


СОЦИАЛЬНО-ЭКОНОМИЧЕСКИЕ НАУКИ



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Gold or fish: behavior towards Nang river's natural resources of the Yao ethnic people in northern upland Vietnam

Abstract. This study examines both material and spiritual values of Nang River to Yao people in the Banh Trach community, Ba Be district, Bac Kan province as well as their behavior towards that natural resource. Study results showed that the Nang River runs through Banh Trach commune which has played an important role in the livelihoods of the Yao. However, the river's ecological environment has been severely degraded due to illegal gold mining. Local people after a long time «forgot» the river and destroyed it for economic benefit, now returned to protect it, especially when local government implemented a project called the Nang River hydropower. It is an interesting example of the human-nature relationship as well as the «awakening» of cultural values associated with environmental protection, stemming from tradition and followed the moral economy point of view. These intangible values are a legacy that can be applied as a basis for policy formulation, to aim at sustainable upland development and environmental protection for their ethnics.

Key words: Nang river, Yao people, Banh Trach commune, moral economy, political anthropology.

Bac Kan is a province located in the North eastern of upland Vietnam. It also a residence of 7 ethnic minorities (Tay, Nung, Kinh, Dao, Mong, Hoa and San Chay) in which the Yao account for 17.6% of the total population. There is also a dense network of rivers and streams in Bac Kan province, which includes the Nang river with a total length of 117km; 87km passes through the Bac Kan province and 25km through the Banh Trach commune [4]. The Nang River has played an important role in the Yao's traditions, from water sources, aquatic resources, cultivated land to entertainment and spirituality. However, that eco-

system is severely changed under the impact of environmental degradation at present, due to illegal gold and mineral mining activities for many years.

This research results show that the Yao in Banh Trach community has been involved in gold mining for a long time, especially during the 1986 - 2010 periods. However, more than 10 years later, in 2013, when the hydroelectric project of the Nang River running through the Banh Trach community, the Ba Be district, the Bac Kan province was approved, local people especially the Tay and Yao resisted strongly. This study stems from the question «why do people back to

protect a river that has been polluted by themselves?»). It aims to compare the historical context and behavior of Yao people toward the Nang river through history. From that, the reasons behind their behavior are highlighted: the return of Nang river cultural, spiritual, recreational, and historical values in the appropriate policy context.

1. *Research Approach and Methodology*

The river is not a new topic in Anthropology in particular and in Social Sciences in general. Most of these research access rivers from the perspective of political ecology, considers the natural environment and local populations are being affected by policies, but has rarely mentioned the opposite. So, in this article, the ethnic community is placed in the period of market economic transition, using two different theory approaches: moral economy and rational choice to highlight their decisive role: protect or destroy their natural resources.

The rational choice approach is that farmers are risk takers. Rationalism anthropologist argue that human behavior always has its purpose is to maximize self-benefits, minimize costs and take into account the probability of success. Applying this approach, Samuel Popkin in his book *The Rational Peasant* (1979) argued that peasants «are self-interested individuals» [6, p. 29], «often willing to bet on improvements» [6, p. 31]. Thus, when natural resources such as forest, fish and land have high prices, they are willing to sell them all regardless of future risks.

The moral economy approach argues that the foundation of economics is based on cultural, social, and religious values such as kindness, fairness... It is directly opposite to the rationalism argument as mentioned above. James Scott (1976) showed that the ethical principle of survival makes them more inclined to maintain their pre-capitalist economic model «as an institution to mitigate risks in a limited technical context and nature is erratic» [3, p. 9]. Accordingly, farmers always tend to avoid any behavior that could create risks in the future, pushing their economic status of below the threshold

of survival. For example, exhausting exploitation of resources can leave the next generation with nothing to survive, so long-term resource management and protection measures are followed by the community laws, rules and spiritual beliefs.

Applying both of these theoretical approaches in parallel, the article examines the relationship between the Nang River and livelihoods of the Yao in Banh Trach community, to find out their reasons behind the changes, from protect to destroy, then back to protect it. To answer this research purpose, I used ethnographic methodology, taking ethnographic fieldwork with participant observation as a base. My research was conducted for 2 years, from 2018 to 2020, which 3 times fieldwork each lasting for 2 months, a total of 6 months in the living with the Yao Na Coi village, Banh Trach commune, Ba Be district, Bac Kan province. Not just to observe the actions of Yao people, I also aimed to immerse in, work with, eat with, live with, and experience their life. Secondary documents at the local government level including reports of the Bac Kan Department of Natural Resources and Environment, annual statistical books, reports on socio-economic development... from 2010 to 2020 were also collected. Also, 40 recorded in-depth interviews with local people and hydropower project workers, 10 in-depth interviews with government officials in Bac Kan, Banh Trach People's Committee, and village manager were conducted. From the perspective of a Yao person that lives far from home, I tried to describe the picture in as realistically as possible.

2. *Fish – a river of everything*

The story begins in late 2011 when I returned to my hometown Bac Kan, after 17 years studying in the city. My family had moved to Hanoi since 1998, so there were few opportunities for me to visit the countryside. My father was born in Na Coi village, which located at an altitude of 700m above sea level. It is also the northern most top of Bac Kan, bordering Nguyen Binh commune in the Cao Bang province. The residents there are mostly indigenous Coin Yao peo-

ple with 63 households. In addition to Na Coi village, down to the south of Banh Trach commune is a market and one more old Coin Yao villages: Pan Han (51 households), Ban Lap village (49 households), Vang Khinh village (44 households), and a half of Na Noc village (23 households) are the Red Dao people who used to live in Cao Bang province, then emigrated to Banh Trach for over 40 years due to Vietnam-China border war. If the Yao are 9th in terms of population in Vietnam, then in Banh Trach they are second only after the Tay.

Road to Banh Trach, from the Ba Be coach station is about 30km, spreads from south to north, from plain to middle of the mountain, crossing the Nang River. Mr. P - my father's brother-in-law drove me on an old motorbike, crawled across a bamboo bridge. I looked down, surprised because of red-colored water, then asked him: «Why is the Nang River so dirty?» He said: «Because of gold mining. People here did it a lot, also our Yao. Now they were chased by police and ran to An Thang commune nearby». Then my uncle talked about how the Yao in Banh Trach came back and protected Nang river from the gold diggers. I felt very surprised: «You said they were gold miners before. Why did they change?» My uncle cheerfully told me: «It is illegal to dig for gold now».

Following the Yao, especially the old people, I collected their stories. Before 1986, the Nang River used to play a very important role in their life, especially the main source of fish in meals. Having a long time lived near a rich natural resource, the Yao in Banh Trach had built up their traditional knowledge of hunting and fish gathering. «The Nang river used to be very clean, we were able to bath and drink its water. There was also a lot of fish. Each time, we could get more than 10kg of big fish.» (Mr. H). Big and rare fish up to half of a meter long of king carps (*Spinibarbus denticulatus*) and spiny eels (*Mastacembelidae*) were regularly caught. If other ethnic groups have water ponds and rice fields to use as an al-

ternative fish source then the Yao people, especially Coin Yao in Na Coi used to do shifting cultivation with no water inside, so they are almost entirely dependent on the Nang river fish source. River fish took a central role in their daily meals. Nowadays, people in Banh Trach still answer that they prefer the Nang river fish even no though it no longer exists.

Depending on the species of fish, they had different methods such as using earthworm bait, cast net, luffa flower to catch frogs, or rice bran to lure shrimp into the cage... Besides, they also poisoned the fish by mixing chili, *Derris trifoliata* leaf and many other forest poison herbs then dropped into the water. Killed fish were floating all over the river, very easy to harvest. It is important to mention here that, the fishing time and scale were very sustainable with reproduction, development cycle of fish in the Nang River, was restricted by customary folklore like laws and rituals. Traditional laws are passed down from generations through verbal instruction without documentation, managed by village chiefs, clan chiefs, and shaman. For example, fish poisoning could not happen very often but only 3 times a year, in a certain period: from the second rain in summer to July lunar full moon; could not poison twice on the same river part. After the fishing season, from September to November is the reproduction period of many fish species, so these laws mean to keep the Nang River environment clean just in time for that.

Festivals and rituals related to the Nang River are also maintained by the Yao from generation to generation. For them, the most important annual festival was the Spring ceremony (*Tchau sun* in Yao language) - a start of cultivation season. Each house in Na Coi village prepared an offering tray of pork, *Chung* cake, colored paper, corn wine... and brought to the oldest stepped rice field. In that ritual, the shaman had to call the God of the Nang River, thank him for the supplement of water for the rice fields, fish for their meals, protect them from the flood. Old people in Na Coi village told: a

long time ago, their area was surrounded by dense mountains, forests, and hungry wild animals. The Nang River was their only transportation route. Therefore, the Nang river God became their protector of each boat trip, in addition to his supporting role of crops and fish productivity.

The sanctification of the Nang River is based on two basic concepts: gratitude to nature and the punishment of the supernatural if humans cause harm to the Nang River. Like the sustainable fishing mentioned above, Nang river sanctification helps to limit the exploitation of the Yao people's in a balanced and adequate level. In other words, it is a manifestation of the «safety» mindset. They fear that the loss of these resources will affect their future lives, pushing them into shortages of food, water and land... especially in a self-sufficient economy which highly dependent on nature. In terms of long-term food security, community laws and worship of Nang River could be said that always bring a guarantee of resources for the Yao in Banh Trach from generation to generation. Thus, no matter what form is organized, the traditional livelihood of the Yao are built and developed according to the principles of a moral economy.

3. Gold – a river of nothing

In 1986, Vietnam entered the Doi Moi period, by shifting from a centralized, cooperative economy to a new market economy. Free migration and hot economic development according to the market mechanism lead to many serious environmental problems like pollution, resources over-exploitation, especially forests and rivers. In the general loss of natural resources all over the country, the Nang River was no exception. Yao people's thoughts changed to follow the political economy perspective, made the sacredness of the Nang River reduced, paving the way for environmental degradation acts.

According to a report of the Center for Environmental Monitoring - Bac Kan Department of Natural Resources and Environment, the current Nang river water quality

is low and could not be used for eating, drinking, showering, just only irrigation, and transportation. Water index at some observation points shows a high concentration of heavy metals such as mercury (Hg), lead (Pb), arsenic (As)... because of long time gold mining. Through in-depth interviews, the picture of the early Doi Moi period was told very clearly: a flow of Kinh people from lowland to upland due to reclamation policies then stopped at the Nang River, Banh Trach commune because of the high gold density. Since Doi Moi, trading activities had been strengthened so local people could easily sell their agriculture products to these «gold thieves». The 1993 Land Law allows the Yao to own and trade land as a commodity good, then some fertile cultivation land across the riverbank had been sold to the thieves: «like an extra source of money with much higher price than selling agriculture products...» (Mr. P) The mining process is carried out with rudimentary tools like wooden cones, discarded pots, even mercury can only be stored in plastic bottles, bowls, glass cups... Miners directly mix mercury with raw gold by their hands without caring about the toxicity and without any labor protection gear. The waste after gold separation, including many heavy metals, was dumped directly into the river and causing serious environmental damage.

According to Nang river biodiversity statistics report, Bac Kan Department of Natural Resources and Environment, most of the fish there originated from the Ba Be lake downstream, which are hygienic and sensitive to water quality such as *Mastacembelus Armatus*, *Spinibarbus Denticulatus*, *C. Multitaeniatus* and species of mackerel (*Bagridae*) family... Therefore, when river water is polluted by gold mining, especially in the 1990-2010 period when gold mining activities in the upstream area took place continuously, the Nang River almost had no fish left. Along with the pollution of water flow due to gold mining, the Nang river fish source had declined sharply.

The population increase put more pressure on productive land, causing watershed

forest decline. Traditionally, a shifting rice field could be produced for 3-4 years, then fallow for 5-7 years, and then return for a crop rotation. However, with new hybrid crops like cassava and maize, one land piece could only be cultivated for 2 years. It means the need for land increased more than ever before, lead to watershed forests damage. Without them, flash floods occurred frequently and the Nang River water level could rise to 2.8m, causing inundation of some cultivated land and swept away many areas of crops [2]. The indiscriminate daily waste directly discharges into the Nang river, along with over exploitation of fish to sell to gold miners, made this abundant resource become depleted quickly.

Cultivation land is also seriously affected. Survey result showed that 46% of the Yao households in Na Coi and Na Noc village from 1986 to 2010 have sold their Nang riverbank land to gold thieves. The average sales of the land area are 200m² up to 1,000m²; mostly the fertile land along the river bank. Let's do a calculation that given each household sells at least 200m², these two villages alone have lost 4,600m², equivalent to 0.46 ha of agricultural land. Meanwhile, the total area of usable paddy fields in Banh Trach commune is only 119.39 ha [1]. So, the area of land degraded by gold exploitation in 2 villages only is significantly large compared to the total. Seriously dammed mining land takes decades to recover while land resources are not infinite and high population growth rate context. Some fallow gold mine squared 2 to 3 ha was fertile soil land along the river, now became barren and will take up to 20 years to recover.

To summary, livelihoods of the Yao in the study area, under the general development programs of Vietnam have completely transformed from self-sufficiency for consumption to market-oriented. Selling land, river fish, and agricultural products... in exchange for gold are clearly shows their rational thinking which not originated from the community, but from the outside context of marketisation and migration. Clearly, the

transition from moral to rational economy shows a profound transition of upland society, whereby the environmental sustainability are gradually broken.

4. «The war» to restore invisible values From returned gold miners...

The 1993 Law on Environmental Protection marked a shift in Vietnam Party and State awareness on environmental issues, but it did not have an impact on mountainous and remote ethnic areas. After 4 years, the Bac Kan People's Committee issued Decision 170/QD-UB/1997 on security and order management in mining areas - the first law to minimize the impact of gold mining activities there. Since then, the police of the Banh Trach commune have repeatedly searched for gold thieves but showed no results. The progress of illegal gold exploitation has even increased in the years 2000-2005 due to the construction of commune roads and Cho Ra coach station. In other words, although local authorities have introduced policies to limit environmental degradation, due to unfavorable natural conditions and lack of human resources, it was difficult to fully implement.

On a national scale, the 2005 - 2013 period was considered a deeply concerned time of environmental and resource issues. National Law on Environmental Protection 2005 issued by the National Assembly replaces the 1993 Law on Biodiversity. On that momentum, Bac Kan Provincial People's Committee also issued many regulations on environmental protection such as Directive 05/2006/CT-UBND on the implementation of Environmental Protection Law; Decision No.2693/2010/QD-UBND about the confiscation of special-use motorcycles and handling material shreds of evidence in illegal mining activities and administrative management in these land area; Decision No. 279/2013/QD-UBND regulating the responsibilities of local agencies, organizations, and units for violations of the Environmental protection law. Based on that, local government officials will have to be sanctioned along if the illegal exploitation of minerals and forest products occurs. Official

staff members of all government levels and functional agencies have to perform their mission of coordinating with local people to strictly protect the river environment. That is seen as a push to strongly promote the participation of grassroots government classes such as village head, youth union, farmer union...

However, real awareness and transformation began within communities where the old people were motivators. Mr. LVT, an elderly village official, retired when being interviewed told me that: «... Nang river is our symbol of the past. If the Nang river exists in our memory, they will know how to protect, and if not, they will destroy everything...» For them, the Nang River fish are not only food but also plays an important cultural and spiritual role, which is leisure in their free time after a long working day. Then, old people make use of every time of the day to tell stories and advise their children. Mr. B, a gold miner recalled that: «every time I come home, my mother would tell me to stop going out for gold. She complains about the lack of fish in the Nang River and she isn't strong enough to take fish out of our pond. At that time, it sounded so bad to me...» The elders even create a story of some person dying from drinking mercury poisoned river water in other gold mines like the An Thang commune (Pac Nam district, which borders Banh Trach commune) to «scare» their children and gold miners.

The culture practicing class such as shamans also plays an important role. Mr. LVT, a high-ranking monk in Khuoi Cha village, Phu Loc commune, Ba Be district was very often invited to Na Coi. Along with leading the ceremony, he often tells stories of spirits, ghosts of dead people, and God in the Nang River during these occasions. According to him, «ceremonies will be lost if people do not believe in it anymore» and the act of gold mining is «committing a serious sin» that makes God's angry. Thanks to his special role in the village, most of the advised people agreed to return home, including a shaman trainee who later became monk like him. Together with the old people, the monks' stories have affected

the perception of local youth, bringing about a remarkable effect.

On that momentum, in 2010-2013 periods, continuous annual activities such as celebrating the National Week of Water and Sanitation, World Environment Day, Campaign to make the world cleaner... were organized. Thus, the role of local people in protecting natural resources and the Nang River environment has been significantly promoted. In 2012, after a raid lasted more than two months and many drastic measures such as clearing, expelling the «gold thieves», burning all their camps, destroying all exploitation tools... mining activities in the Nang River area of Banh Trach commune was re-established. Many Yao gold miners in the past then became the leading nucleus in the anti-illegal gold mining movement, including Mr. S. He said: «Sometimes I have to run to the riverbank right after finishing my meal to check and caught a group of miners. Nobody knows them better than me, because I have done it before...» In 2014, Mr. S helped local officials detect a large illegal exploitation, handling many residual chemicals, seized 3 motorbikes, and fined 7 million VND thus he was awarded a certificate of merit from the Banh Trach commune Police Department.

Along with the efforts of local authorities and Yao people, illegal gold mining has been controlled. Obviously, in the complicated terrain geographical conditions and lack of human resources, local people's support is extremely important to thoroughly and effectively implement the proposed policies. Since 2013, when «gold thieves» were swept away from Banh Trach commune, the Nang river entered its stage of recovery. Each natural ecosystem is an open, self-balancing system, contains a great resistance to adverse conditions. In my last visit, the water was clean enough for people to bathe and wash, small fish and shrimp came back from the Ba Be lake to the Banh Trach commune.

To Nang River hydropower dam

In 2009, the Bac Kan People's Committee approved the Nang river hydropower

project with a capacity of 5 MW and 27 meters high dam located in the Na Noc village, Banh Trach commune, Ba Be district. Until 2017, this project has passed through the hands of three investors; the most recent is the Nang river Hydropower Limited Liability Company. Although the shortage of electricity for the Banh Trach commune could be solved, hydroelectric dam will damage the entire ecosystem of Nang river, including water flow and coastal areas, even lice affect Ba Be Lake - a famous tourist attraction place upstream.

Facing these shortcomings and ambiguity, local Yao people have shown an intense protest. From 2014 to 2016, many petitions to the People's Committees of Banh Trach and Ba Be districts were written, especially from the Na Coi, Vang Khinh, and Na Noc villages. Not only through the official route, but Yao people also expressed their resistance through traditional verbal instruction methods. In-depth interview results show that most of the workers from other provinces said they were intimidated by the people, and even the nearby households chased them out of the construction site. In contrast, young Yao people often gossiped about cheating stories in hydropower construction projects. Meanwhile, old people continued to use their way: telling the story of spirits and ghosts in the Nang River to scare workers, warning them not to touch their sacred land.

Whether these stories are true or false, with their determination, the Bac Kan People's Committee finally issued a decision to suspend the construction of the Nang River hydropower project in April 2017. By June 2019, from the capital of Program 134, a concrete bridge across the Nang River crossing Na Noc village point was started to be built. People's need of a safe transportation routine now was solved. The bridge face width is 2,6 meters, enough for trucks to reach the remotest villages in the north of the Banh Trach commune [5]. It is a clear demonstration of the local ethnic's role, not only helping to implement policies but also adjusting and orienting this policy orienta-

tion. The Nang River is reviving, both in the tangible and the intangible.

5. Conclusion

Since the marketisation, Vietnam's highland economy in general, Bac Kan province and Banh Trach commune in particular have achieved many remarkable achievements. The commodity market has become a key source of benefits for Yao people, brought in a much higher source of income than traditional commerce. However, agrarian transition in the uplands has not been without its problems. Gold mining on Nang River causes serious environmental pollution, threatening aquatic species and many gold mining fields after many years cannot restore their original state. The sacredness of the river, traditional culture and beliefs is lost. This is a clear demonstration of the market economy's two-sided effects on environment and culture in the uplands Vietnam.

On the opposite, although influenced by policy and historical context, local ethnic communities are the subjects who decide to protect or destroy their natural resources. The Nang river in this story has not only been an essential natural resource but also a spiritual symbol of the Yao in Banh Trach commune for generations. That long-lasting relationship rooted through moral, emotional and cultural connection, will «hold back» and recall people, make them realize what is more important than money. Once again, the Yao in Banh Trach returned to a moral economy, with principles based on cultural, social, and belief values. It's like a «line» sets limits for their life. When that «line» is not completely lost, when the voices of old people, chiefs and shamans are still valid, the gold mine who leave their village will still return. I call this the «balance», or «endurance» of a local custom against external factors that disrupt the internal system.

The moral principles are always there, but invisible and will be faded away if we forget to protect. This indigenous culture depends a lot on local leaders, gatekeepers such as the elderly, chiefs, shamans... because they are who maintain and transmit beliefs to the next generation. Therefore, to

call upon people to join hands and protect the environment, it is important to keep and restore these traditional moral «lines». This,

finally, is a problem for our anthropologists to find out which are these «lines» are and how to protect them from modernity.

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