

Karen Ethnoecology and Its Contributions to Ecotourism

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Abstract—This paper discusses traditional ecological knowledge of human-forest relationship in the Karen indigenous community in northern Thailand. The study explores the values of human-forest relationship, examines how this traditional knowledge is preserved in the community, and learns to share it to visitors. Through in-depth interviews and focus group discussions, the findings reveal local ways of life, perceptions, attitudes, knowledge, and values of the Karen community toward their ethnoecological identity; and in what ways they can exchange the knowledge to visitors. Consequently, traditional ecological knowledge of the Karen provides implications and contributions to ecotourism development.

Keywords—Karen, indigenous ecological knowledge, ethnoecology, and ecotourism.

I. INTRODUCTION

In recent years, the prevailing impacts of tourism on biodiversity is calling for a paradigm shift that truly sustains the tourist destinations, and to greater extent, the planet earth or world ecology. Notably, human beings are key agents of ecological destruction, climate change, and alterations in biodiversity. People take nature for granted and seem to be gradually distant from the natural surroundings. That being the case, Huay Hin Lad Nai Karen community, in Wiang Pa Pao district, Chiang Rai province, Thailand, offers a critical examination of the indigenous ecological knowledge (IEK), especially symbiotic relationship with the forest—the main source for the world biodiversity.

Karen people, the largest hill tribe, have been in northern Thailand and Myanmar for centuries. Their indigenous knowledge, which is centered upon the preservation of the biodiversity of the forest and ecological system, has been constructed and passed on in the forms of oral tradition for centuries (Delang & Wong, 2006). This makes their indigenous wisdom on human-forest relationship intrinsically interesting to further examine and present their indigenous insights to wider society.

The indigenous knowledge can bridge the gap between

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humans and their natural surroundings and become exemplars of the co-existing harmony between human and nature (Luangaramsri, 2001). The larger society can learn a great deal from the indigenous people's traditional skills in sustainable management of complex ecological systems (Chao and Hsu, 2011). The purpose of this research is to investigate the phenomenon of indigenous ecological knowledge by examining the relationship between indigenous folk (the Karen) and their surroundings (forest) - a source of their ethnoecological values, and exploring the ways in which the indigenous communities preserve their traditional knowledge and skills, and exchange it to visitors.

II. LITERATURE REVIEW

A. Ethnoecology

According to Casagrande (2012), ethnoecology comes from two words ‘ethnic’ which refers to human culture and ‘ecology’ which refers to “interactions between organism and the physical environment”. Hence it focuses on the relationship between humans and non-human environments, and underlines what the indigenous or ethnic people “consider worth attending to” and their valuable traditional knowledge and skills that “allow humans to subsist and flourish” (Frake, 1962 in Casagrande, 2012). Ethnoecology is not merely limited to the traditional approach to plant, animal, habitats, and other ecological phenomena, but rather it involves what underlines the human mind that determines human behavior.

Ethnoecology stresses on the indigenous people who are culturally, socially, and spiritually concerned with their environments and in fact it centers on cultural memory and sense of place (Santasombat, 2013). In other words, the ethnoecological study helps us fathom the relationships between culture and ecological systems or people and their environment as well as “the role of community-based conservation in fostering and undermining socio-ecological resilience” (Institute for Environmental Sciences and Technology, no date) and grasp the core of how the relationship originates and becomes a tool for human adaptation to nature (Trakansupakorn, 1997).

B. Indigenous Ecological Knowledge (IEK)

The indigenous knowledge or so called ‘local knowledge’ has been widely discussed (Delang & Wong, 2006). Rao and Ramana (2007, p.129) attributed indigenous knowledge as “the basis for local decision-making in agriculture, health care,

natural resource management and other activities in rural communities". Indigenous knowledge is embedded in community practices, institutions, relationships and rituals. Indigenous ecological knowledge (IEK) receives a great deal of attention for the last two decades. IEK was also known as traditional ecological knowledge which is an encompassed concept of uniqueness and particularity to a culture and society as well as long-standing and transmittable knowledge that guides human societies as to how to interact with the natural milieu (Nakashima, Prrott & Bridgewater, 2000). Indigenous knowledge in general is locally based, dynamic and unique to a given culture or society and juxtaposed with the international knowledge system derived from academic research (Warren, 1991). IEK has been affirmed to offer a process of preserving the natural and environmental milieu and has been increasingly recognized as an important means for managing local ecosystems and landscapes (Luangaramsri, 1996; Jiao et al, 2012).

Unfortunately, there is a tendency to commoditize and commercialize indigenous ecological knowledge. In so doing the socio-cultural and ecological capitals are utilized as merely a stepping stone to sell local cultural capital and organic products. It becomes a world of production and not world of people and their place. There is still little emphasis on appreciation and "indwelling" in the local cultural and ecological values.

Similarly, IEK sounds less developed and relies on intuitive sense of a person. In fact, it is rather the living knowledge of the dead and not the dead knowledge of the living. The significant point of concern is that the foundation of the indigenous ecological knowledge is simply embedded in the oral tradition and manifested in day-to-day life. Oral tradition is a traditional transmission of knowledge among the indigenous communities. In this way, it needs to revisit and renew it in order to be able to utilize and transmit it to wider society as a way to coexist with nature.

C. Ecotourism

The International Ecotourism Society (TIES) is now defined ecotourism as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education" (TIES, 2015). Ecotourism should ground its foundation on the promotion of the indigenous ecological knowledge in their conservation, communities, and interpretation. In general, ecotourism promotes nature-based tourism activities, environmental conservation, and contribution to economic benefits for local communities (Huang et al, 2015). It also serves as an alternative to mass tourism that promotes sustainable development for nature-and culture-based tourism (Kontogeorgopoulos et al., 2013). To some extent, the form of ecotourism constitutes environment as the key tourism resource for natural-based atmosphere, sustainability, educational process, and local participation (Diamantis, 2004).

Unfortunately, the voluminous literature on ecotourism suggests the disparity between the economic drive and symbolic

or intangible value of the people and place. In shorts, people and place come last after profit. The prefix 'eco' has a couple of nuance—ecological sustainability and economic benefit—or in three main concerns, i.e., people, planet, and profit (Brightsmith et al, 2008). The primary concern should be people and place and the depth of interpretive value of the indigenous; the profit should otherwise derive from the interaction of the host-visitors. Although, ecotourism brings about the economic gain for the community, it may degrade the whole meaningful intact and nuclear relationship between humans and nature.

III. RESEARCH SITE

A. Huay Hin Lad Nai Karen Community

Huay Hin Lad Nai is a Karen ethnic community located in Moo 7, Ban Pong sub-district, Wiang Pa Pao district of Chiang Rai province. Wiang Pa Pao is a district bordering with Doi Saket and Phrao districts of Chiang Mai and with Wang Nuea and Mueang Pan District of Lampang province. Huay Hin Lad Nai is approximately 17 kilometers from the Wiang Pa Pao District Office, 105 kilometers southwest of Chiang Rai city and around 121 kilometers northeast of Chiang Mai city.

Topographically, Huay Hin Lad Nai is classified as hill evergreen forest with an elevation of 800-1000 meters above sea level and within a mixed-deciduous forest, the leaf-shedding forest and thus there are various tree and plant species. Biodiversity of the forest is still intact. A large portion of the village's land is hilly terrain. Hin Lad is called according to the topological structure of the terrain and stream and near the watershed. There are 14 streams running in the region thus the water supply runs unceasingly in the community.

The climate at the location is pleasantly cool all year round and rather cold in the cool season. Still the community is within the tropical climate zone. Thus, summer lasts from February to May, the temperature is rather high yet with the ecosystem of this green area and upland watershed, the place experiences a relatively pleasant climate. Rainy season usually lasts from May to October. In cool season, the temperature can drop lower than 10 degrees Celsius. The climate is suitable to cool season plants and flowers all year round as well.

The forest area is comprised of 10,954 Rai (1,753 ha.) and divided into two main functions. The first is the upland field and residential areas around 1,228 Rai (196 ha. or 10 % of the total area) meant for basic consumptions such as house-building wood, food growing, and agroforestry gardens. This area is preserved and forbidden to cut any trees or hunt any animals within the 1-km diameter and so a forest for cultural rituals and beliefs. The second area around 9,726 Rai (1,556 ha. or approximately 90%) is called a community forest and preservation area since it is the watershed. The area is used for shifting cultivation (162 Rai or 26 ha.), tea cultivation as well as upland rice farming (168 Rai or 27 ha.), and being protected and not allowed to invade (CESD, 2013).

Demographically, Huay Hin Lad Nai is part of Moo 7 in Ban Pong sub-district with 107 people and 20 families but if including all three administrative units (Hin Lad Nai, Hin Lad

Nok, and Huay Sai Khao) is around 402 residents and 86 families (CESD, 2013). Only Huay Sai Khao is a Lahu ethnic community, the other two are Karen (Ban Pong sub-district Office, 2014). Huay Hin Lad Nai according to the Karen tradition, when a man gets married, he has to move in to live with the family of his spouse. For the last consecutive decades, the number of the population at Hin Lad Nai, has been almost the same. Thus the community is relatively small and has less human impact on forest

B. Karen People.

The term “Karen” or “Kariang” or “Yang” is used by the people outside the community, the Karen call themselves Pgaz K’Nyau which means “human person”. The Karen are indigenous people with their own culture. In this study, Karen is referred to as Pgaz K’Nyau, and sometimes interchangeably used to mean the same group of people. There are an estimated 400,000 Karen in Thailand, the largest ethnic minority in the country. They prefer settling in valleys surrounded with evergreen forest, conifer forest, and mixed deciduous forest at 400 m to 1200 m above sea level and riparian areas or water meadows (Santasombat, 2004). There are many subgroups within Karen ethnicity. Notably, the subgroups are distinguished by the color of their clothing and in Thailand the main subgroup are the Sgaw and the Pwo or White Karen who shares the same ancestry as the Karen in the Karen State in Myanmar. Nowadays, the Sgaw Karen are more populated than the Pwo in northern Thailand. In this study, the main focus is the Sgaw Karen in northern Thailand.

Since the early part of the last century, Pgaz K’Nyau communities and widely dispersed across Myanmar and northern and western part of Thailand, especially Myanmar-Thailand border (Graber, 2006; Hiyami and Darlington, 2000). Pgaz K’Nyau has long history and unique cultural identity, arts, traditions and rituals. In 19th century, the historical evidence was recorded by the British government officers and later American Missionaries on the life of Pgaz K’Nyau and Mon. In present day Myanmar, this ethnic group is still fighting with the Burmese military for independence (Trakarnsupakorn, 1997; Luangaramsri, 2001).

The Pgaz K’Nyau are indigenous to the hills and plains and so prefer to build their settlement in the midst of hill forests, valleys and plains, along the streams, and lowlands in mainly the provinces of Tak, Mae Hong Son, and Chiang Mai (Hiyami & Darlington, 2000). There is also evidence that Karen have been in Thailand since 600-700 years ago.

IV. METHODOLOGY

This study utilizes a qualitative method which allows the exploratory narrative to examine the intangible value of the ethnological knowledge, the main focus of this study. The approach is chosen due to dynamic ethnic culture, ecological knowledge, and feelings of villagers as well as the interplay between the awareness local and non-local experiences. To support the qualitative findings, observations, document analysis, in-depth interviews, and focus group discussions are primarily utilized. In-depth interviews as well as focus group discussions will provide more accurate collective reflections.

The target populations are indigenous Karen people including the elders, the youth, and the house ladies or the mothers.

All data from interviews, observations, and textual analysis were documented structurally and processed in an organized fashion. A deductive qualitative approach to thematic analysis in a narrative form was used to recap and conceptualize the results and findings by showing the relation between data and the attested indigenous ecological knowledge. The results provide a link between the values of Karen ethnoecology and the local sustainable livelihoods in relation to biodiversity and articulate the local perception on the traditional knowledge as well as contributions of the indigenous worldview to ecotourism development.

V. FINDINGS AND DISCUSSIONS

A. *The values of community indigenous ecological knowledge (IEK)*

At Huay Hin Lad Nai Karen community, the ground for human-forest relation is on We live in and benefit from forest, we need to take care of forest, and forest is our source of life. In effect, the glimpse into the facet of authentic Karen ethnoecological knowledge emerges from this relation. Sandis (2014) contended that indigenous knowledge is defined within the construction of the present and the interpretation of the past, and this can never happen if there is no relationship as a ground for socio-cultural and physical context.

Within the embrace of rich forest, the indigenous Karen have their own form of community forest management and the community reckons as to how to manage their living space and producing land with their own ethnoecological knowledge. This community has blended traditional agriculture—agroforestry as well as rotational farming-- with evergreen forest and pine forest along the hills. For agroforestry, the community does not single out nor reclaim the forest area for designated tea or coffee plantations but instead integrates plantations into the forest. For rotational farming, the community prioritizes only the needed space though usually multiple fields for cultivation or “planting crops on the hill,” which rotates between short and long period (7-10 years) for the land to recover itself. Furthermore, the traditional rituals and belief characterize how they relate respectfully with nature and acknowledge their place in it without claiming ownership but instead stewardship.

The traditional knowledge of the Karen has helped preserve the biodiversity of the forest and ecological system for several years. For instance, the shifting cultivation or swidden agriculture is underpinned by recent researches that this process benefits earth’s biodiversity with an alteration of fallow periods where the land is left to its recovery stage of fertility (Trakansuphakon, 1997). The indigenous knowledge of choosing soil and preserving watershed is also paramount to their wellbeing (Hiranwong, 2003). All theses have been fabricated as the Karen local wisdom of human-forest relationship or in shorts livelihood-based forest of the Karen (Delang & Wong, 2006). Caring for forest is an integral part that the community perceives paramount and takes ardent responsibility to nurture the natural surrounding as its source of life. This has changed some misunderstandings about the ethic

Karen in which they have been perceived as victims of deforestation.

B. Local consciousness and preservation of Karen traditional knowledge

Considering themselves as the people of forest, the Karen perceive humans and nature as part of the same holistic diversity (Luangaramsri 2001; Tomforde, 2003). The local way of life has led to self-sufficiency and sustainable livelihoods, and resolute socio-cultural identity. This becomes local self-consciousness of their presence in forest. The community tries to maintain with the same prospect in the mindset of the youth. Jiao et al. (2011) wrote that “[if the young believe] they are an integral part of the natural landscape or that they are spiritually connected to the flora and fauna that sustained their forebears,” (p.260) the traditional practices will remain alive. Such self-awareness of the people in this community indicates that how animators (local residents) are truly able to appreciate their traditions, and find appropriate means to embody them. Interesting self-awareness really dictates cultural assumption, inner determinants, experience and competences to act and continue to live out the living tradition of the ancestors. Though the tradition is not fixed and ready-made product of value but invented through time to help the locals adapt themselves to their environment (Santasombat, 2013). Obligation as a result becomes self-imposed duties to face the changing reality within the environments in which they happen to act.

The Karen community is an oral tradition community. The oral tradition is a means of socio-cultural transmission that is bridging the generation gaps and other ethnic rituals which carries a lot of ethnoecological wisdom from the older generation to the younger generation (Boonlue, 2002). The youth here point out that the transmission comes in two ways: theory and praxis. For theory is about stories, legends, folktales, and etc. that teach and inculcate the values of life and living; for praxis is simply learning by doing. This has been characterized through their way of living. Besides, the knowledge and the process of thinking is transmitted through practical means they do together as a way of teaching by doing and learning by doing. For instant, the youth are working with their parents in the field every time possible. Such local way of life has led to self-sufficiency and sustainable livelihoods, and resolute socio-cultural identity.

As a result of the interviews, the elder informants are generally satisfied with the community youth since many of them return to the community and make their living within the community through traditional knowledge and skills. The community pride rests on how the community can self-generate some income from a surplus on top of what the community needs.

For decades, the community elders have been spearheading the good practices based on the interrelation of people and forest, because the Forestry laws are insufficient to care for forest (Luangaramsri, 2001; Santasombat, 2013) without true awareness and deep relation with the forest. In return, good practice of caring for forest has earned the community the Green Globe Award, the global certification for sustainable tourism in 1999 for a decade (1999-2008). In 2013 the title “Forest Hero” was given to one of the local scholars by the United Nation

(UN), the awardee as a representative for the entire community to celebrate the fruit of their conscientious effort to care for forest.

C. Community perception of tourism development

In recent years, the values of Karen traditional knowledge at Hin Lad Nai community have become known to several groups of visitors. Sharing with visitors is one of the main tasks that the community has been doing for some time. When asked about tourism, they are of the opinion that they are open to it with caution and discretion. However the overall interviews, tourism is perceived as a threat to the environment and to the indigenous community. The growing concern is the sustainable and environmentally friendly approach to tourism especially to the ethnic communities in northern Thailand where more and more activities are now taking place. The influx of people in mass tourism does more harm than good to the ecotourism destinations.

The community rejects any external dominant imposition on the community economic benefits and the type of just-looking-around or traipsing mentality visitors with no human interaction. The authenticity or real-life experience is still significant here and the locals will not dilute it to mere staged display for the visitors since it is contrary to their way of life and might lead to conflicts and dissatisfaction among the locals (Simons & De Groot, 2015).

In shorts, the visitors have to blend into the life of the locals, and not vice versa. Thus, the community cautions about “tourism” because this might eventually alter the socio-cultural and environmental landscape in the community; and tendency to rely too much on tourism can also arise. Above all, the local participation in decision-making and involvements cannot be omitted. The community prefers a type of educational and transformative tourism where the community is a venue for knowledge exchange and learning encounter. Stronza & Durham (2008) affirmed that ecotourism works best when it builds on the local knowledge since ecotourism is unique and grounded on educational and interpretive value. The Huay Hin Lad Nai community has chosen to position itself as an exchanging encounter destination that is in line with the local rhythm and socio-cultural community activities for the visitors to experience the local ethnoecological knowledge.

Lastly, exchange of the traditional knowledge on forest guarding and securing the source of food and of life can lead to better understanding and recognition of the people in the mountains. The constant building right understanding with the people outside the community is also important through knowledge exchange and negotiation with the local authority. The new mutual understanding should foster the strengthening of local wisdom, identity, and the nourishing of diversity in society.

VI. CONCLUSION

The Karen community at Huay Hin Lad Nai not only aims at self-sufficiency as well as self-dependence but also proves to outsiders that indigenous or traditional way of living does benefit the forest where they have long lived. Focusing on an indigenous perspective, the community offers to relook at the

human-forest relation as an integral part of the local socio-cultural and environmental landscape for sustainable living and wellbeing in a harmonious way. This relation becomes a basis for local consciousness and philosophical worldview in preserving the values of indigenous ecological knowledge along with skills and passing them on to the younger generation as well as sharing and exchanging with the community visitors who are interested in their traditional livelihoods. The community welcomes visitors on its own terms and under the guidance of community regulations. The community still prioritizes the socio-cultural values over monetary gain. Thus, the external domination from outside to appropriate traditional ecological knowledge runs contrary to the will of the local people. Accordingly, visitors must comply to the rhythm of the community as a basic requirement to visit the rural village at Huay Hin Lad Nai.

This is what the Karen community not only contributes to ecotourism but also to society's consciousness of how the indigenous community can harmoniously live with nature for decades, what we can learn from them, and how to let the local community decisions take precedence over other concerns or benefits.

VII. REFERENCES

- [1] Boonlue, V.... "Cultural capital and struggle for symbolic power of a Pgaz k'nyau community" (Unpublished master's thesis). Chiang Mai University 2002.
- [2] Brightsmith, D. J., Stronza, A., & Holle, K. "Ecotourism, conservation biology, and volunteer tourism: A mutually beneficial triumvirate," *Biological Conservation*, vol. 141, no.11, pp. 2832-2842, September 2008.
- [3] Chao, C.-L., & Hsu, P.-H. "Learning about the development of eco-tourism in the context of the Smangus tribe's traditional ecological knowledge," *GeoJournal of Tourism and Geosites*, vol. 7, no.1, pp.7-21, May 2011.
- [4] Delang, C. O., & Wong, T. "The livelihood-based forest classification system of the Pwo Karen in western Thailand," *Mountain Research and Development*, vol. 26, no.2, pp. 138-145, May 2006.
- [5] Jiao, Y., Li, X., Liang, L., Takeuchi, K., Okuro, T., Zhang, D., & Sun, L. "Indigenous ecological knowledge and natural resource management in the cultural landscape of China's Hani Terraces," *Ecological Research*, vol. 27, no.2, pp. 247-263, March 2012.
- [6] Kontogeorgopoulos, N., Churyen, A., & Duangsaeng, V. "Homestay tourism and the commercialization of the rural home in Thailand," *Asia Pacific Journal of Tourism Research*, vol. 20, no.1, pp. 29-50, November 2013.
- [7] Simons, I. & De Groot, E. "Power and empowerment in community-based tourism: Opening Pandora's box?" *Tourism Review*, vol.70, no.1, pp. 72 – 84, April 2015.
- [8] Tomforde, M. "The global in the Local: Contested resource-use systems of the Karen and Hmong in northern Thailand," *Journal of Southeast Asian Studies*, vol. 34, no.2, pp. 347–360, June 2003.
- [13] Santasombat, Y. *Biodiversity Local Knowledge and Sustainable Development*, 2nd ed., RCSD Chiang Mai University. 2013.
- [14] Stronza, A., & Durham, W. H. (Eds.). *Ecotourism and conservation in the Americas*. Wallingford, UK: CABI. 2008.
- [15] Rao, V.L.N., & Ramana, G.V. Indigenous knowledge, conservation and management of natural resources among primitive tribal groups of Andhra Pradesh, In V. Bhasin & M.K. Bhasin (Eds). *Anthropology today: Trends, scope and applications* (pp.129-134), New Dehli: Kamla-Raj Enterprises, 2007.
- [16] Sandis, C. (Ed.). *Cultural heritage ethics: Between theory and practice*. Cambridge: Open Book Publishers, 2014.
- [17] Hirawong, T. "Transfer of indigenous knowledge in ecology of Karen people in the area of Inthanon National Park," (Unpublished Independent Study). Chiang Mai University, Chiang Mai, Thailand, 2003.
- [18] Trakansuphakon, P. "Transmission of the body of knowledge relating to the shifting cultivation system of Karen communities," Unpublished Master's thesis, Chiang Mai University, (in Thai). 1997.
- [19] Nakashima, D., Prott, L. & Bridgewater, P. Tapping into the world's wisdom, UNESCO Sources, 125, July-August, 12, 2000.
- [20] Casagrande, D. (2012). Ethnoecology. Available <http://www.eoearth.org/view/article/152681>
- [21] Huang, C.-C., Liang, W.-Y., Tseng, T.-L., & Wong, R.-Y. (April 2015). A rough set-based corporate memory for the case of ecotourism. *Tourism Management*. 47. pp. 22-33. Available doi:10.1016/j.tourman.2014.09.004
- [22] Institute for Environmental Sciences and Technology (2016). Ethnoecology laboratory. Available <http://icta.uab.cat/Ethnoecologia/>
- [23] The International Ecotourism Society [TIES] (2015). What is Ecotourism? Available <http://www.ecotourism.org/what-is-ecotourism>