

Economic Value of Non-Timber Forest Products Used by the Largest Hmong Community in Thailand

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ABSTRACT

The Khek Noi Hmong village, the largest Hmong community in Thailand, settled in Phetchabun province, the lower part of northern Thailand. The villagers living in this area closest to Thung Salaeng Luang National Park were chosen as samples. Questionnaires and interviews were used to collect data on the economic valuation of Non-Timber Forest Products (NTFPs) between October 2012 and September 2014. Of all 3,034 households in 12 villages, 353 households were selected by random sampling. The NTFPs samples were 118 items, and were classified into 6 categories including socio-economic background of samples surveyed. Based on the market price method, the economic average net value of the NTFPs was 34,487.22 Thai Baht (THB) per household per year or 104,634,225.48 THB per community per year. The analysis revealed that 6 categories of NTFPs were woods, herbs and spices, wild crops and wild fruits, mushrooms, wild animals and insects, and ornamental plants. The top 3 categories of all NTFPs items, having the most utilization, were bamboo trees (*Bambusa* sp.), wild pigs (*Sus scrofa*), and eucalyptus (*Eucalyptus globulus* Labill.) with a net value per year equal to 31,251.60, 974.40, and 396.70 THB, respectively. Moreover, the seasonal calendar of each type of the NTFPs was created to understand a relationship between the forest dynamics and the human needs. The NTFPs in lower northern Thailand are therefore the most important coping strategies, including informal safety nets for the local people living close to the park.

Key words: NTFPs, biodiversity, local value, hill tribe people, northern Thailand

INTRODUCTION

Most rural people in many areas of the world, if not all, live in and along the periphery of forests and a large number of these people rely upon Non-Timber Forest Products (NTFPs) for their subsistence and partly for cash income (Olmos, 1999). The NTFPs include wood fuel, charcoal, honey, resin, spices, and raw materials for handicrafts from rattan, vines, bamboo, grasses, and wildlife products such as bones and skins for natural and ornamental purposes (Narendran *et al.*,

2001). These products may be collected by virtually anyone in the community, and are free of charge. People who are heavily dependent on forests for their livelihood primarily on a subsistence basis were often indigenous people or people from ethnic minorities. They are, thus, usually outside both the political and economic mainstream (Fisher *et al.*, 1997).

Since the 19th century, the Royal Thai Government blamed the hill tribe people for the destruction of forests in northern Thailand. They believed that education is the most important measure to restrain hill tribe people from destroying the natural's forests (Vithoon, 1989; Delang, 2005). At present, the hill tribe people in this area are helping to conserve the threatened forests but the quality of the forests is reduced, leading to a decrease in the biodiversity. While doing so, it was apparent that the NTFPs sector was an important source of their subsistence and income of people in the community. There has been much debate on the sustainability of this extraction for the long-term ecological integrity of forests. A number of researchers maintained that NTFPs can contribute to the economic well-being of the rural people and that the villagers should be involved in the conservation of biodiversity (Shankar *et al.*, 1996; Mesquita, 2000; Vodouhe *et al.*, 2009; Nahayo *et al.*, 2013). Sustainable harvest of renewable natural resources such as NTFPs could also be defined as the level of harvest that does not damage the ability of the harvested population to replace itself (Hall & Bawa, 1993).

Although several standard techniques can be used to provide the valuation of NTFPs e.g. travel cost, hedonic pricing, and contingent valuation methods (Svarrer and Olsen, 2005; Turner *et al.*, 2010; Vaughan *et al.* 2013), the market price method is a typical valuation technique for measuring the economic benefits from the NTFPs. Moreover, it is relatively easy to give a monetary value and to obtain for established markets (Kahn, 1998).

The mountainous highlands in the lower part of northern Thailand are the home of the Karen, Hmong, and other hill tribes. This research focused on the Hmong community at Khek Noi village in Phetchabun province. This area is the largest Hmong community and is also the 2nd largest hill tribe group in Thailand. This community consisted of 12 villages with a population of approximately 3,034 households or 13,246 people living in the community (Community Development Plan, 2011). It is possibly the largest number of Hmong people outside China and the United States (Yang, 2008). The Khek Noi Hmong village is situated close to the Thung Salaeng Luang National Park (Figure 1) which is one of the biodiversity-rich natural forests in the lower part of northern Thailand (DNP, 2010). However, there is little information on the NTFPs in this area. Thus, the purposes of this study were to identify the biodiversity of NTFPs appropriated by the Hmong households and to estimate the economic values of NTFPs by using the market price method.

MATERIALS AND METHODS

Populations and samples

Local people aged 15 and over living with their families from 12 villages of Khek Noi community were the respondents of the questionnaire-interview survey.