

Laos' Xekaman 3 Dam Break Shuts Off Power to Vietnam

2016.12.22



This image shows the Xekaman 3 dam after electrical production was shut down because of a break in the penstock.

A break in a critical waterway shut down a hydro-electric dam in southern Laos and raised questions about the quality of construction at the facility that sends most of the power it generates to Vietnam.

While officials said the Dec. 16 break in the Xekaman 3 facility's penstock posed no threat to people living downstream, it marked the second breakdown in the tunnel that channels water to the power turbine, RFA's Lao Service has learned.

"The broken portion of the pipe is about 100 meters from the power house," said an official who spoke on condition of anonymity. "Rocks and mud flowed into the power house."

According to the official, the damage is extensive as the power house and its equipment were inundated.

"The dam is no longer operational," the official told RFA's Lao Service. "Power production is stopped."

While the break forced the six-year-old dam to go offline, the official said villagers living downstream were safe.

The dam lies on Nam Pagnou River, a tributary of the Xekaman River near the Village of Dak Yrang, in the Sekong Province's Dakcheung district.

"They turned off the pipe quickly," he said. "The village below the dam is safe and there are no injuries and casualties, but all the company's equipment suffered a lot of damage."

Phetsamone Phonepaseut, acting head of the energy and mining department of the Sekong Province, told the *Lao Economy Daily* that the break occurred around 8:45 a.m. on Dec. 16, causing a lot of damage to equipment and the road near the dam.

Penstock problems were known

While the break shut down Xekaman 3 this month, a similar break also shut the dam down in 2015, according to an engineering paper examining the last year's problem.

The penstock was built on the location of an ancient landslide that was stable until construction of the dam destabilized the rock, according to the engineering study presented at the International Society for Rock Mechanics' 2015 Vietrock workshop.

“[A]fter the excavation of the cut slope upstream of the power house [was] completed, the ancient landslide reactivated, destroying the penstock, so the electricity generation has to be stopped, causing economic loss for the owner,” the study found.

According to the study prepared by Song Da consulting, the ancient landslide is unlikely to stop moving, and it appeared to blame the 2015 break on poor engineering.

“It is necessary to prompt an outdated lesson, but [one] often being violated in Vietnam, this is the protective measures of the cut slope were not constructed on time, causing serious consequences, particular during the rainy season,” wrote the study’s authors, Bui Khoi Hung and Dao Manh Tung.

While the authors recommended a complete redesign of the penstock, remedial measures designed to monitor and compensate for the ancient landslide’s continual movement were implemented, according to the study.

“These measures diminish the rate of displacement but it is difficult to stop completely the displacement of the landslide,” the authors wrote.

‘There is no standard of construction in Laos’

The break spurred many local people to question the quality of the construction of the facility on their Facebook pages.

“There is no standard of construction in Laos. See what happened?” Phet CK posted on his Facebook feed. “It was likely that they built the dam, then they inspected it themselves.”

Another Facebook user, Nan Leuanglitthidet wrote: “The construction is not up to standard. It happened because there was no real inspection. The authorities should punish the builder and the field engineers.”

According to the Ministry of Energy and Mines website, the 250 megawatt Xekaman 3 started operations in 2010. The state-owned power company Electricite du Laos owns 15 percent of the facility and the Vietnam-based Vietnam-Lao Power Company owns 85 percent, according to the ministry’s website and a database maintained by the environmental group International Rivers.

About 90 percent of the electricity produced by the dam is exported to Vietnam while 10 percent is used locally.

Laos and many other Asian countries are on a dam-building spree as they try to harness the power of the Mekong and other rivers. The Lao government sees power generation as a way to bootstrap the country's economy, and has a goal of becoming the “battery of Asia.”

Reported by Lanxang for RFA's Lao Service. Translated by Max Avary. Written in English by Brooks Boliek.