

# Promotion Of Local Knowledge For Forest Protection In The Central Highlands Region Of Vietnam

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**Abstract:** The Central Highlands Vietnam is an area having enormous potentiality for forest resources, biodiversity and is a watershed of many large river and stream system of Vietnam. This is also the habitat of many ethnic minorities and has relations with cross-border ethnic groups. Therefore, it has unique multicultural character, especially diverse and unique local knowledge treasure. Local knowledge of the Central Highlands ethnic minorities play a very important role in all aspects of community life in which there is a intimate attachment with the forest culture space and forest land. So, upholding the values of local knowledge in forest protection is an important factor promoting the rapid and sustainable development of this area. The paper is the research results of the project "Studying the use and promotion of local knowledge for proactive and responsive to climate change in Vietnam's regions", code BDKH.26/16-20.

**Keywords:** Local knowledge, Forest protection, Central Highlands Vietnam.

## 1. Introduction

The Central Highlands area consists of 5 provinces: Kon Tum, Gia Lai, Dak Lak, Dak Nong, Lam Dong, natural area of 54,638.4 km<sup>2</sup>, accounting for 16.8% of the country's area, population of 5,504,560 people and is one in the seven economic - ecological area of Vietnam today. As a multi-ethnic land, so the Central Highlands has a unique cultural identity with famous epics and gong cultural space closely associated with forest and forest land. In addition to cultural diversity, the Central Highlands is a region with great potential for forest resources such as: Chu Mom Ray National Forest, Dak Uy Special-use Forest, Kon Ka Kinh National Park, Yok Don National Park, Chu Yang Sin National Park, Madagui Forest and Cat Tien National Park... In addition, the Central Highlands is also an area with many nature reserves of Vietnam, such as Ngoc Linh nature reserve (Kon Tum province), Kon Chu Rang nature reserve (Gia Lai province), Nam Nung nature reserve, Ta Dung nature reserve (Dak Nong province), Bidoup - Nui Ba nature reserve (Lam Dong province) ... With great potential for forests, the Central Highlands is also considered an area with a diversity of fauna and flora with many rare and precious animal species, wood and medicinal plants.. According to current statistics, "List of medicinal plants in the Central Highlands consists of 1,633 species belonging to 6 vascular plant branches. Currently there are many animal species in the red book discovered, such as gray-shanked douc langur in Kon Tum, extremely precious gray cow with a small amount in Indochina"<sup>3</sup> However, after a period of setting the target of economic growth to the top, by converting forest land to production land, converting and improving poorly natural forests to planting industrial crops, converting forestry land to construction land together with the massively construction of hydropower plants and the speed of urbanization and free migration... leading to the over-exploitation of natural forests, thus "the area and quality of Highland forests continuously decreased from 2,836,083 hectares in 2010 to 2,553,819 hectares in 2017"<sup>5</sup> Not only was the forest area degraded, but many kinds of animals lived commonly in the Central Highlands before and now they are almost disappeared. "Previously, the Nai Ca Tong lived quite popular in many forests, now also disappeared

from Gia Lai and Kon Tum. In Dak Lak, Nai Ca Tong only has very few individuals. This animal is continuing to be threatened and also at risk of extinction. Birds in the Central Highlands also suffer the same fate. Precious birds such as peacocks, star worms, pink purple pheasants, Polyplectron bicalcaratum and Anthracoceros have been heavily hunted. Currently, there are some species of birds not found in primary forests anymore. Due to the impact of human and forest shrinking, the habitat is altered, many species of birds and wildlife have migrated to other places (they may disappear from the Central Highlands but it is unlikely they are extinct)"<sup>3</sup> At the same time, the Central Highlands is now suffering more and more disaster consequences with more destructive power such as floods and flash floods in the rainy season; drought, hot sun in the dry season; Other dangerous weather phenomena such as thunderstorms, tornadoes, hail appear more and more, the rainy season is shortened but the rain and flood lasts longer again. Besides, the increase in thermal amplitude, daytime and nighttime humidity, make some places are losing its inherent moderation. This situation has been affecting the environment, water resources, food security ... and indirectly related to climate change in Vietnam. If it is not soon overcome and improved, these effects will last long, the consequences cannot be determined. On the above issue, on March 18, 2019, the Prime Minister of Vietnam issued Decision No. 297 / QĐ-TTg approving the Scheme on protection, restoration and sustainable forest development in the Central Highlands in the 2016 period - 2030, in order to "Preventing and repelling forest loss, gradually recovering and developing forests. Accordingly, by 2030, the forest area will reach about 2.72 million hectares, increasing the forest coverage rate to 49.2%; sustainable forest management, protection and development, ecological environment protection, conservation of biodiversity, provision of forest environmental services, contributing to socio-economic development, ensuring national security, social order and safety of the Central Highlands region"<sup>1</sup> Besides, the Government of Vietnam has also conducted "Mobilize households living in and near forests to sign forest protection commitments; development and implementation of forest protection conventions; strengthening forestry extension

activities, building high-quality forestry models, encouraging agro-forestry development, sustainable and effective cultivation”<sup>1</sup>. The calling and mobilization of people, especially ethnic minorities living in the Central Highlands, is considered an appropriate direction in the protection and sustainable forests development in the Central Highlands, while also helping to uphold the local knowledge of ethnic minorities living in the Central Highlands of Vietnam in forest protection today.

## 2. Results and discussion

### 2.1 Local knowledge and the value of local knowledge in forest protection

Local knowledge has been making an important contribution in solving local and ethnic issues. This knowledge is considered creative products, initiatives and selected, handed down from generation to generation. Local knowledge of local ethnic minority people in the Central Highlands is very diverse such as social management, community, animal husbandry, curing for cattle, agricultural production and afforestation... associated with cultural space of mountains and forests in the Central Highlands. In each ethnic group in the Central Highlands area, although there are different forms of customary laws, customs and regulations... but those knowledge are all sacred to protect green forests, protecting the pristine features of forests, biodiversity and ecological balance of mountains and forests. For example, the Ede ethnic people in the past have conceived that while the forest trees still have water wharves, the wharf is still in the village. Everyone in the village has to all keep the forest trees because they are the life source for the village. The customary law of the Ede people stipulates: Prohibit burning fire indiscriminately in the forest, anyone who causes forest fires will be severely punished; building houses is not allowed to cut big trees; entering the forest is not allowed to cut straight trees; chopping big trees must leave seedlings, do not cut down the sprouting trees, chopping one tree must plant seven trees, not clearing of trees for cultivation in areas with old forests and forests with big trees... H'rê ethnic group stipulates: do not to cut trees in areas where many dead trees, do not take plants that have vines; not be slash and burn, no grazing cattle upstream, and at the watershed of the village. Water taken from the vein source in the forbidden forest to be believed by the compatriots that will help the rice better. Each member of the community are all self-conscious, respect and not violate into taboos, such as sacred forest zone, sacred water sources, sacred plants, sacred animals ... Customary laws of the Ma ethnic group prohibit all members of the village to damage sacred forest zones in any form, especially not cutting trees for timber, hunting, gathering, grazing cattle in sacred forests... The survey results of the research team show that: Currently, many localities in the Central Highlands have been harmoniously combining in intercropping many forestry trees and agricultural trees on a land area. It has been effective in maintaining vegetation, creating new landscapes and increasing soil fertility, limiting weeds, increasing water permeability and water retention, reducing erosion and surface leaching, limiting floods in the rainy season and maintaining water for the dry season, limiting forest fires, contributing to make sustainable ecological environment, limiting pests and diseases in plants ... Besides, the Central Highlands provinces have put in a number of indigenous tree

species such as water oil, oyster oil, black star, green mulch, red litchi, peach tree, and deep bass to be cultivated on many ecological regions. In the past, indigenous trees were destroyed by many localities when they thought that they do not have economically effective as other crops, but the destruction of indigenous trees caused ecological imbalance, made exhausted soil, economic value of replaced trees declined ... Therefore, indigenous tree planting is getting more attention because of its natural adaptation to the environment, ecology, and soil conditions. Along with replanting indigenous tree species, the localities in the Central Highlands have also combined planting other crops to improve economic efficiency such as planting mixed with teak trees or oil-wood with acacia hybrid. The application of mixed cultivation model has both short-term trees for business and large timber trees, while ensuring economic benefits for the people, while protecting and developing effectively high forests. This issue does not appear separately, but according to a system that is closely linked to protecting forest resources as well as land and water resources. Therefore, local knowledge of ethnic minorities has become the foundation to help them to choose the most appropriate solutions to manage and use forest resources effectively. That knowledge has helped them to manage and use forest resources better than solutions having scientific names but not practical and effective because the research and application process is often not taken seriously. This is considered as one of the important factors in protecting forests and contributing to the conservation of animal and plant species of the Central Highlands Vietnam. However, the use and promotion of local knowledge still faces many difficulties and challenges such as awareness; the selection of appropriate knowledge, remove the customs; combining with modern knowledge; much knowledge is lost...

### 2.2. Solutions

In order to overcome difficulties and challenges in upholding local knowledge in protecting effective and sustainable forest resources in the Central Highlands, in the next time, it is necessary to implement well and synchronously the following solutions:

Firstly, along with sanctions to strictly punish forest destruction acts, the State needs to have policies to encourage and support to maintain community institutions for ethnic minorities upholding their local knowledge in forest protection and development to quickly restore forests. According to the statistics of the Ministry of Agriculture and Rural Development of Vietnam, only for 5 years (from 2010 to 2014), "The total forest area of the Central Highlands has decreased more than 300,000 hectares, the forest coverage has decreased by 6,1%, down to 48.5%. Not only the area but also the reserves fell sharply; Forest reserves in the Central Highlands region decreased by more than 57 million m<sup>3</sup>, corresponding to a decrease of 17.4% ... High-value precious woods are still very rare, only in remote and dangerous areas; rare and precious herbs are exploited exhausted, and the number of forest animals also decreased sharply ". Therefore, if there is no policy to encourage the promotion of local knowledge in forest resource protection and development as well as timely and effective prevention of deforestation, it will lead to ecological environment, biodiversity, weather, and climate... will also be seriously affected. In addition, the forest is also associated with Gong

culture, beliefs, and living space of ethnic minority communities in the Central Highlands.

Secondly, promote propaganda, dissemination and education for people to overcome inferiority complex and disregard for the traditional knowledge capital of his father. Accordingly, people must be proud of their own intellectual heritage, because this issue not only helps promote local knowledge in forest protection but also contributes to preserving traditional cultural values. Because cultural heritage is an invaluable asset, connecting the ethnic community, the core of national cultural identity, the basis for creating new values and cultural exchanges, it is necessary to "preserve and promote traditional cultural identity of ethnic minorities to be suitable for the actual situation ...Promoting the role of cultural subjects in the development of traditional culture of ethnic groups"<sup>2</sup>

Thirdly, collecting, researching and re-disseminating local knowledge capital to determine that knowledge is appropriate and assess its effectiveness and sustainability in forest protection. Combining to use traditional knowledge and scientific knowledge in a reasonable way in forest protection. When planning research or directly participating in projects to conserve forest resources, it is important to preserve local knowledge, so it will not be expensive and take a long time. Besides, it is necessary to study and put into education the knowledge content that is suitable to the specific conditions of each locality and culture of each ethnic group.

Fourth, strengthening land allocation and forest allocation to people to help community forest management, implement sustainable shifting cultivation towards agroforestry. Doing well on this issue is also implementing guidelines and policies of the Party and State of Vietnam. "Continue to allocate forests in association with land allocation to communities and households for management, especially, the forest area is managed by the Commune People's Committee"<sup>1</sup>. Because in the Central Highlands, many local ethnic minorities have been attached to the forest for generations, their lives are mainly based on the forest, so they have a very rich knowledge system related to forests. Land and forest allocation have great significance in the protection, development and reasonable use of forest resources. Besides, it is also a condition to protect the ecological environment and develop sustainable livelihoods for people in the Central Highlands.

Fifthly, there is the policy of encouragement and reward for people or communities who have a lot of effort in bringing local knowledge values into forest protection and development, conservation of rare genes of plants and animals of the Central Highlands forest. Besides, it is necessary to socialize to protect and exploit local scientific and intellectual values in forest protection. Doing well on this issue will help promote local knowledge in forest protection in the Central Highlands region.

### 3. Conclusions

It can be seen that local knowledge is one of the important elements of culture, contributing to the ethnic identity and is the property of each ethnic group in the development process, reflecting the relationship of each community to the

natural and social environment. The development experience of many countries in the world in the past decades shows that science and technology are not enough to meet the diverse needs of local people. A lot of local knowledge has been applied to bring high efficiency, challenged and selected for a long time, suitable to the culture and customs of each ethnic group. Therefore, it is necessary to consider local knowledge as an important source of "assets" in the process of national development in general, in sustainable forest resource protection in the Central Highlands in particular.

### 4. References

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