

# Territorial organization for ecotourism development in Hoang Lien National Park, Sapa District, Lao Cai Province

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**Abstract.** Hoang Lien National Park, what is located in Sa Pa District, Lao Cai Province, has been planned to develop priority in ecological tourism because the park is composed by many ecological systems with the most diversiform biology in Vietnam. Here exists many endemic species, beautiful landscapes, as well as typical cultures of local inhabitants.

According to statistical data, the number of tourism arrivals to the area grew up rapidly. Since 2000 to 2006, the figure was increased by 39.1%. There was a continual increase in its tourism revenue as well as diversity in its effective tours. However, many principles of ecotourism were not fully applied. Little profit was shared among local community while most of revenue came back to outsiders. The result was the degradation of the national park's environment and its natural resources in spite of the development of tourism. Moreover, the living standard of local people was not much improved: 21% of households lived in poor condition without any benefit from tourism activities.

To sustainably develop tourism in the park, simultaneously to support local community in preservation and socio-economic development, there is a need of researching and organizing tourism territory. Hence, based on analysis and assessment of related resources, the paper is focused on suggesting some orientations for tourism territorial organization of Hoang Lien National Park. The obtained results show that the territory for ecotourism should be divided into three sub-regions coinciding with its current functional zones of the park: prohibited area, limited area and area open for tourism development. Other relevant solutions such as operating new ecotours, re-educating local human force, etc. are also suggested to enhance the effectiveness of tourism activities and to upgrade the living quality of local people.

*Keywords:* Ecotourism; Territorial organization; Hoang Lien National Park.

## 1. Introduction

Hoang Lien National Park (HLNP) is situated in the area of two provinces, Lao Cai and Lai Chau, endowed with a significant geographical location, where lies Hoang Lien

Son, the biggest chain of mountains in the north of Vietnam. Comparing to other national parks of Vietnam, HLNP owns the most abundant flora and fauna thanks to the diversity in landscapes formed by a wide range of altitudes. On December 18th, 2003, HLNP was inscribed in the UNESCO's list as one of the first four Asian Heritage Parks in

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Vietnam [3]. More and more tourists have been attracted by its typical natural landscapes and unique culture.

Though being as a National Park (NP) for a long time, HLNP could not avoid a serious degradation of its forestry due to negative activities such as spontaneous and unplanned field tilling; excessive hunting; fire caused by agricultural activities; cardamom planting, which resulted in the reduction of leaf-layers' thickness and, in turn, prevented the reproduction of trees. The reasons mainly come from the poverty of its community, whose economy is highly depended on forest resources. Statistics in Sapa District show that 22.9% of households who live in the core of the National Park have much lower income than the average of national standard [1].

In this case, ecotourism development is claimed to be a powerful tool to harmoniously obtain three targets: socio-economic development, resource preservation and tourism development. In order to reach the goals, tourism zoning is a fundamental step. It is impossible to have an effective tourism management without considering its spatial organization, which is even more important in national parks where tourism must come hand in hand with conservation to improve local living standard.

## 2. Methodology for tourism territorial organization in National Parks

*Territorial organization* is simply defined as a way to make best use of territory. Thus, territorial organization for tourism (TOT) is the effective spatial division of tourism based on its natural resources, infrastructure and facilities, and labor force as well as other arising factors in correspondence with those of other industries in other regions.

In other words, territorial organization for tourism is a system of spatial inter-connection between tourism subjects and its related service properties, based on the optimal use of tourism development resources (natural and socio-economic) to get the best effectiveness in terms of economy, society and environment [4].

Researches on TOT and plans for effective spatial organization will set the basic information to efficiently exploit tourism forces (especially the natural resources) of the country in general, and of the local area in particular. It will also accelerate the process of specialization in tourism industry, thus create more valuable and typical tourist products to enhance its competitiveness.

The main targets of establishing NPs are to preserve the bio-diversity and territorial unity, to serve educational and scientific functions and to provide favorable environment for tourism. As the result, NPs are ideal places for tourism development. Nonetheless, like two sides of a coin, tourist activity may easily cause damage to NPs if it is not well planned and managed. That's why territorial organization for ecotourism development (TOET) in NPs is of great necessity.

TOET in NPs should, first and foremost, aim at organizing a tourism spatial system in which tourism subjects and related service properties are closely connected through the optimal use of tourism forces, facilities, and other belonging elements in order to maximize the benefits for the sake of socio-economics and environment. To be specific, it must obey several principles: have typical ecotourism establishments; consciously propagate environmental education; harmoniously use the territory for both tourist and preservative functions [2].

TOT will only succeed if it obtains all of four following targets: the satisfactory of

tourists, the efficiency of economy, the preservation of tourism resources and the solidarity of its local community and tourism units [2].

### 3. Forces for TOET in Hoang Lien National Park

HLNP is situated in the northwest of Sapa District, at the triangle of boundaries of three provinces: Lao Cai, Hoa Binh, and Son La. Its geographical coordinates are between 22°22'55" and 22°08'00" of the Northern latitudes and between 103°45'20" and 103°59'40" of the Eastern longitudes.

The park is bordered by the following villages: Ta Phoi (Lao Cai Town), Thanh Kim, Nam Sai, Nam Cang (Sa Pa District) and Nam Xe (Van Ban District) in the East; Ta Giang Phin, Ta Phin, Ban Khoang and Trung Trai (Sa Pa District) in the North; Phong Tho District (Lai Chau Province) and Muong Khoai village (Than Uyen District) in the West; Ho Mit, Than Thuoc, Muong Khao villages (Than Uyen District) and Van Ban District in the South.

#### 3.1. Natural tourism resources

Hoang Lien National Park, with the total area of 29845 ha, is situated in a region where relief is very complex and diverse, prevailed by medium to high mountains of Hoang Lien Son massif - the highest and most marvelous chain of mountains in Vietnam. There are handfuls of over 2000 meters high peaks. The highest is Fansipan (3143 m) - favorably called "*The roof of Indochina*". The average slope is quite high, 25° - 35°; some may reach 40° - 45°. Topography changes wildly in terms of a titude, the widest difference can be 1000-

1500m, forming distinct and separated reliefs. Scattered among the foot of huge mountains are fertile valleys deposited by alluvia such as those in Ta Van, Lao Chai, and Ban Ho communes.

Belonging to subtropical and temperate zone in mountainous region, the climate in Hoang Lien National Park is temperate and cool all year round. The quickly-changing weather right within a day attracts thousands of tourists annually. Visitors can experience all four seasons among a day's time. In winter, snow sometimes appears [1].

Distinct relief is the main cause of densely hydrographic system characterized by narrow and deep streams, steep currents. In turn, it creates a lot of falls, forming plenty of alluring landscapes valuable for tourism activity in the park, for instance, Thac Bac (Silver Waterfall), Thac Tinh Yeu (Love Waterfall), Suoi Vang (Yellow Stream), etc.

Flora in HLNP represents almost all forest types in Vietnam. Several dominant plants on mountainous area are unique in Vietnam such as primeval cold-bearing plants living in temperate condition on high mountains of over 2800m with predominance of unique low forest type; a complex of thin-and-thick-leaf plants at the height of 2700-2800m prevailed by *Sam bong lanh* - a typical cold-bearing plant; a complex of plants dominated by Do Quyen (*Rhododendron*) [1].

Claimed to have the most abundant biodiversity of all Vietnamese specialized forests, Hoang Lien is native to 2343 types of plants, 96 types of animals, 343 types of birds, 113 types of reptiles and amphibians, many of which are in danger situation and have been inscribed in both Vietnam's and World's Red Book. Moreover, the uniqueness of HLNP is also in the top of Vietnam specialized forests with 17.9% of all rare plants. 5 types of birds

and 6 types of reptiles, amphibians are found nowhere but here throughout Vietnam [1].

### 3.2. Human tourism resources

There are 5 main ethnic groups who are living in the area of HLNP in Sapa, namely H'Mong, Red Yao, Day, Tai and Thai, among those H'Mong is the majority, accounting for 71% of the total population [1]. Each group established their own territory into a separated village. H'Mong people usually prefer to live in the high land, while Yao, Day and Tai people live in lower places. The population density of each village is also greatly differentiated.

Most of their income comes from farming, animal husbandry and forestry. Due to the lack of cultivatable land and labor, and low efficiency of production in correspondence with a high proportion of not-working force, there are a large number of households living below normal standards. Those in four villages in HLNP account for about 22.2% of all households in poverty in the district. The annual average amount of rice per person is only 220kg, even less than the minimum worldwide indicator (260kg/person).

However, the human resources are abundant. The inaccessibility to this adventurous zone resulted in its traditional culture, barely influenced by outsiders. They have long established good relationships each with other. At the same time, they still keep their culture distinct in forms of social hierarchy, house structure, way of farming, customs, festivals, traditional folklores, religious beliefs and rituals, etc. The cultural diversity makes strong attraction to tourists.

It is clear that human tourism resources in HLNP are well served the demand of ecotourism development.

### 3.3. Infrastructure and facilities for tourism

Generally speaking, transport system is quite an advantage of the park to connect it with its generating sources. Only 40km away from Lao Cai Town to the northwest, Hoang Lien can easily be accessed through the extended National Road 4D by cars and motorbikes. However, transportation within the park is limited. People coming to the park for sightseeing, natural exploring or visiting community in the core of the park have no choice but to walk or climb along small land-paths. Moreover, these paths are quite dangerous because of landslide on rainy season.

Electricity and water supply are insufficient. All of villagers in the core of the park are disconnected to the national electricity network. Hydroelectricity generated by small streams is the main source of power and can serve only a half of households. This situation is a drawback for tourism development.

Local people in HLNP mainly use water from streams brought to the villages by natural canal and traditional bamboo irrigation system. Some even have to use farming water in daily life. Only a few villages like Ban Den, Cat Cat and Sin Cha, which are located near important roads connecting communes together, have their reservoirs constructed thanks to the 135 Project sponsored by UNICEP and ADB.

Telecommunication in the park has improved recently. Almost all villages have set up telephone system. Nonetheless, only a limited number of households could install home phone. In terms of mobile phones, signals are restricted due to geographical hindrance; thus, it is hard to contact now and then. It is a big problem for tourist security emergency case.

## 4. Current tourism activities and territorial organization in HLNP

### 4.1. Current tourism activities

Marvelous landscapes and unique ethnic culture attracts more and more tourists to Sapa District in general, and to HLNP in particular. Statistics reveal that tourist arrivals shot up to 259,079 visitors in 2006, five times to that in 2000 (49,322). On average, it increased 39.1% annually between 2000 and 2006 [3]. There is a variety of tourism activities: from natural-based tourism like walking or climbing on mountains, landscape sightseeing, biology researching, or adventurous trips (Fansipan trekking, sports tours) to cultural tourism like village visiting, community-based activities etc. Usually, the visitors choose mixed types.

Individual studies show that there is a balance ratio between international and domestic tourists visiting HLNP, with a slight larger figure of foreigners in trekking tours. International tourists stay relatively longer than domestics, 4-5 days compared to 2-3 days in average. However, few of them know about HLNP due to its ineffective advertisement and lack of educational and environmental explanation. Even during the visit to ethnic communities, such as Seo Mi Ty, Ta Trung Ho, Cat Cat, Sin Chai, tourists are rarely conscious of their entering the core of the park. Mainly who conquered Fansipan are the ones to have knowledge of HLNP, which makes up a very small proportion.

### 4.2. Current management and territorial organization based on principles of ecotourism

#### \* Permanent tours

Permanently, tourist sites in HLNP and

their related tours have not been effectively and widely exploited. Management is too complex to succeed. There are mainly two types of tours differentiated by who manages them.

Ecotourism tours within the National Park supervised by the Centre for Environmental Education and Ecotourism [3]:

(1) Fansipan conquering tour:

+ 2-days tour: Sa Pa - Tram Ton - Fansipan - Tram Ton - Sa Pa;

+ 3-days tour: Sa Pa - Tram Ton - Fansipan - San Chai - Sa Pa; Tram Ton - Fansipan - Seo Mi Ty;

+ 4-days tour: Sa Pa - Tram Ton - Fansipan - Cat Cat - Sa Pa.

(2) Sa Pa - Ta Van - Seo Mi Ty - Ta Trung Ho - Ban Ho - Sa Pa (4 days).

(3) Tram Ton - Fansipan - Seo Mi Ty - Den Thang - Seo Trung Ho (7 days).

(4) Sa Pa - Tram Ton - Suoi Vang - Thac Tinh Yeu (one day).

(5) Sa Pa - Cong Troi - Suoi Vang - Thac Tinh Yeu (one day).

(6) Cat Cat - Y Linh Ho - Lao Chai - Ta Van (one day).

(7) Tram Ton - Rung Gia - Thac Bac - Sin Chai (one day).

(8) Sa Pa - Ta Van - Seo Mi Ty - Den Thang.

(9) Sa Pa - Ban Ho - Seo Trung Ho - Ta Trung Ho.

(10) Sa Pa - Lao Chai - San I - San II.

It can be seen that there is an unequal distribution of tourists in different tours. Those supervised by Department of Trade and Tourism attract a larger number of tourists thanks to convenient accessibility. In tourist seasons, an overwhelming number of tourists cause negative effects on natural resources and environment. In contrast, the visitors rarely know about tours deep into the park, thus their economic and educational impact is low for tours organized by Center

for Environmental Education and Ecotourism.

*\* Level of fulfillment of educational functions and environmental explanations*

Ecotourism can be distinguished from other types of tourism by its educational and environmental functions. This is denoted by providing tourists with natural, biological and cultural value of the destination, enhancing visitors' appreciation for environment with the help of tour-guides or mass media.

In the case of HLNP, these functions were not fulfilled yet. There are a surprising small number of tourists who are made known of the park, not mention their consciousness of Hoang Lien's value. Furthermore, tour-guides had little chance to provide this kind of information as a large amount of visitors don't hire guides, 70.37% of domestic tourists and 57.14% of foreigners.

*\* Level of assurance for ecotourism quality*

Almost all international tourists are quite satisfied with ecotourism in the park and its current services. They are willing to suffer from the lack of normal standards of infrastructure and tourism facilities for the nature of marvelous landscapes and traditional living style of local people.

On the contrary, domestic tourists are not completely satisfied. Their limited time does not allow them to explore the nature, which they think is beyond their withstanding of health and finance. Instead, they only visit famous near-by sites, which are convenient to access; thus, Sapa Town is their favorite. Consequently, their main comments come to tourism facilities, transportation upgradation. Some complains about a high price of ecotourism to conquer Fansipan or the management and quality of tour guides. In the other hand, foreign tourists' comments focus on environmental conservation and

experience gained after the trip.

*\* Relationship between ecotourism and conservation*

It is suitable to develop ecotourism in HLNP. It not only helps to fulfill the need for understanding and living close to the nature but also enhances visitors' consciousness and responsibility to preserve natural, cultural and environmental value of the destination. Moreover, it economically supports conservative function of the park.

Now, HLNP management board is partially financed by the money from ecotourism activities led by the Center for Environmental Education and Ecotourism and a proportion of entrance fee. Ecotourism also maintains the relationship with national and international organizations, attracting research and investment projects by preservation units such as animal conservative organization, multi-national zoology organization, IUCN, and so on.

Furthermore, developing ecotourism spares room for restoration of traditional festivals and customs, which are on the verge of extinction, for example, *mua khen, hat giao duyen* (traditional folklore and dance) and other famous handicrafts.

*\* Relationship between ecotourism and local community*

Tourism industry has financially supported the local community, both individual and social as a whole. However, there is a wide gap between different groups. Kinh people who live near or within the town and the frontiers of the park get quite a high income, approximately 1-3 millions VND/person/month, doing business such as accommodation and restaurant operation or photographing. H'Mong, Yao, Tai people who live in the area of the park make use of tourism by selling hand-made products,

souvenirs, working as tour guides, porters or using their houses as tourist accommodation or visiting sites. They can earn 100.000-600.000 VND/person monthly. Others, who live deeply at the core of the park, get almost nothing from tourism.

### 5. Orientations and solutions for ecotourism territorial organization in HLNP

As the growing demand of tourism in Vietnam as well as in National Parks still goes on, developing ecotourism in HLNP is the right orientation for its sustainability. Based on national and provincial strategies and policies, added with present tourism conditions, it is high time principles of community-based ecotourism were fully considered in developing the province's tourism plan. The next sessions are major

suggestions to pay attention to.

#### 5.1. Spatial organization for ecotourism territory

Spatial organization for ecotourism territory is the key to the conservation in National Parks, setting seeds for tourist management to ensure sustainable development. Territory for ecotourism should be divided into sub-regions with different functions based on current functional zones of the park:

- Prohibited area: is the area for strictly conservative function, including Fansipan region of 11,875 ha, which is home to primitive ecosystem with many unique and endangered flora and fauna. This only opens for intensive researches or strictly observed ecotourism activities. To enter this zone, several principles are applied:

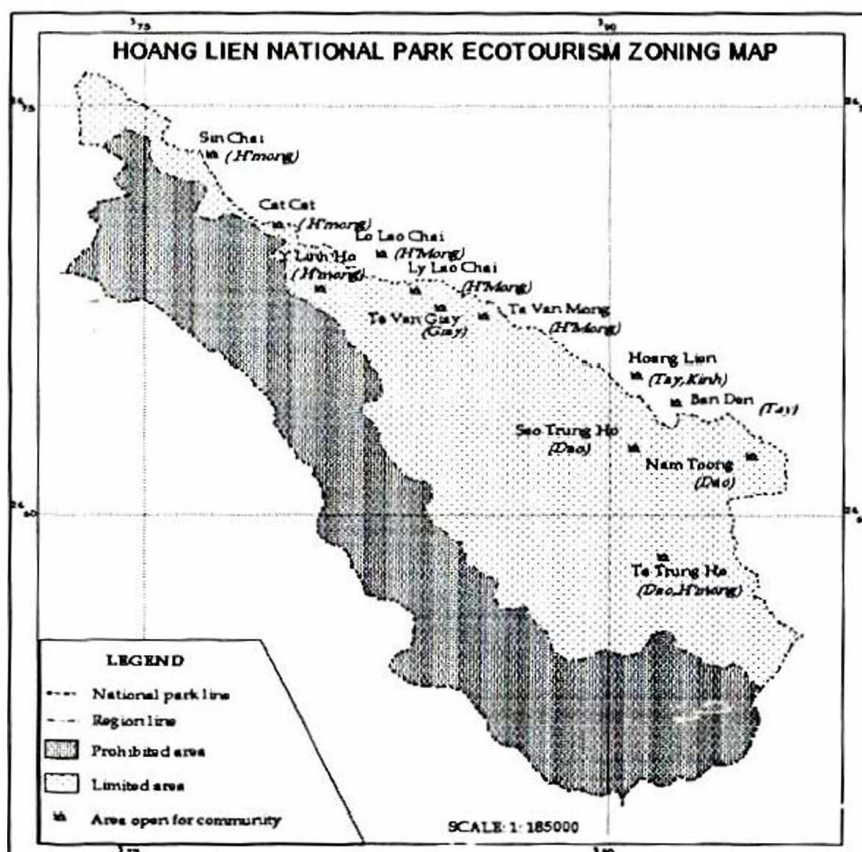


Fig. 1. Hoang Lien National Park ecotourism zoning map.

- Limited area: is the zone for re-habiting the ecology of the park, which covers the area of some popularly-visited villages like Sin Chai, Ban Den, Ta Trung Ho, Lao Chai San, etc. This zone is considered as the buffering zone of the park to maintain bio-diversity of the prohibited area and support conservative function. In this zone, a few ethnic groups still keep their simple life which is said to be well-adapted to the unspoiled nature and an advantage to operate other ecotourism activities besides ecotours. They are sightseeing, village-visiting, camping, community-based activities.

However, tourism activities should be strictly supervised in order to minimize their environmental impacts. Natural resources can be used for tourism with a controlled and limited amount. Advance registration is required. Intensified environmental education is given to enhance the quality of ecotourism. Carrying capacity is desired. Motorbikes and cars are possible to use but simple modes like bikes, animal-drawn carriage are encouraged. Regulations and rules are fully announced for good cooperation from tourists. Budget should be allotted to educate local people and help them start their business from tourism activities (e.g. initial investment in handicraft activities).

- Area open for tourism development: includes the area of the communes on the boundary of the park's buffer and those along inter-provincial roads. Tourism services may be in form of accommodation renting, shopping. In this zone, Sapa Town plays a role of logistics, as well as the most significant welcome-gate for eco-visitors to the park.

### 5.2. Operating more ecotours

In order to satisfy increasing demand, it is

necessary to carry out further research and operate more ecotours besides the current ones. For example, eco-managers and tour operators could bring the following sites into operation: Deo May (Cloudy mountain pass), Fairy Forest, Low Bamboo Forest, Muong Hoa Valley, Ta Van Day plum farm, Ta Van Mong plum farm, Ban Ho terraced fields. In addition, there should be a flexible combination between recent ecotours and tours to the buffer area to diversify and widen tourism territory. Possible tours can be: Tram Ton - Fansipan - Y Lin Ho; Sapa-Thac Bac - Tram Ton - Lau Vong Canh - Deo May - Sapa; village-specialized tours and community based tours to Ta Van Day plum farm, Ta Van Mong plum farm. Multi-provincial and multi-national ecotours should also be encouraged. For the best result, a close cooperation between Department of Trade and Tourism of Sapa and Centre for Environmental Education and Ecotourism is required.

### 5.3. Proposals

To accomplish the above orientations for successful ecotourism development, the following solutions should be implemented simultaneously:

- Create favorable policies to attract FDI and domestic investment on doing researches, exchanging education and knowledge on planning, managing and operating ecotourism effectively.

- Strengthen management and supervision in order to assure that ecotourism principles are fully applied. Other schemes, fees, rules and regulations should be set as deterioration tools in addition to scientific management based on carrying capacity.

- Reinforce the market studies in parallel



with advertisement on ecotourism in HLNP through all types of mass media, namely radio, newspapers, internet, etc.

- Consolidate infrastructure and facilities for ecotourism. Special attentions should be put to operating more tours and tourist sites aiming at spatially redistributing the overcrowding trips in a specific place, thus minimizing the environmental impacts.

- Intensify environmental education: education and reeducation, improvement of knowledge, experience and consciousness for both managers and labors; widen mass media effects on environmental education for tourists and local communities

- Attract the local people to participate and help them to get benefits from tourism activities, thus improving their living standard.

## 6. Conclusions

Hoang Lien National Park, situated on a huge range of mountains, characterized by abundant and unique natural and cultural attributes, is highly potential for ecotourism activities. Developing ecotourism here not only benefits tourists but also supports the bio-diversity conservation. It can be a powerful tool for poverty alleviation to households in the deep end of the park. However, it is an uneasy task. To construct sustainable ecotourism, further researches should be

carried out, and the territory should be well organized. A system of solutions should be implemented to harmoniously target at two aims: economic and conservative. It is highly recommended that local people be involved in and get benefits from tourism activities to reach a better living condition, which in turn lowers the pressure of resources' destruction. Only then the management board will be able to fulfill its functions.

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