level rise with sediment accretion on the delta plain is dwindling due to upstream dam construction and decreased hurricane activity in the Mekong catchment."

A serious lack of sediment that naturally flows downstream along with saltwater intrusion is threatening the disappearance of Vietnam's Mekong Delta, Eyler said, estimating that for every meter of seawater rising, the delta will lose 30 percent of its soil.

## **Negotiations**

Eyler said it's critical for nations downstream the Mekong River to make China release water during the dry season in the region and that these nations should find ways to come up with a deal with Beijing on the matter.

He suggested that the Lancang-Mekong Cooperation Mechanism, a China-led initiative for cooperation on the Lancang-Mekong River, which was formed in 2015 to promote cooperation among all riparian countries, Cambodia, China, Laos, Myanmar, Thailand, and Vietnam, could be used to negotiate the circulation of water flowing from the upstream to the downstream of the river.

However, Eyler also cautioned that "Vietnam should be careful when dealing on water release with China because its Mekong Delta needs the annual flooding, while Laos does not have that demand."

Fighting for water security would need diplomatic efforts and it would not be easy, he said.

For downstream hydropower projects, Eyer suggested that Vietnam cooperates with Laos and Cambodia to reduce the number of dams as much as possible.

Regarding electricity supply and demand in the region, Eyer said Vietnam could become the main buyer and therefore could "place orders" for Laos and Cambodia to produce green energy, such as solar and wind power.

Electricity demand in Vietnam is likely to rise as manufacturing firms relocate from China, a trend that's been accelerated by the U.S.-China trade war, studies have said.

The Ministry of Industry and Trade said in July that Vietnam was planning to import electricity to overcome the imminent electricity shortage caused by delays in building new power plants.

Since electricity consumption will continue to increase while water, coal and gas available for producing power are expected to decrease, there is a risk of a shortage from 2020 onwards. The shortage is estimated to be 6.6 billion kWh in 2021, nearly 10 billion kWh in 2022 and 15 billion kWh in 2023, the ministry said.

*Viet Anh, Minh Nga*