

# **A study on the forest-related traditional knowledge retained by Dong ethnic group**

**– A case of Dengcen village in Guizhou province, Southwest China-**

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## **ABSTRACT**

Local communities have relied on traditional knowledge (TK) to manage forests and utilize forest resources for centuries, and the TK helped them keep the capacity of forest ecosystems in providing environmental services. Such forest-related knowledge (FTK) including local peoples' ecological knowledge, culture, religious belief and forest management know-how has been transmitted through generations. The erosion of FTK is identified counting against sustainable forest management. Nevertheless, states and trends of FTK as well as the causes of FTK erosion retained by local communities remain unknown due to the lack of research. This study aims to understand the situation of FTK retained by local community in China and further identify factors that have affected FTK retention. For this sake, the retention rate of FTK retained by a Dong ethnic group called Dengcen – which is located in Guizhou province in southwest China – was measured by utilizing Vitality Index of Traditional Environmental Knowledge (VITEK) method. Besides, there are four demographic or socio-economic factors have been demonstrated making contribution to the changes of FTK. We suggests, to help the FTK to be maintained, measures on both local level and government level should be conducted.

**Keywords:** traditional knowledge, indigenous knowledge, forest management, local community, local people, southwest China

## **INTRODUCTION**

Forest-related traditional knowledge is a cumulative body of knowledge, practice and belief, handed down through generations by cultural transmission and evolving by adaptive processes, about the relationship between living beings with one another with their forest environment (Berkes et al. 2000).

Over the course of last few decades, unprecedented global deforestation and forest degradation have been continuing at an alarming pace. Against such a backdrop as well as considering the origins of the environmental problems, many questioned whether modern forest science and technologies of resource management is up to the task of maintaining sustainable forest environments (Parrotta, Youn and Camacho, 2016; 刘金龙, 张明慧, 和志鹏, 谷莘, 2013). Knowledge and practices have been used by local or indigenous communities to manage and utilize forest resources for centuries, without jeopardizing the capacity of forest ecosystems to provide material and non-material

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services for future generations. Therefore, there is a growing interest in the role of forest-related traditional knowledge in ensuring the sustainable utilization and management of ecosystem services (Boafo et al., 2015).

### **METHODOLOGY AND DATA COLLECTION**

The data was obtained through field survey in Dengcen village from 16th July to 26th July in 2016, 9th Jan to 21st Jan in 2017. The study site is located in the southeast of Qiandongnan Miao and Dong Autonomous Prefecture in Guizhou province, covering 108°51' - 108°54'E, 26°10' - 26°13'N.

This study applies to Vitality Index of Traditional Environmental Knowledge (VITEK) which is a tool for measuring the retention and change of TEK. In addition, Mann-Whitney U Test and One-way ANOVA are used to find out the differences in FTK retention under influences of several contributory factors.

### **RESULTS AND DISCUSSION**

Decline of FTK from the oldest generation to the youngest one is indicated by this study through VITEK statistics. Moreover, one's age, gender, experience of living in urban area, and education level are demonstrated having influences to FTK retention. Each demographic or socio-economic factor has been influencing FTK retention by different ways.

To help the FTK to be maintained, this study suggests that FTK education program for young local people and community-based ecotourism should be developed at local level. In addition, refined education system and policy of culture diversity conservation should be implemented by government.

### **CONCLUSION**

This study is the first practice of VITEK methodology in the field in China. According to the results, erosion of FTK within a local community is demonstrated, which is similar with the results of previous research conducted in Yunnan province, China (Z. Yuan et al., 2014). The sharp declines and long-standing erosion of FTK with complicated causes should raise concern on FTK retention.

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