

CUSTOMS OF NATURAL RESOURCES USE, PROTECTION AND PRESERVATION OF DAO ETHNIC GROUP IN HA GIANG PROVINCE, VIETNAM

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In 1999, there were 620,538 Dao ethnic people in our country. They lived with many other groups in the Chinese-Vietnamese and Laotian-Vietnamese border area and in some midland provinces.

There are many Dao groups living in Ha Giang, Yen Bai, Tuyen Quang, Cao Bang, Thai Nguyen, Bac Can, and Lai Chau provinces.

According to population statistics in 1999, there were 92,524 Dao people in Ha Giang province. They lived mainly on dangerous limestone mountains with average altitudes of 800m to 1000m in districts such as: Vi Xuyen, Hoang Su Phi, Bac Quang, Bac Me, Yen Minh, and Quan Ba. They lived mainly on upland rice and wet rice on terraced fields. There was special cultivation called “ rocky mountain cultivation ” with maize and subsidiary crops but this is also an area of natural forest with a rich botanical system.

Generally, the Dao is typical of ethnic groups who farm forest gardens and rely on forest products. Therefore, they have many experiences in managing natural resources protecting these natural resources. Most of these practices are still in use.

This paper focuses only on problems of usage, anti-erosion, protection and preservation of the forest and water resources of Dao people in Ha Giang province.

1. Overview of research materials

Before 1980, Vietnamese anthropologists paid less attention to how ethnic minorities use

natural resources. The knowledge of ethnic people has been expressed in experiences, customs and habits, daily activities, social management, and behaviours related to environment (Pham Quang Hoan, 2003). Only the book *Dao ethnic group in Vietnam* – by Be Viet Dang, Nguyen Khac Tung, Nong Trung, and Nguyen Nam Tien mentions how Dao people use their land. However, these authors have not commented on how they protect the natural resources (Be Viet Dang et al., 1971). Since 1990, the topic of ethnic minorities’ use and protection of their natural resources has been researched by anthropologists. There are some books and reports on these issues such as *Customs and habits on protecting forest and natural resources of Tay, Nung, Kinh ethnic groups in Lang Son and Ha Bac provinces* (Nguyen Ngoc Thanh and Vuong Xuan Tinh 1996)- *Customs and habits on protecting forest and natural resources with developing hamlet’s regulations of Tay, Nung ethnic groups* (Vuong Xuan Tinh 1998); and *Thai customs and habits on protecting environment* (Cam Trong 2000). Concerning the Dao people, there are also some reports on using and protecting natural resources such as *Local knowledge on preventing and treating diseases of Dao Quan Chet sub- group in Ma hamlet, Tu ly commune; Da Bac district, Hoa Binh province* (Tran Hong Hanh 1998); *Local knowledge on using herbal medicine of Red Dao sub-group*” (Tran Hong Hanh 2002); *Situation on using natural resources of Dao ethnic group in Mit hamlet, Tu ly commune, Da Bac district, Hoa Binh province* (Vu Thi Van 1998); *Traditional culture of Dao ethnic group*

in Ha Giang province Pham Quang Hoan, Hung Dinh Quy 1999); *Dao ethnic group protects watershed forest* (Nguyen Ngoc Thanh 2000).

2. Customs of land use and protection

2.1. *Ivated land use*

The most important thing in cultivation is choosing forest and land. Land for cultivation is often on primary forests because in these forests, humus soil consisting of leaves from previous years and high humidity makes the land suitable for cultivation for several years. However, the primary forest located at the head of a water source are not exploited. Dao people, as their custom, prefer hillsides and the foot of mountains where the sun rises because the sunlight is good for cultivation (Be Viet Dang, 1971). To test whether land is good or not, when looking for suitable land, they stick a stake in the ground and then pull it up. If soil sticks on the stake, it is considered good and high humidity land.

The people leave the land to dry under sun for about one month after clearing and then burn it off. Following traditional practice, to avoid forest fire, they create a fire break by clearing a space 2-3 m wide surrounding the land. They usually burn from the foot of the field on a sunny, hot, dry day with low wind. After that, they let the land cook for two or three days before clearing the unburned debris. The weather can make the job of clearing debris easier or more difficult. If the weather is bad and rainy, the trees will not burn well. Therefore, it is difficult to clear the field. It costs 60 days labor to make a new forest garden for 50kg of seeds. But in the following year, this field only needs weeding.

Earlier, Dao people in Ha Giang practice shifting cultivation, the land was only cultivated once then left fallow. After seven to ten years, they came back to burn and sow. This method

was only suitable for areas with a population density of five to ten persons per square kilometer.

Previously, in the Dao customs of cultivation, they usually grew sweet potato, groundnut, pulse, and soybeans after harvesting maize. However, they have applied rotational cultivation techniques for a long time. For example, in one field, they grow soybeans the first year then sweet potato the second year and groundnut the third year. The rotational cultivation technique is even applied for one kind of cultivated tree. They grow short-term maize for several farming seasons, then long-term maize; or they grow sticky white maize first, then non-sticky maize (Be Viet Dang, 1971).

But now, shifting cultivation is on the decrease because of the lack of forest land and the falling soil fertility. Dao people have turned these gardens into terraced fields in order to stabilize their lives for the long-term and they have stopped their shifting cultivation and nomadic life. This is a sustainable and effective solution for people in mountainous and sloping land areas (Nguyen Ngoc Thanh, 1999).

Apart from maize, sweet potato and cassava, Dao ethnic people also grow vegetables together with other crops for daily needs. For example, cucumber and wax gourd are planted together with maize or maize is planted together with cassava and taro. Other vegetables are usually planted around the field such as squash and colocynth. People also have specific fields, such as tea gardens, cabbage garden, and sesame gardens next to their houses, making daily life very comfortable.

This method of multi cropping trees together not only takes full advantage of the land but also protects it, resists erosion on rainy days by reducing the speed of water flow and enriches humus of soil by keeping dead and rotten trees.

In order to protect the soil, the Dao also grow tea on hillsides. The technique of cultivating tea is very simple. People usually plant tea in spring time from the third to the fourth month on hillsides where there are many grasses and herbs. They just clean the area of the growing-hole the and hoe the soil carefully before they plant tea in the hole and fill it with soil. The tea will grow up under protected by the natural grasses and herb, therefore, the survival rate is high (Nguyen Ngoc Thanh, 1999).

2.2. Cky mountain cultivation land use

The process of cultivating land in rocky mountain areas is the same as in flat land areas but *requires* more effort, including: choosing land, cutting trees, burning grasses and herbs. For this kind of land, Dao and other people usually farm intensively rather than extensively as *they do on flat land*. To maintain fertility of the soil for long - term cultivation and resist erosion by rain and floods, people arrange stones at the edges of fields, even in the smallest plots even just for one maize plant.

Dao people have different ways of using land for different kind of land. The technique of overlapping and mixed cultivation has been a practice for a long time among Dao people. This technique has many effects, such as making best use of land, creating botanical cover to resist land erosion, and people can harvest many kinds of crops at the same time. People make mixed cultivation by mixing cabbage, amaranth, and cucumber seeds with fertilizer then sow it into maize hole. When maize sprouts out, vegetables and cucumber also sprouts out. Moreover, Dao people also grow maize together with different kind of beans.

2.3. Trraced fields

Cultivating on terraced fields has been practiced by the Dao for 60 to 70 years. Previously when the land was mainly covered by forests, the use of land for terraced fields was rare. Currently, when the soil is poor and the

cultivating period is shorter, the common land use is terraced fields. This is significant because it requires that Dao people settle for long periods. The Dao practice terracing in mountain areas to prevent water erosion when planting rice. To build terraces requires much labor and Dao have to draw on their experience and skill in leveling land and making borders

Water is a crucial factor, especially with wet rice cultivation; they , therefore need to choose cultivated land near water sources for easy irrigation. Dao people always terrace on land where they have planted hill rice for many years and exhausted. The difficulty in the task of constructing irrigating terraced fields depends on the topography. Before terracing, the local people carefully plan the altitude, width, and length of plots to make the most efficient use of their labor

Traditionally, the first plot of terraced field should be situated in the highest position (on the side of a hill or mountain). The forest area on the top of the hill is kept for water retention purposes and the rest would be leveled gradually. Sometimes, the time for breaking a mountainous area to be a terraced field takes 10 to 15 years with a lot of different tasks needed to be undertaken, such as, land dig-out, hill splitting, stump dig-up etc. According to Dao's estimation, preparing an area of terraced field for 10 kg of seeds takes about 50 working days for 3 people; and 80 to 100 working days for more difficult terraced fields . The soil for the lower fields' border comes from the upper one; normally, the border is about one-foot size, low and small for rich land and water keeping (Nguyen Ngoc Thanh, 1999).

2.3. Land use convention

For the Dao, in addition to their residential land area of the village, there are cultivable land (including fallow land), cemetery, mountains and forests, rivers and streams, and roads and

tracks. All these make up the “village land”. The boundaries between villages have been established and handed down to the next generations, with some modifications, they have been respected. Thus in the established village territorial area, every family is entitled to exploit land (except watershed forests and protected forests). When a land area is selected for cultivation, people mark it off and plant a *neu* as a sign of owned land. *Neu* is a wooden pole with a long grass leaves tied on top. Other people will not infringe on the land area once they see the pole. However, the pole is not perpetually valid. Its validity is limited in a certain time frame. According to rules, the pole is planted at the beginning of the land clearing season, once the season ends and the plot of land is not cleared, it is considered ownerless and other people can cultivate on that plot of land without making any material compensation to its former owner. In case of dispute of a marked plot of land, the pole itself serves as important evidence. According to customary law, the leaves on the pole planted by the person on that plot of land which are most withered, means it was planted before other poles and accordingly the land belongs to that person. The customary law also stipulates that the cultivated land which is left fallow after two or three crops, continues to belong to its former owner. Whoever intends to occupy it will have to voluntarily return it to its owner.

The terrace fields have been reclaimed by household families therefore, if the head of the household passes away, they will be shared equally between their sons. For family clans who in many generations have been living in the village, they often have common land. The land is rotated to be cultivated by households who keep the family clan ancestral altar. The annual harvests are used for the worshipping ceremonies and common activities of the family clan.

Public land (roads, cemetery, grazing grounds etc.) is administered by the village and all members of the community are responsible for protecting it. Every year, at the beginning of the 2nd lunar month, by rule, each family sends a member to join in the repair and upgrading team of the village roads. Whoever damages the road has to repair it and pay a fine in kind (alcohol) and now usually in cash of between VND 50,000 – 100,000.

Outsiders who want to move in to live and do business in the village have to ask for permission from the village head and old folks. Once the family is accepted, it can settle in the village for a long time and of course the family has to prepare offerings including a chicken and a bottle of wine to worship the village God and to thank the villagers. According to customary law, the new comer can only cultivate the land given by the village and is not allowed to look for other cultivable land area. And from the second crop onward, the family has to contribute part of their harvest to the village public fund. For families who have long been living in the village, if they want to reclaim new land, they have to inform the village head, if they fail to do so, they have to pay fine in ingot silver

3. Customs on use, preservation forest and water resources

3.1. The use of forest products and forest protection regulations

The Dao are experienced in exploiting and using forest resources. They cut down timbers to build their houses and gather firewood for cooking and making fences etc. Forests also provide them with pharmaceutical materials (mainly medicinal herbs). The Dao have not only used forest products but also planted forests, particularly high economic value trees which can also be used as medical treatment such as cinnamon, cardamom, turoz (Tran Hong Hanh, 2002). These trees have been planted by

the Dao on a large area. Depending on each type of medicinal plants and their economic value, the Dao expand or narrow their area. They can plant such trees into forest, around their upland fields, outside forests or in their gardens.

Branches and leaves are harvested as medicinal herbs around the year. For root plants, only when the roots are matured, they are harvested. Flowers are harvested during the blossoming season (Tran Hong Hanh, 2002).

The protection of forests has long been practiced by the Dao. All members in the village community are obliged to abide by rules and whoever violates them has to pay fines as stipulated. According to customs, on the 15th of the first lunar month every year, the heads of households have to be present at the village head's house to discuss the implementation of the village conventions. At first, the village head announces the list of forest areas to be protected and then he reads out the conventions, for example, the villagers are prohibited to gather bamboo shoots from bamboo forests during their growing season. The duration of the ban is from the 20th of the first lunar month to the end of the third lunar month. Whoever cuts a bamboo shoot during this period has to pay a fine of 1 white silver *hao*. Families having buffalos and cows have to tend them carefully during their grazing. If their buffalos and cows enter forests and destroy a bamboo shoot, they have to pay a fine of 3 white silver *haos* (Nguyen Ngoc Thanh, 2000).

Whoever deliberately does slash and burn farming in the watershed forests has to pay a very heavy fine. In the past, the violator had to kill a big pig and take it to the head of the village. Then each family is represented by a man at a meeting at the village head's house to listen to his announcement of the crime committed by the violator. The criminal stands in front of household representatives and makes his apology. Afterwards, they all stay on to eat

the 'apology meal'. This form of fine is still applied in the Dao village now. Prior to 1954, the Dao also had a regulation that any household that wanted to fell down trees to build their house had to register the number of trees needed with the village head and was only allowed to cut the registered number of trees, any surplus tree cut down would be fined with the value of the tree calculated at the time it was felled (Nguyen Ngoc Thanh, 2000).

Since the establishment of the agricultural cooperative in 1960, forests and forest land have been managed by the cooperative and the district rangers' unit. Yet the Dao here continue to maintain their traditional forest protection rules. Particularly since 1986 land and forest land allocation to households for management has further made traditional rules effective, and many villages have developed them into written regulation to be disseminated to everyone in the village. The regulation stipulates that whoever cuts down a tree of 10 cm in diameter has to pay a fine of VND 2,000, a bamboo root VND 2,000, a *giang* bamboo shoot VND 1,000, a forest banana tree VND 3,000, rattans VND 10,000 etc. In addition, all the products cut shall be confiscated.

The Dao also has forbidden forest close to the village where spirits reside. It is very sacred and people are forbidden to cut down trees or gather firewood from the forbidden forest. Whoever takes any act of violation has to kill a pig of 50 kg to be offered to the forest spirits. The offerings are placed in a temple in the middle of the forest. After the offering ceremony, the offerings are brought back to the village head's house. Then the household heads gather to listen to the village head announcing the reason of the meeting and the violator stands up to make an apology and promises not to commit the violation again. Finally, the participants sit down and eat together. According to customary law, on the 1st day of the Lunar Year, the household heads go to the forbidden forest to repair the

temple. On the same day, the village old folks remind villagers of the village regulations and rules

3.2. Use and protection of water sources

For water sources serving production including small canals running along mountain sloping sides built by the village community, every year at the beginning of the 4th lunar month, before starting the crop, all working-age villagers have to join hand in their repair and upgrading, according to the village regulation. However, to make management easy and the use of water sources more convenient, the village community agrees that if the canal runs through 3 – 4 households who are close to each other, they have to maintain and repair that portion of canal regularly. The distribution and use of water sources are made according to certain rules as follows:

If three household families sharing the same terrace field area, the water source is distributed according to the following rule: the household having the field closest to the water source must only have a water gate of 25 cm wide, the size of the next household's water gate is double that of the first household, and that of the third household is double the second is (Nguyen Ngoc Thanh, 1999).

If three or four households having terrace fields close to each other and share the same irrigation canal, the water source has to be distributed equally. To ensure equal distribution, a 2 m long wooden board is used on which the same size water feeding gates are cut and from each feeding gate, each household dig through it to let water enter their fields.

In case three or four households sharing a terrace field area want to irrigate their fields but have no space to dig a common irrigation canal, the household having lower terrace fields will get water through the upper terrace fields of the other household. This also follows a similar rule,

that is, the household having upper fields will have a smaller water gate and those having lower fields will have larger gates. The distribution of water source in this way is always witnessed by the village head.

For water sources serving domestic use, at the end of the year, each household sends a member to join in repairing and dredging the canals and pipelines. The Dao have ruled out that whoever throws dead animals into the domestic water sources and is caught red-handed has to dig another water source and make another water pipe line for households. They do not allow dead body to be buried close to the water source and this is regularly reminded through a proverb: "*mat tu po lap an vom con*" meaning burying the dead body close to the water source, water will be contaminated. At present, the Dao in Nam Song village, Nam Son commune, Hoang Su Phi district have a fining system: those who damage irrigation water sources have to repair them and depending on the level of damage, they have to pay a fine of between VND 50,000 - 100,000. Whoever contaminates and destroys the domestic water sources has to be responsible for their repair and pay a fine of between VND 50,000- 100,000.

Also according to the village regulations and rules, whatever village the stream runs through, that portion of stream is under the management of that village. The water resources (fish, shrimps, crabs etc.) can be caught by everyone, but they have to strictly follow the village rules. It is prohibited to use poison (poisonous leaves, poison substances) for fishing. Whoever violates the rules has to pay a fine according to the length of the water flow: 5 kg of rice per a meter (now it is VND 5,000/m). At the same time the violator has to review his/her mistake in front of the villagers. In recent years, the use of explosives and electricity to kill fish en mass has often been seen. To prevent it, the Dao in Ho Thau, Hoang Su Phi district have set a regulation

prohibiting fishing using explosives and electricity. Whoever deliberately violates it has to pay a fine of VND 50,000 and has to review his/her mistakes in front of the villagers at a meeting and pay VND 5,000 to each participant. After the meeting, the violator has to spend three work days on public work and pay VND 200,000 as fine. The village also prohibits the fishing in fish breeding habitats. Violator will have to pay a fine of 20 kg of rice and a pig of 30 kg.

In short, the Dao ethnic minority group has many production experiences. They know how to make full use of natural topography, improve them through their terrace fields and cultivation in stone holes. Although shifting cultivation still exists, they have cared for the prevention of soil erosion and protection of soil fertility for their long-term cultivation.

Most of the regulations of the Dao focus on the protection of natural resources (land, forest, water). These regulations still exist in the Dao community and are voluntarily implemented by community members. Therefore, when development projects are implemented, positive aspects of the Dao traditional rules and regulations should be used for their effective implementation.

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