

Tropical Forestry Change in a Changing World

Volume 9:

Trends and Issues in Community Forestry



FORTROP II International Conference

Kasetsart University, Bangkok, Thailand

17-20 November 2008



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Successful Forest Management by Na Lan Village Community in the Northern Mountainous Region of Vietnam

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Abstract

Forest-dependent people in Na Lan village in the northern mountainous region of Vietnam have found a way to sustainably manage their community forest. In the past, Vietnam's rich natural forests have been overly-exploited and cleared for slash-and-burn agriculture. In Na Lan village, the irregular flow of water from the mountains caused by forest degradation had severely affected agricultural production and food security.

In 1967, Na Lan villagers formed a task force to manage and protect 250 ha of community forest on the top of the mountains. A community forest management committee was established to formulate rules and regulations, a structure that has been maintained to the present day. All the forest area on the top of the mountains and along streams and creeks has been declared protected areas in which tree cutting and crop cultivation are prohibited. Harvest of timber is strictly non-commercial and occurs in designated areas only. Use of harvested timber is restricted to house construction and for community purposes. The condition of the degraded forest has since improved, with valuable trees 50-60 cm in diameter now common. Water now flows permanently in streams and creeks enabling agricultural production activities.

The effort of the Na Lan villagers in the protection and management of their forest has been recognized by local government, so that the village now receives government payment for its protection task. This fund generates employment for poor villagers as forest guards. The Na Lan

villagers have clearly demonstrated that local communities can successfully manage their own forest.

Keywords: community forest management, community participation, northern mountainous region, Vietnam

Introduction

Vietnam has a total land area of about 33 million ha and a population of 85 million from 54 different ethnic groups (GSO, 2006). About 16 million ha of Vietnam (48.3% of the country's total area) are classified as forest land. This includes forested areas, reforested areas and cleared forests, which are further classified into three categories of forest: 1) production forest, to supply timber and non-timber forest products, combined with environmental protection (8 million ha); 2) protection forest, to protect water, streams and soils, prevent soil erosion and mitigate natural disasters (6 million ha); and 3) special use forest, for nature conservation, protection of historical and cultural relics, tourism, and to some extent, environmental protection (2 million ha) (MARD, 2001). Vietnam's forests directly provide a livelihood for 25 million people who live in and near forests (GoV, 2005).

The northern mountainous region (NMR) of Vietnam consists of 15 provinces which together account for the largest upland area of the country. About 11 million ha (75% of the region's total land area) is classified as forest land. This area directly provides a livelihood for about 12 million people from many different ethnic groups (GSO, 2006). The northern region's tropical forests constitute a key factor in environmental protection and biodiversity. However, the quality and extent of the forest has been severely degraded. Most forest cover was lost between the period from the late 1950s to the late 1980s through slash-and-burn cultivation and overexploitation. This loss has had a wide range of socio-economic, ecological, and environmental impacts. In the past, forest and forest land belonged to the state and were managed directly by state forest enterprises. The state enterprises had the dual functions of, first, commercially logging the forests and, second, protecting them against intruders and re-planting them after harvest. However, while the enterprises were generally successful in the first objective, they often failed in the second. As a result, the condition of the remaining natural forests deteriorated and has continued to do so.

Since the early 1990s, the Vietnamese Government has carried out many reform programs in upland areas such as forest land allocation to different users, natural forest management and reforestation. The purposes are to achieve optimal use of forests and forest land use through applying appropriate cultivation systems and strategies to combine conservation and development goals. It was expected by the government that, by increasing local income based on appropriate agricultural and forestry production activities, deforestation would be stopped and steep land would be managed in a sustainable way. The forest cover of the NMR has since increased but the way forest is managed is not sustainable (ADB, 2000; Le and Rambo, 2001; Alther *et al.*, 2002; Zingerli *et al.*, 2002; Tran, 2007). In most cases, ignoring the role of local communities and indigenous forest management knowledge has contributed to the lack of sustainability (Tran, 2007). However, despite a general trend towards unsustainable management of forests, there are some successful cases due largely to the initiative of local communities. The management of forest by the people of Na Lan village is one of those success stories.

The Village of Na Lan

Na Lan village belongs to Quang Trach commune, in the Ba Be district of Bac Kan province (Figure 1), located about 230 km north of the capital Hanoi. It is a remote village and connected with the outside world by one dirt track accessible by motorcycles and carts, two km from the district main road. The village was first established in the early 1930s. There were only six households during the period 1930-1955. The number of households has since increased to 15 in 1960, 26 in 1990 and 30 at present, with a population of 173 people. The majority of the people belong to the Tay ethnic group.

The total area of Na Lan village is about 542 ha of which 515 ha are classified as forest land and the remaining 27 ha are agricultural land including 10 ha of paddy rice field. For the forest land, 250 ha of watershed forest, now classified as protection forest, have been managed by the local community since 1961. The remaining 260 ha of mostly degraded forest land positioned on the lower slopes were allocated to individual households for long-term use in 1995 as part of the government forest land reform.



Figure 1 Location of Na Lan village.

Until 1954, when the country was a French colony, Na Lan villagers lived under feudal institutions. A significant change occurred after the country gained independence in 1954 with the establishment of the 'Cooperative or Collective Model'. This distribution principle was applied to every household of each village cooperative. Every household labour-capable member worked in the paddy rice and agricultural fields for a cooperative and received food based on the number of household members. The cooperative model was abolished in 1986, and replaced by a new agenda known as 'Doi Moi' (Renovation).

After independence in 1954, almost all the old forests outside and inside Na Lan village were cleared for shifting cultivation as a result of policies encouraging self sufficiency. The village's only 10 ha of paddy rice field

downstream was severely affected by the irregular flow of water. There was often no water in the streams and creeks for household use during the dry season because of the lack of adequate vegetation cover in the watershed forest areas. Animal hunting for food became difficult in addition to the loss of some non-timber forest product species. As a forest-dependent community, the livelihoods of Na Lan villagers were severely impacted. The majority of households experienced, for the first time, food shortages for many months of each year. They recognized the negative impacts of the forest loss and also realized that they could not rely on or wait for external help. The villagers held meetings to discuss the issues and after several meetings they agreed to work together to reverse the situation.

Community Forest Management - The Na Lan Model

In 1961, a simple structured 'community forest management committee' was established under the Na Lan villagers' own initiative. The committee consisted of a chairman and two forest protection teams of seven people each. The committee chairman was also the village head. Other members were volunteers or nominated by other villagers. All committee members worked without payment.

The immediate task of the committee was to formulate village rules for the protection and conservation of the watershed forest within the village boundaries. The rules, which have been in place for nearly half a century were not put in written form until now, but are well respected and observed by all Na Lan households. These are the simple village rules:

- All forests and forest land in the top of the mountains are a strictly protected area and belong to the village community not individuals.
- No form of agricultural cultivation is permitted in the protected area.
- Harvest of timber and non-timber products in the protected area is strictly non-commercial and permitted in designated areas only. Use of timber from the harvest is restricted to house construction and for community purposes.

- Each household is permitted one timber harvest only to build one house for their whole lifetime. Households must submit a harvest plan to the committee chairman for consideration and approval at a community meeting. Only the agreed number of trees can be cut down and harvesters must ensure minimum damage to surrounding trees.
- All households have a duty to protect the community forest and report forest encroachment to the committee.

The total protected forest area is about 250 ha. Each of the forest protection teams works on a two-week roster to patrol this forest and to prevent cutting of trees by people from other villages. Other household members contribute free labour to community work, such as maintenance of village roads and firebreaks. No women work as forest guards because it is a common belief that forest protection is a physical job and culturally considered suitable for men only. However, women participate in emergency tasks such as helping to extinguish forest fires.

People from neighbouring villages still cut trees in Na Lan forest, but mainly in the household forest because the community forest is better protected by frequent patrols of forest guards. In most cases, conflicts are resolved at the village level with the sanction of village heads. Very rarely are matters referred to the Commune People's Committee. However, cross-border forest management will continue to be a big challenge, not only at the village level but also all other higher levels in Vietnam. The high demand and high prices for wood will encourage tree cutting by people from outside Na Lan. Na Lan forest guards have had to work very hard and make random inspections in the protected forest at least two times per week. Despite all this, the security of the Na Lan village is considered very good with very few incidents of theft. Even cattle left in the forest are safe.

Benefit Sharing

Na Lan households share the same benefits from their contribution to the protection and conservation of the village community forest. As mentioned earlier for example, each household including new families setting up residence is entitled to one harvest of timber for house construction. In general, they can cut five large trees or ten small trees. Additional small

harvests will be considered for house repairs only but not for house extension. No fee payment is required.

Villagers can harvest non-timber forest products (NTFP), such as bamboo, bamboo shoot, banana stem and leaf, mushroom and cardamom from the community forest for household consumption only but not for sale, provided that no permanent damage is done to the resources. Sustainable harvest is applied to avoid overexploitation, young plants are kept for the future and collection of dead branches is allowed only for firewood. From interviews conducted during the study, poorer people go to the community forest to collect NTFP more often than those who are better-off.

All households are allowed to graze their cattle in the community forest area. This usually takes place for a few months during the dry and cold season (December-February).

In 1998, the 250 ha of protected watershed forest were formally classified as 'protection forest' under the government land use planning program. In 2001, when the government implemented a national forest protection program (Program 661 which applies to 'protection forest' only) and offered payment for protection tasks, the Na Lan village committee also signed contracts with the provincial authorities. The current payment is VND75 000 (about USD4.5) per ha. The Na Lan village committee received VND18.8 million (USD1200) for 2008-2009. The forest protection teams now receive a small payment (VND10 000 per person) each time they patrol the forest. At the end of each year, the village committee has some savings from the government contract. At the Vietnamese New Year (Tet), each household receives about USD20, a significant amount considering that the average household income in Na Lan is USD15 per month. It is a new year gift in recognition of the household contribution to the protection of the community forest. The remaining money is kept as a village development fund and at present the total amount is VND22 million. Poor households can borrow up to VND1 million from this fund for economic development.

Current Situation and Management of Na Lan Community Forest

Soil Erosion and Water Resources

Na Lan villagers strongly believe that the protection and natural regeneration of the protected watershed forest has improved and stabilized the local ecosystem. Soil erosion in the protected forest is no longer an issue. Water now continues to run from the mountains throughout the year into the village streams and creeks, even in the dry season, enabling cultivation of cash crops and vegetables and general household use.

Most households interviewed said that they have had better crop yields since the degraded forest or bare hills were replaced by new regeneration forests. The good results from the community forests encourage villagers to protect upland fields in their own forest to reduce soil erosion after heavy rain. In addition, the forest canopy provides shade and reduces the temperatures in the upland fields, leading to a favourable micro-climate for cash crops. Every villager agrees that their paddy fields cannot be cultivated without the primary forests in the community forest areas.

Biomass and Biodiversity

A recent investigation was carried out on nine sample plots (each 40 m x 25 m) laid out along transects of Na Lan community forest. The biomass of the primary forest was found to be of a medium level with a total volume of 248 m³/ha. Trees 50-60 cm in diameter were common. Trees larger than 1 m in diameter could also be found. Most of the primary forests, which are a mixture of limestone and mountain forests, consisted of many high-economic-value tree species, in particular Dinh (*Fernandoa bracteata*) and Truong Sang (*Amesiodoichon chinensis*). In the naturally regenerated forest on the top of the hills, there were not many high value species and biomass was still low because the area had been burned many times by uncontrolled fires from the adjacent village before it was protected. From the field observations and interviews of key stakeholders at village, commune, district and provincial levels, it was clear that these forests are managed much better than in other villages. The main reason is that the Na Lan community has devoted time to protect their forest from outsiders coming in to cut down trees or collect non-timber products and graze stock. Na Lan villagers have exploited their forest using a selective thinning approach that is considered to

be a 'conservative harvest'. For example, if one household needs three trees, they will cut exactly three trees without damaging other adjacent trees.

Counts in the sample plots showed that species diversity was high in this area, in particular in the primary forest. There were 80 species (ranging from ground cover to high trees) in primary forest and 48 species in seven-year old regenerated forest. Na Lan's community forests are comprised of closed seasonal tropical evergreen forest with a high diversity of species. Natural regeneration also improves biodiversity. Mixed forests are rich in species, and produce an abundance of resources, including valuable timber, medicinal plants, resins and oils, and other forest products. The old-growth forests provide habitat for birds and wildlife. Villagers have seen large wildlife return in recent years, with formerly common species like monkeys and other small animals often sighted. Hunting in the community forest was stopped seven years ago.

Many high value, non-timber, forest product plants are found such as Binh Voi (*Stephania cepharantha*), wild orchids and cardamom. Some common non-timber forest products such as mushrooms, bamboo shoots and herbs are still available and people from other villages also come to harvest them.

Forest Fire Control

One area in the community forest was burnt many times seven years ago by hunters who started the fires to hunt animals. Slash-and-burn cultivation is still widely practised in neighbouring villages, causing uncontrolled fires near village boundaries to burn into Na Lan village forest.

Na Lan villagers are able to control the spread of the fires by preventative and protection measures. Villagers take turns to patrol critical areas during the slash-and-burn season. Six kilometres of firebreaks 4-5 m wide have been constructed and are well maintained. All members of Na Lan community contribute free labour to clear the firebreaks every six months. When a forest fire breaks out, every member has a duty to fight the fire at any time, day or night. For example, forest fires broke out three times in 2006 in adjacent villages. Twice all Na Lan people went out to fight the fires from afternoon until midnight and once until early morning of the next day. But not a single person from the other villages who started the fires came to assist.

Traditional Cultural Values

Na Lan people are a very happy community because they can enjoy the beautiful landscape not experienced by many other indigenous communities in the northern mountainous region. A village elder who had a firsthand experience of Na Lan first village meeting to discuss forest degradation and livelihood problems said that:

“Primary forests form a traditional culture of our indigenous communities for many generations. Our ancestors had lived in primary forests for many hundreds of years. Forests provide everything we need—food, houses, furniture, hunting equipment, musical instruments, cooking and eating utensils, ceremonial artifacts, hundreds of other practical and spiritual uses. And the list goes on. Forests have been closely connected in the daily life of the indigenous people for centuries and will continue for centuries if we do not destroy them.”

Sustainability of Na Lan Forest Management

All the villagers interviewed confirmed that they would continue to protect the community forest even without payment from the government. They have a very strong sense of ownership although by law the legal rights of this forest have not yet been recognized. For Na Lan people the environmental benefit is more important than the economic benefit as far as the protected community forest is concerned.

Conclusions

The successful protection and management of the community forest at Na Lan village is proof that local communities are able to manage their own forests in a sustainable way. Such practices should be promoted and encouraged in other forest-dependent communities not only in Vietnam but other countries facing similar situation of forest degradation and poor livelihoods.

The success story at Na Lan village is attributed to many factors: firstly, the will and determination of the people to solve their own problem; secondly, the cooperation from all village members; thirdly, the commitment of all

village members although the task was extremely difficult in the beginning; and lastly, the self belief and mutual respect among village communities. The hard work and achievements of Na Lan are highly commendable.

Acknowledgements

The authors are very grateful to the people of Na Lan village who shared their story and experiences. The senior author especially wishes to thank many villagers for their generous hospitality and giving their valuable time for meetings and discussion. The visit to the village and the forests of Na Lan was very professionally rewarding.

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