



Community rights changing to access to water resources in the downstream of the nam lik 1-2 dam, fuang District of Vientiane province, Lao PDR

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Abstract

In the Lao PDR, a variety of activities alter the rights to utilize water resources. There are four main reasons why the rights of the community to access water resources downstream of the Nam Lik 1-2 Dam in the Fuang District of Vientiane Province can change. Such change caused by the construction and operation of the Nam Lik 1-2 dam in Fuang district's Naxaeng village, the relocation of those impacted by the Nam Ngum 2 dam from Xaysomboun province to Phonsavath village in Fuang district is the second factor, along with the community's overall growth, growth of tourist destinations along the Lik River, including restaurants, homestays, bamboo boats, resorts, and tourism boats close to the villages of Muangfuang, Sammouan, Kaengxieng, and Naxaeng.

Keywords: Changing, community rights, water resource, Nam Lik 1-2 dam

Introduction

of seven villages: Naxaeng, Khoneluang, Pakngoua, Sisaath, Samouan, Kaengxieng, and Muangfuang Villages. This is expected to have a total population of not less than 5000 people. The community has a way of life with farmers such as rice farming and animal husbandry, including relying on natural resources such as fishing, shrimp, snails, aquatic animals, and other aquatic plants such as vegetables along the river for consumption and goods, together with harvesting natural resources that are forest products. Fish, shrimp, shellfish, crabs, aquatic animals, and other aquatic plants are also called water resources, as defined in the Law on Water and Water Resources, 2017, Article 2.

Access to water resources of the community living along the banks of the Lik River in the Fuang district is considered a basic right. However, the right to access the water resources of the communities living along the banks of Nam Lik in Fuang District, Vientiane Province, was disputed when the Nam Lik 1-2 hydroelectric dam was developed at the north point of Naxaeng Village, which has a large water storage basin to be able to produce 100 megawatts per hour of electricity and started producing electricity in 2010. The impoundment of the dam causes the amount of water downstream of the dam to change, such as the amount of water increasing in the dry season, the flow of water being faster, and there are some dry days due to the closing of the dam's water gate, etc. The people downstream of the dam noted that the increase and decrease of the abnormal amount of water has a direct impact on the fishing and other aquatic animals of the community and may cause some fish species to decrease in number or be more difficult to find.

Methodology

The study is carried out as a qualitative study with the study of both doctrinal legal research and empirical study. The study of the contents of laws, regulations, concession contracts, and reports on the impact of the Nam Lik 1-2 hydroelectric dam will be used to help design interview questions and use them in analysis, comparing them with the information obtained from the interviews (field data). Field information was obtained from interviews with people

in 7 villages that live downstream of the Nam Lik 1-2 hydroelectric dam in Fuang District, Vientiane Province. In addition, this study also uses village education methods (Xaobaan research) by having the people in the community conduct the study themselves, such as drawing a diagram (resource mapping) of the water resources that they have access to in the past and now, including telling stories (storytelling) caused by changes in the right to use water resources, with the researcher as a facilitator in various aspects, such as providing large papers, asking questions, helping to record messages, and other facilities.

Results and discussion

The results of the study found that the change in the community's right to access water resources downstream of the Nam Lik 1-2 hydroelectric dam in Fuang District, Vientiane Province, was directly related to four causes: the development of the Nam Lik 1-2 hydroelectric dam; the increase in population in the community, especially the arrival of people from Phonsavat village who were relocated from Nam Ngum 2 hydroelectric dam; the development of tourism; and unsustainable fishing.

1. Development of Nam Lik 1-2 dam

Completed in 2010, the Nam Lik 1-2 hydropower dam has a 100-megawatt-hour output capacity. It is a major hydroelectric dam. The Lao PDR government and international investors, primarily from China, collaborated on the dam project. This power dam is situated in the Fuang District, Vientiane Province, near the top of Naxaeng Village, along the stream.

All of the respondents concurred that the communities downstream of the dam experienced both direct and indirect effects during construction. The project developer withheld water during construction to produce electricity, which gives the impression that the lower portion of the dam is dry and devoid of water. This has a direct influence on access to water resources, including animals, water, and water plants. According to the informant, the Nam Lik, 1-2 hydroelectric dam discharged water to generate electricity after it was built, which resulted in a significant rise in the amount of

water downstream of the dam. A few of them express the opinion that it rises by 50–100 cm, while others express the opinion that it rises by more than 100 cm. From the informant's perspective, the water that was released from the dam's reservoir in the beginning or between 2010 and 2015 smelled awful.

In addition, the majority of the informants stressed that bathing in lake water downstream of the dam is prohibited for five years because the released water soaks leaves and trees. As a result, many people avoid taking baths because they fear getting warts, abscesses, or itching, depending on who they are. When questioned about fishing at the time, the informant stated that it is challenging since it is impossible to get into the water. For example, they must descend to retrieve a gillnet or cast net that has become lodged in a tree or rock beneath the water. However, starting in 2015, people felt comfortable bathing or drawing up the water to cleanse themselves because the disagreeable odor and the skin-related side effects subsided gradually.

Access to water resources from the time the dam opens, and releases water has a direct impact on access to rocks, sand, aquatic animals, and various types of water plants. The informant gave access to rocks and sand, and the view before the release of water to generate electricity from the dam, the people living along the Nam Lik riverbanks could easily access the rocks and sand by taking long-tail boats or tractors to go along the beach with rocks and sand without any restrictions. On the other hand, people can bring rocks and sand to use in their construction projects, such as building houses, pouring floors, constructing pillars, and so on.

2. The community's population increasing

According to the informant, the rise in population within the community—which currently consists of seven villages with a combined total population of 6661 people, including 2249 women—is directly linked to the shift in the right to access water resources. This has significantly increased in comparison to the population a decade ago.

There is no doubt that access to natural resources has a direct impact on population growth since rising populations always result in rising demands for necessities of life. In addition, there is a problem and a barrier to the population growth of fish, aquatic animals, and other kinds of aquatic plants when there are favorable environmental conditions or scarce resources. According to informants from Khoneluang village, the current wave of migrants, which has surged dramatically over the past ten years, is making it harder for people to access water resources, particularly aquatic plants and animals. The majority of those who arrived have land or reside beside the river, making it challenging to access fish, aquatic life, and a variety of aquatic plants along the Nam Lik River.

The population growth will also have an immediate impact on the use of waterside land since more people will be using the Nam Lik riverbank to grow cereal crops, and using waterside land—a personal right—will have an impact on how easily people can access water resources. For instance, residents of the village in Fuang district express the opinion that, as things stand, residents of their village are unable to go down to the waterside where there is a concession or rent to make raft boats or restaurants to obtain vegetables, fish, or aquatic plants and animals.

The 16 villages that were impacted by the construction of the Nam Ngum 2 hydroelectric dam in Xaisombon province were divided up and moved to the area between Muangfuang, Sannouan, and Nawan Villages. There, they became one large village called Phonsawat Village, which has a population of over 6000. This population's arrival is thought to be significant because it has an impact on the host village's ability to utilize natural resources including land, water, and forests, both directly and indirectly. This is because the village's population is distributed over a sizable area of land, making access to water resources—particularly those related to fishing and aquatic animals—inevitably competitive, particularly when fishing under conditions that call for skill and knowledge. As a result, the conflict is seen as a competition for natural resources, particularly those related to fishing.

3. Development of tourism resources

The creation of tourism amenities along the river within the borders of the villages of Fuang, Sannouan, Kaengxieng, and Naxaeng; will take the form of leasing or concession of waterfront land for the construction of raft boats, guesthouses, hotels, and beach services both in the middle of the water and along the waterfront.

Since 2017, the problem of tourism around the canal has grown. In 2020 and 2021, the number of guesthouses and riverfront raft boats that cater to tourists will rise significantly. Right now, there might be 300 raft boats, and there will be more guesthouses. Muangfuang, Kaengxieng, Sannouan, and Naxaeng residents' access to water resources has been impacted both directly and indirectly by the rise in raft boats and guesthouses.

This is because the floating raft boats and guesthouses are located along the waterfront and close to the people's houses, which affects fishing, aquatic animals, and other aquatic plants, such as the people of Kaengxieng village, who think that the current fishing conditions for the people in the village are difficult because the area that is the fishing ground for the people is used by investors to make floating raft boats, and in the past, the owners of the floating raft boats did not allow fishing, aquatic plants, and other aquatic animals in the area of their floating raft boats. While the location of the boat is a place where people used to catch fish and aquatic animals, including other natural vegetables, now they cannot operate, it is considered to have a direct impact on the people's livelihood.

The influx of tourists has undoubtedly brought about many positive changes for the community, not the least of which is the employment of locals to staff the raft boats. This employment is regarded as a new profession in the area and includes housewives, receptionists, cleaners, and other service personnel.

4. Unsustainable fishing for fish and aquatic animals

Fishing and other aquatic animals are endangered in the villages below the Nam Lik Hydroelectric Dam in Fuang District, Vientiane Province. Whether residing in the seven villages or outside its municipal boundaries, people still engage in common behaviors such as using electric equipment, fishing nets as high as the water's depth, fish suction machines, and other common actions that show a lack of concern or fear of the law or regulation. Laws, including the Criminal Code, the Law on Aquatic Animals

and Wildlife, and the Law on Environmental Protection, are said to be broken by such behavior. For instance, Article 331 of the Criminal Code of 2017 states that anyone found to be hunting in violation of any hunting regulations, including hunting prohibited species, hunting pregnant animals, hunting during the season, hunting in prohibited areas, using prohibited tools, etc., faces a sentence of three months to two years in prison and a fine of three million to ten million kips. If you have formed a group, committed a crime, or caused damage of at least 50,000,000 kips, you will be sentenced to two to five years in jail and a fine that is double the amount of the damage.

When a hydroelectric dam closes, the water downstream of the land dam dries up until it turns to mud or the water level is low, drawing people from nearby villages in Fuang district or the community downstream to fish, fishing and aquatic life that poses a risk to sustainability occur frequently. The sustainability of aquatic plants and animals is threatened by the abundance of people, equipment, and access points to fish and other aquatic species. According to a Kaengxieng village source, the Nam Lik River level inside their hamlet's borders turned to mud during the hydropower dam's closing water. There would be less water in the coastal or water-rich areas, which would make it easier to fish for aquatic plants or animals. To collect fish and other aquatic animals in huge quantities, individuals from different villages in the Fuang district will travel there and use tools like cast nets, gillnets, scoop nets, plunge baskets, etc. Because there are many people there, including some who come with their families and bring rice and other food, the villagers refer to the arrival of fish and aquatic animals as a "fishing festival."

Conclusion

The building of the Nam Lik 1-2 hydroelectric dam in Naxaeng Village, which directly influences water use and water resources, is directly tied to changes in the community's right to access water resources downstream of the dam in Fuang District, Vientiane Province. The community's population is growing at a rapid rate, which has an impact on how water and water resources are used. The growth of riverbank tourism—raft boats, homestays, restaurants, and tourist service boats, among other things. These activities all have an impact on people's ability to use water resources downstream of the dam, both directly and indirectly.

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