

A Study of Cultural Heritage and Sustainable Agriculture Conservation as a Means to Develop Rural Farms as Agritourism Destinations

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Abstract

Rural communities possess advantages of natural resources and culture heritage to attract agritourism development; its success will greatly increase if rural communities observe and practice self-sufficiency farming and employ sustainable agriculture practices while preserving their local cultural heritage. The objective of this paper is to investigate the rural cultural heritage, the agricultural landscape, the local traditions, the local sustainable agriculture practices, the locally practiced sustainable conservation methods, and farmers sensitivity to conservation that are appropriate for agritourism development. In addition, the conservation of local farming traditions and cultural heritage can serve as the basic foundation for agritourism destination farm development. The awareness of vernacular landscape, culturally constructed landscape, farming livelihood, cultural heritage, and traditional self-sustaining agricultural practices are the strong building blocks to foster prosperity, ecological integrity, cultural identity, social well-being, self-sufficiency, biodiversity, and sustainable conservation in rural villages that wish to become the agritourism destination.

Keywords: Agritourism; Sustainable Agriculture; Cultural Heritage; Rural Farm; Conservation

Introduction

The objective of this paper is to investigate the rural cultural heritage, the vernacular landscape, the local traditions, the local sustainable agriculture practices, and locally practiced sustainable conservation methods that are suitable for agritourism development. This research aims specifically at identifying the above mentioned fundamental ingredients of farming traditions and cultural heritage to assist in the sustainable agritourism development and heritage conservation and to support the strategic development of agritourism.

The studied area is approximately 50 square kilometers which consists of three villages in Chiang Khan District. These areas have abundant local cultural heritage, natural resources, traditional agriculture practices, and traditional lifestyle; its agriculture practices are thriving on the fertile soil of the alluvial plain where the streams and rivers from the mountains are flowing. There are a variety of agricultural products within local markets which visiting tourists have yet to be exposed to. These villages have been a hub for local farm products and a market network within the district and the region with unique characteristics and opportunities for the development of agritourism. Agriculture with treasurable resources of nature and culture are the gateway for rural development and this will successfully happen if rural communities significantly observe and practice self-value and sustainable agriculture. The findings of this research can serve as the foundation for the development of strategies for agritourism in the rural villages.

Cultural landscape and rural tourism models

Agricultural landscape, rural vernacular landscape, and cultural heritage can be presented as an open air museum displaying culture on the land by local people (Davis and Corsane, 2014: 119, 128). Community-based agritourism (CBAT) engages productive elements of community participation approach, heritage resource management, and sound rural tourism development plans (Songkhla and Somboonsuke, 2013: 54; Pakdeepinit, 2007: 80-103, 242-244). There are various methods of developing agritourism such as a strategic plan by the Tourism Authority

of Thailand which “encourages the further development of tourism attractions in rural areas, the conservation of rural cultural heritage and environments, and local participation in rural tourism development” (Srisomyong, 2010: 110). Other models use elements of agricultural labor, knowledge and local production improvement with motivation for agro-tourism promotion (Songkhla and Somboonsuke, 2013: 60-62); plan activity and activity guidelines regarding the local resources and interest to offer visitors hands-on local agricultural practice experience (Tourism Authority of Thailand (TAT), 2012: 53). One model focuses on the land resources using geographic information system (GIS) with overlaid mapping of topography data, land use data, network analysis as well as field survey using quantitative and qualitative data to study the potential development for agro-tourism (Phandee and Pinthong, 2012: 647); the other model focuses on increasing agricultural resource conservation, agricultural diversification, added value to agricultural resources, local community involvement, sustainable marketing and added value product (Kurnianto et al., 2013: 12). Another study applies community process on variety of tourism resources as a means of sustainable development and conservation (Pakdeepinit, 2007: 143). This study intends to focus on the cultural heritage, the sustainable agricultural practices along with the site, the demography, the land use patterns, and the natural resources that are the fundamental ingredients of establishing agritourism; this study also looks deeper into the local traditions, the locally practiced sustainable conservation methods, and farmers’ sensitivity to conservation that is appropriate for agritourism development.

Tourism and communities

In community-based tourism (CBT), culture plays an important role and is essential for conserving and maintaining the local traditions and way of life of the host communities themselves and to those interested tourists (Boonratana, 2010: 284). A community’s heritage and assets are represented and used as products and services for visitors, offering visitors an opportunity to appreciate natural uniqueness and cultural authenticity while visiting the local community. “The impact of tourism

on the environment includes depletion of natural resources, pollution, soil erosion, natural habitat loss, and loss in the authenticity of cultural heritage.” (Khanal and Babar, 2007: 5, 7) The community should set the threshold for the level of visitation to avoid negative impacts from over tourism.

Cultural Heritage is one’s own-self-identity of each place; the rural village lifestyle is the result of long tradition reflecting the cultural heritage values, tangible and intangible, of the local communities. There are local heritage of nature and culture which possessed and practiced by local people including the landscape, agriculture, ecosystem as a natural heritage and local festival, language, dress, crafts, and lifestyle as cultural heritage (Hall et al., 2011: 29).

The traditional agriculture practices, festivals, weaving, and farm house styles are the enrichments for today’s communities and it helps to connect people to cultural origin. In the studied villages, farmers spend most of their time practicing agriculture, doing weaving of local material, crafting and enjoying religious festivals. It is evident that a community’s lifestyles and cultural heritage are a reflection of the value of the local people and is an intangible asset in tourism development (Sartipipour, 2012: 91-92). The distinct local culture and rural lifestyle and culture heritage make the villages special and unique and this will foster and support agritourism development with cultural awareness and conservation. The lakeside community in Kwan Phao, Payao, Thailand is one example of using three rural elements: “natural attractions, religious attractions, and lifestyle and occupational activities” as major tourism resources. The “close-knit relationships” make tourism a safe enterprise to develop (Pakdeepinit, 2007: 55). The World Tourism Organization (UNWTO), a United Nations specialized agency sponsored many projects to study the Intangible Cultural Heritage and its relationships to tourism. One case study utilizes the “four-day festival as a catalyst of rural tourism development” in the Kozara Mountain region in the Republic of Srpska, Bosnia and Herzegovina. “As part of the festival, each village has a marketplace displaying eco-food and handicrafts while visitors are also encouraged to explore the living

culture of the villages.” (Šukalo, 2013: 6) This is a nice effort to establish tourism connection with intangible cultural heritage. Another study of current themes in Japanese tourism in cultural heritage indicated that “revival of traditional local festival” and “local heritage-oriented” events are developed for tourism trend as a means of local culture promotion and conservation (Prideaux et al., 2008: 112). Another case study is “Making Art for Livelihood – Scroll Painters Village in West Bengal, India” where artists were trained and assisted in using their creative talent and heritage of communities to demonstrate traditional craftsmanship and market their handicraft products. The project “demonstrates that cultural heritage may be used as a concrete means for local empowerment and the improvement of people’s lives.” (Bhattacharya, 2013: 5)

Cultural heritage and agricultural traditions

Cultural heritage includes tangible value such as artifacts, natural or built landscape, building, museums, monuments and intangible value such as language, artistic performances, music, beliefs, festivals, knowledge, folklore, values, rituals and traditions, and way of life. Cultural Heritage either “tangible or intangible”, is related and connectedly shown the previous past and the present society “for a specific purpose” (Catibog-Sinha and Wechtunyagul, 2011: 30-31). Similarly, heritage means “anything that has been inherited” and heritage is the reflection of “the change attitudes to the past” in various means and expression. Therefore “cultural heritage is highly reflective of society in which it is created and valued” in touchable (tangible) and untouchable (intangible) forms (Salazar and Porter, 2004: 2). Also stated in a Council of Europe magazine that “Beyond its aesthetic value, it provides a unique and irreplaceable record of certain aspects of intangible heritage: local responses to the conditions of everyday life, such as techniques and skills, and ways of organizing social life.” (Council of Europe, 2008: 3) This echoes the definition of Roberts and Hall (2001b: 161) that “relationships with the land and the skills associated with agricultural work” shape local lifestyles and community identity.

The local heritage presents a unique expression and beautiful identities. Understanding heritage should not only focus on cultural

elements but also on natural heritage which are great attributes in agricultural villages. Natural heritage is a component of biodiversity including various species of plants and animal, ecosystem, and the complex integrations between them and the physical environment (Catibog-Sinha and Wechtunyagul, 2011: 31). One of the main attractions for tourism in such a developing world like Thailand is not only the appreciation of cultural heritage but also the appreciation of natural heritage. In the remote rural farm areas of Chiangkhan, the heritage of these three villages both tangible and intangible may be an avenue through which the visitors start to grasp a basic understanding of the past and/or living culture which they could not experience in their urban environment.

Agritourism for rural development

There are many definitions of Agritourism, most definitions of agritourism involve the combined themes of agriculture and tourism. Professionals and researchers have many perspectives in defining agritourism as follows. Agritourism is “any practice developed on a working farm with the purpose of attracting visitors” (Barbieri and Mshenga, 2008: 168); agritourism is “a specific type of rural tourism in which the hosting house must be integrated into an agricultural estate, inhabited by the proprietor, allowing visitors to take part in agricultural or complementary activities on the property” (Marques, 2006: 151) Agritourism is “tourist activities of small-scale, family or co-operative in origin, being developed in rural areas by people employed in agriculture” (Kizos and Iosifides, 2007: 63). Agritourism is happening in rural areas and involved with rural local people with all activities in festival, craft, museums, cultural event and farm event and its products (Roberts and Hall, 2001a: 16). According to the Utah Farm Bureau, agritourism is “any activity that allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy agricultural related activities.” (Burr and Petrtyl, 2011: 1). These activities are directly connected to the local culture and local resource such as farm products, local handmade, farm tour and farm stay and educational rural area visit, (Roberts and Hall, 2001a: 16) and with notions and interrelationships in rural tourism between “farm-base tourism,

culture and attraction” (Sharpley and Sharpley, 1997: 9). Similarly, based on the results of Center for Profitable Agriculture study, agritourism is farming-related activities offered on a working farm or other agricultural setting for entertainment or educational purposes (Bruch, 2013:1), this concurs with Ohe’s (2014) view that agritourism activities are provided by initially farmers and a group of local farm producers in rural area. (Ohe and Ciani, 2014: 2).

For the past few decades, the sustainable agriculture trend has been focused in many countries as the gateway out of the environmental and social problems caused by conventional agricultural systems and practices. Sustainable agriculture is the whole corroborated biodiversity and environment system on farming practices. It contributes to long term viable opportunities for all stakeholders economically and socially (Colliver et al., 2010: 3). Sustainable agriculture development for sustainability is not only for the individual approach of development but the holistic integration approach of agriculture practice, socio-cultural, ecological resources and economy of the local people in the rural community (Roberts and Hall, 2001a: 54-55).

Sustainable agriculture

Agriculture in this region is not quite well-managed and sustainably developed because of geographical and environmental constraint, farmers’ skills, knowledge deficiency, and market resources limitation in the region. In other words, there are problems caused by wrong farm practice of farmers and resulted in degradation and pollution of soil, forest, water, and salinity (Suksri et al., 2008: 3, 5), thus valid suitable paradigms and methods of traditional local wisdom and practices should be considered and taken into account for sustainable agriculture. One of the most important notions is that Thai agricultural resources have diversified varieties and are inherited with rich rural heritage; those agriculture practices support and promote the heritage through sustainable agriculture and adjustment to suit in various contexts (Jitsaguan, 2001: 3-4). Additionally, sustainable agriculture practices could contribute and raise awareness among farmers in communities of conservation of their farm heritage along

with the sustainable development of well-being (Pattananurot, 2012: 3-4); sustainability is the leading factor that could enrich long-term crop productivity, environment protection, and adaptive capacity of agricultural, environmental, economic and social change (Lichtfouse et al., 2009: 3). A new concept of eco-museum which views landscape as open air museum displaying culture on the land has been coined by Davis and Corsane (2014). Agricultural landscape, vernacular landscape, and cultural heritage can be presented as an open air museum displaying culture on the land by local people. Particularly, in the rural farm villages where agricultural land, daily farm practices, cultural heritage and culturally constructed landscape are fundamental components for living eco-museum for people to visit and experience and for local farmers to appreciate and have stewardship of their own heritage for sustainable conservation (Davis and Corsane, 2014: 119).

Conservation and self-sufficiency

Agricultural practices have been embedded in Thai society for a long time and can still be seen now in many parts of rural regions especially in Northeast region of Thailand. Many kinds of agriculture practices along with natural farm resources have been managed by local farmers such as hill orchards, multi-cover planting, strip and wetland farming, valley rice paddies, stream-side vegetables, livestock, organic farms, and self-sufficient farms. This attractive integration of cultural and natural resources makes the studied area a great place to develop and promote a cultural and natural tourism destination. Additionally, it is important that local villagers, their cultural heritage, agricultural traditions, and natural resources are recognized and are presented to visitors with sustainable conservation tourism in mind. To everyone, this will also encourage and enhance a great awareness of nature, culture, and livelihoods for a CBAT. One of the goals of the CBAT development is to generate economic benefits while creating a self-reliant and an equitable society. Within this framework, a community ought to look within its own culture and way of life for answers. When Japanese corporations strive for their long term sustainability, one of the concepts they engage is to focus on the employee-

oriented approach to problem solving in the corporate business. Thailand on the other hand has very interesting approaches rooted in the Buddhist religion and the King's sufficiency philosophy. During the Asian financial crisis, His Majesty bestowed the philosophy of the "Sufficiency Economy" to the nation on December 4, 1997 (The King, 2007: 1). The King's New Theory in agriculture has engrained in rural farmers sustainable agriculture practices in water resource conservation, soil conservation, sustainable agriculture, and self-reliant community development. The application of Sufficiency Economy Philosophy that "values the importance of traditions, culture, the Thai way of life, and local heritage" (Suwanraks, 2000: 13) to the CBAT development can lead to a harmonious society.

Agritourism in rural villages of Chiangkhan with cultural heritage conservation and sustainable agriculture conservation is the main theme of this research, therefore looking into the studied area's local tradition, the cultural heritage, the agricultural landscape, the local sustainable agriculture practices, and farmers' sensitivity to conservation to support agritourism development is critically important. Successful agritourism activities in the rural community greatly involve local community, utilize the local assets and resources, and improve the local economy with profit sharing while allowing visitors to experience unique tourism destination and conserving the tourism resources at the same time.

Research Methodology

Agritourism with sustainable conservation of cultural heritage and natural landscape is now a worldwide focus of interest. In this context, the district of Chiangkhan with its unique architectural and cultural heritage resources attracts tourists and has become a mecca for the urban tourists. These people flocking from the urban areas will soon discover the fun and treasure of the rural way of living; the demand to visit agricultural farms and homestays at the local villages is growing. Therefore many concerns are raised:

- Do these rural villages have the potential for agritourism and sustainable tourist destinations?

- Are local farmers engaging in sustainable conservation practices?
- Are there attractive cultural heritage and local traditions for the tourism development?
- How can farmers and visitors participate in tourism engagements?

A survey was conducted among volunteers from the households of these three villages to gather fundamental data and answer questions arisen above. It is essential of this study to investigate the site, the demography, the land use patterns, the natural resources, the cultural heritage, and sustainable agricultural practices that are the fundamental ingredients of establishing agritourism.

This research employs a case study approach and qualitative and quantitative research tools including primary and secondary data collection. A field survey prepared with questionnaires was conducted to the target farm households for primary data collection, the qualitative and quantitative attributes were then analyzed by the researcher.

The methodology

The core part of this research is to collect the primary data that would expose the characteristics of agricultural practices and cultural heritage and confirm the suitability of sustainable agritourism with these inherent assets in the studied villages. With the help of the local leaders who announce the intention of survey, more than 100 households joined the survey. The survey consists of six parts: demography, farm information, conservation sensitivity, attitudes/perspectives of tourism and sustainable conservation, sustainable agriculture practices/self-sufficiency farm, and tradition and lifestyle of village.

Population, the sample group and related information

This paper is focused on the phenomenon of agritourism, so the farm units or the households who operate the farm practices must be the target choice. The target population was household leaders or representatives from their households in the targeted three villages namely Umung, Phabaen and Buhom located in the rural Chiangkhan area. The data from households acquired from the sub district office indicated that Umung has 391 households, Phabaen has 322 households and Buhom

has 525 households. The total household count is therefore 1238. For this research, one of the criteria is to determine the sample group and the sample sizes for the survey. Yamane (1967:886) provides a simplified formula to calculate sample sizes, the formula was used to calculate the sample sizes as shown below. A 90% confidence level is assumed for the equation. $n = \frac{N}{1+N(e)^2}$ given n = number of samples; N= number of total households; e = error, designated at 0.096 significant level. After the formula was applied, the number of sampled sizes was 100. An error at 9.60% significance level or 90.40% confidence would still acquire sufficient meaningful results (Israel, 2003: 4; Yamane, 1967: 886).

Site Information

The studied area consists of three rural farm villages: Ban Umung, Ban Phabaen and Ban Buhom in the Chiangkhan district of Loei province. A combination of natural landscape, farming practices and culture heritage are a unique identity and great local assets for the visitors.

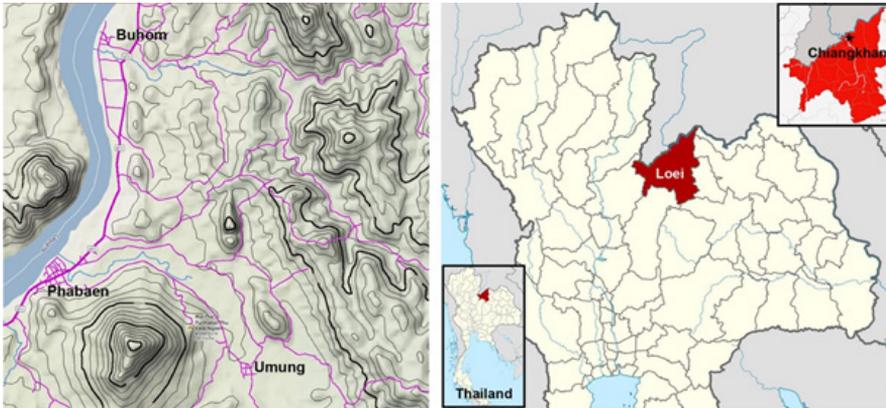
The studied area

The studied area encompasses three rural villages wrapped by the Mekong River and several mountain ranges. The mountain streams from the upland feed into the fertile alluvial lowland create thriving agricultural practices for the studied area. The jagged mountain ranges with its abundant forest and agricultural resources coupled with local cultural heritage, traditional farming knowledge, and sustainable agriculture practices make this studied area even more attractive for agritourism. (Figure 1)

Land use patterns

The satellite images from Google Earth displays comprehensive patterns of various land use in the studied area. After careful aerial photo interpretation, land use classification (Colwell, 1997; Jensen, 2000), and site checking, three maps of land use patterns of the three villages were created by the author using an overlay of satellite images and Adobe Photoshop™. These maps demonstrate the healthy distribution of rice paddies, orchards, plantations, mixed-agricultural farms along with forests and streams. Rice paddies tend to be located along the river and canals

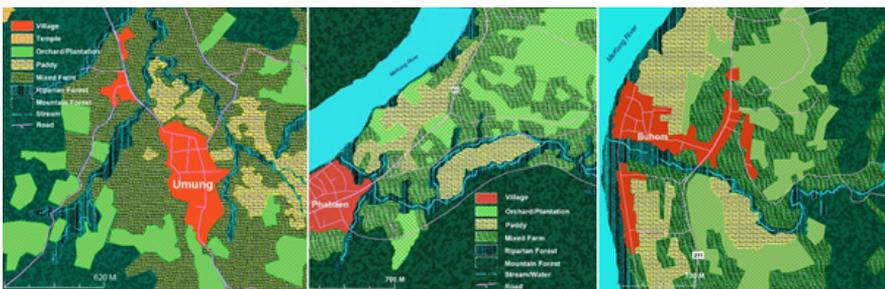
Figure 1: Topographic map and locator of the studied area



Source: Google Maps (2013) and Wikipedia (2013)

where water sources are abundant. Orchards and plantations are generally located on the upland and sloping foothill of the surrounding mountains. This presents a conservation challenge for farmers with slope stabilization mechanism. The riparian forest along the streams from the mountain is generally kept which provides a nice wildlife habitat. Roads and trails of transportation networks from villages to the farms are well developed. (Figure 2)

Figure 2: The sites and land use pattern of Ban Umung, Phabaen and Buhom



Villages of Phabaen and Buhom have the lowland characteristic along the Mekong River; the availability of farm lands, rice paddies and

orchards are mostly concentrated in lowland areas. Village Umung with its upland characteristics often develops rice paddies and orchards upon terraces and sloping foothills. These three maps are in general the description of the overall land use patterns; it classifies land uses into nine categories: Village, Temple, Orchard/Plantation, Rice Paddy, Mixed Farm, Riparian Forest, Mountain Forest, Stream and Road.

Results and Analyses

Local agricultural resources contributing to agritourism destination

Agritourism affords these rural Chiangkhan villages opportunities to develop and promote working farm resources with existing farm features, tradition, and practices. This study looks at the details of agricultural farm products and other natural features that can contribute to agritourism development.

Farm products: The natural resources of the Mekong River and the mountain ranges offer a multitude of opportunities for farming and cultural development. These three villages engage in fully traditional agriculture practices on varieties of uplands and lowlands; their farm products generate market activities and value added products. There are agricultural fields, farming resources and a variety of agricultural products in local markets such as banana, coconut, papaya, rubber, mango, pomelo, bean, corn, and herb. These villages have been a hub for local farm product and market network within the district. The survey found that 70-85% of farmers planted lowland rice in all three villages while 85% of Umung and 76% of Buhom farmers planted corn. All farmers planted other vegetables and cash crops such as egg plants, beans, herbs, chilies, green leaves, pumpkins and teakwood as a supplemental income. (Table 1)

Table 1: Agricultural farm products of rice and vegetable (survey n = 100)

	<i>Low-land rice</i>	<i>Upland rice</i>	<i>Corn</i>	<i>Egg plant</i>	<i>Bean</i>	<i>Herb</i>	<i>Chili</i>	<i>Pumpkin</i>	<i>Green leaves</i>	<i>Flowers</i>	<i>Teak</i>
<i>Umung</i>	75%	18%	85%	8%	0%	5%	13%	18%	13%	3%	3%
<i>Phabaen</i>	85%	4%	41%	19%	7%	15%	15%	11%	4%	4%	0%
<i>Buhom</i>	67%	15%	76%	15%	30%	6%	21%	18%	9%	15%	3%

The geography of the studied area is well-suited for different varieties of agriculture. Sloping mountains are used for mostly orchards and the valley flatlands are for rice paddies and other planting fields. Year round, there are seasonal fruits, crops and plants such as tamarind, mango, papaya, eggplant, rice, and corn. Many natural resources and landscapes such as local fruit, rice, flower, herb, wild animal, exotic forest, river, canal, stream, valley, and mountain can be found in the area. (Buhom sub district agriculture local office, 2013). The survey result supports the agricultural briefings from the Buhom sub-district office. A majority of farmers in three villages from 81% to 98% all planted banana; the next popular products are mango 65-93%, tamarind 40-70%, and rubber 41-52%. Other products such as grape fruits, coconuts, papayas, and guavas are ranged from low of 3% to high of 36%. The mixed growth and self-sufficiency farming these farmers are doing further explain the wide variety of crops grown. (Table 2)

Table 2: Agricultural farm products of orchards and fruits (survey n = 100)

	<i>Banana</i>	<i>Tamarind</i>	<i>Mango</i>	<i>Gua-va</i>	<i>Rubber</i>	<i>Papaya</i>	<i>Grape Fruit</i>	<i>Lime</i>	<i>Coconut</i>
<i>Umung</i>	98%	40%	65%	3%	58%	25%	3%	0%	8%
<i>Phabaen</i>	81%	70%	93%	19%	41%	19%	7%	0%	11%
<i>Buhom</i>	88%	45%	85%	9%	52%	36%	9%	9%	9%

Agriculture and natural features: The survey finds that rice paddies which are the main farm practice and tradition, have the highest occurrence with 70 to 76% among three villages. These three villages share similarity of agricultural character and culturally constructed landscape with plenty

of rice paddies, orchards, palm/rubber, farm huts and ponds/canals on working farms. Phabaen has the highest number of orchard farms at 89% occurrences while Buhom comes in at 64% occurrences. Almost 50 to 60 % of the farms among three villages have farm huts and vegetable gardens as part of the attractions. (Table 3)

Table 3: Agriculture and natural features occurrences in the farms (survey n = 100)

	<i>Orchard</i>	<i>Vegetable</i>	<i>Livestock</i>	<i>Rice paddy</i>	<i>Palm/Rubber</i>	<i>Canal/Pond</i>	<i>Dam</i>	<i>River</i>	<i>Farm Hut</i>
<i>Umung</i>	53%	53%	18%	70%	60%	25%	18%	13%	40%
<i>Phabaen</i>	89%	41%	19%	74%	44%	44%	4%	26%	52%
<i>Buhom</i>	64%	48%	18%	76%	45%	33%	27%	27%	61%

Local cultural heritage contributing to agritourism destination

Local farm lifestyles with tangible and intangible heritage values are found in the three villages; they are typical rural agricultural villages sitting by the stunning stretch of two mountain ranges and the stretch of the Mekong River bordering between Thailand and Laos. A survey was conducted to further investigate the details of the local heritage and lifestyles, the result unveils and affirms the interesting characteristics of the traditions, lifestyles, authentic culture, attractions, and local heritage of these villages.

Daily life experiences: The people of the area are bi-lingual and bi-cultural often speaking a second language, Thai-Lao. The unique locality of culture, customs, and lifestyles of these villages are simple but the relaxed feelings are real. Imagine one could come and stay in the farm hut and do hands-on farm activities, or go visit the local farm market and participate in the village festival. There are many local life experience that could be shared with visitors as the study points out. Agricultural trail trekking with 57 occurrences and hands-on farm activities with 47 occurrences are the most popular experience to share while village temple sightseeing, village festival participation, home stay and farmers’ market are the other popular lifestyles that the villagers could share with outsiders. (Table 4)

Table 4: Daily life experience could be shared with visitors (survey n=100)

	<i>Umung</i>	<i>Phabaen</i>	<i>Buhom</i>	<i>Total</i>
<i>Farm activities hands-on</i>	22	6	19	47
<i>Village/Temple sightseeing</i>	23	16	13	52
<i>Home stay</i>	10	6	7	23
<i>Agriculture trail trekking</i>	23	15	19	57
<i>Farmer market</i>	6	6	9	21
<i>Village festival participation</i>	18	11	11	40
<i>Farm field education</i>	3	1	8	12

Popular local festivals: Many of Thailand's annual events are determined by the lunar calendar, these three villages have their own festivals in celebration of local harvests of the seasonal crops along with many other national, religious, and local festivals. The popular traditional Songkran Festival in the villages (60 occurrences) is the Thai New Year and usually falls around the middle of the month of April. It is a time for local people to pay homage to Buddha images, clean their homes, and sprinkle water on their elders in a show of respect. Bun Bang Fai, a rainmaking festival, takes place in the northeastern province of Loei. Local people parade in the streets in highly decorated ghost masks and costumes. Loy Krathong, river spirits are placated for another year with gifts of Krathongs floated on rivers, canals and lakes on the night of the full moon. Krathongs are made of banana leaves and decorated with incense and candles, thousands of these beautiful boats light up the night. (Table 5)

Table 5: Yearly local festivals considered popular in the villages (survey n=100)

<i>Popular annual local festivals</i>	<i>Umung</i>	<i>Phabaen</i>	<i>Buhom</i>	<i>Total</i>
<i>Songkran (Thai New Year)</i>	21	18	21	60
<i>Loykrathong</i>	5	16	16	37
<i>Buddhist Lent-End</i>	21	12	15	48
<i>Bun Bang Fai (rain wishing)</i>	2	2	6	10
<i>Bun Phawet (merits & charity)</i>	31	25	28	84
<i>Community fruit parade</i>	3	1	8	12
<i>Other-temple donation, etc.</i>	3	0	1	4

The most cherished festival (84 counts) is Bun Phawet; this is a festival of merit and charity of the Buddhism festival held in March every year. It is the most respectful and spiritual ceremony to worship the rain ghosts. Villagers will gather at the temple for three days and share cooking, offerings, and celebrating traditional food to the ghosts at the rice field. During these three-day festivals all farmers are off work and join the festival; other village guests or relatives will come to visit and share the food and help with the festival. Another auspicious day celebrates the end of Buddhist Lent Day by lighting up the temples and pagodas with candle lights, lanterns, decorative lights to make offerings (light puja) to Buddha. Local authentic culture: Culture is the activity involving architecture, music, literature, food, and other arts. Culture is a set of ideas, beliefs, and ways of behaving of a particular society. The studied villages are old traditional Thai communities with their own authentic culture. In Thailand, food forms a central part of any social occasion. That is, food often becomes the social occasion in itself, or reason to celebrate. This is partly due to the friendly, social nature of Thai people, but also because of the way in which food is prepared and eaten in these local villages or homes. Language is another special aspect of this area, almost everyone in the village is bi-lingual and can speak Thai and Thai-Lao; this receives highest 64 counts of recognition from the villagers. Almost all of the population practice Buddhism but it is strongly influenced by animism and belief in assorted spirits. In spite of the harsh farm work and unpredictable weather affecting income, the people here are very friendly and happy; 56 out of the 100 surveys recognize this nice trait. Besides food, language, custom, and friendly people, the survey result indicated that local farmers also consider their village history very unique to outsiders. (Table 6)

Table 6: The local unique and authentic cultures or customs (survey n=100)

Local Culture Occurrences	Total	Umung	Phabaen	Buhom
<i>Village history</i>	60	28	15	17
<i>Local food</i>	47	18	12	17
<i>Language</i>	64	28	16	20
<i>Costume</i>	14	5	3	6
<i>Custom</i>	43	26	16	1
<i>Local festival</i>	50	17	18	15
<i>Vernacular architecture</i>	13	3	6	4
<i>Friendly local people</i>	56	26	13	17
<i>Other-rural landscape, environment</i>	2	2	0	0

Off-season farm activities: According to the results of the studied area, group hobby activities are the most popular off-season activities of the three villages that farmers gather together to have fun on social activities. (Table 7)

Table 7: Off-season farm activities in the villages (survey n=100)

	Weaving	Added Value Product	Group hobby activities	Traveling	Other
<i>Umung</i>	2%	2%	74%	7%	15%
<i>Phabaen</i>	3%	13%	65%	13%	6%
<i>Buhom</i>	7%	7%	51%	7%	27%

Local sustainable agriculture elements that support agritourism

This study investigates and explores the sustainable agriculture elements, practices and methods that are most applicable for this locality to support conservation and attract agritourism in the studied villages.

Sustainable agriculture practices engaged by local farmers: Local farmers in the studied villages use their traditional techniques, some pass on from generation to generation and some learned from farm organizations or educational institutes. Organic farming, herb/vegetable gardening, and self-sufficient farming are prevalent with 59, 42 and 39 counts respectively. (Table 8)

Table 8: Sustainable agriculture practices farmers do in the locality (survey n=100)

Sustainable agriculture practices	<i>Umung</i>	<i>Phabaen</i>	<i>Buhom</i>	<i>Total</i>
<i>Organic farm</i>	22	17	20	59
<i>Self-sufficient farm</i>	12	17	10	39
<i>Herb/vegetable garden</i>	15	10	17	42
<i>Home healthy cooking</i>	6	4	9	19
<i>Farm made and fresh produces</i>	7	6	8	21
<i>Other-fruit fertilizer</i>	2	0	0	2

Green open space and conservation: The survey tested farmers' understanding of the importance of preserving green open space and whether they apply multiple conservation methods to be sustainable. There are high numbers with 71 total counts of farmers who conserve woodland while preserve some wetland and grassland in the farms. There is uncultivated land with other open green space serving as green buffer. The most popular conservation practices are mixed cropping of 66 total counts while cover cropping and contour planting come next. Strip cropping and zero tillage practices also are practiced among the farms. Farmers occasionally adopt integrated farming systems not letting the farm space remain empty, but use it for multifunctional agriculture as a self-sufficient farm and sustainable farm practice. (Table 9)

Table 9: Green open space and conservation (survey n = 100)

	<i>Woodland</i>	<i>Wetland</i>	<i>Grass land</i>	<i>Open water</i>	<i>Uncultivated</i>	<i>Other land</i>
<i>Umung</i>	28	4	2	1	3	6
<i>Phabaen</i>	18	7	2	1	1	4
<i>Buhom</i>	25	3	1	1	4	2
<i>Total</i>	71	14	5	3	8	12
	<i>Terracing</i>	<i>Mixed Cropping</i>	<i>Cover cropping</i>	<i>Contour planting</i>	<i>Strip cropping</i>	<i>Zero tillage</i>
<i>Umung</i>	1	31	9	5	4	6
<i>Phabaen</i>	1	14	16	5	1	1
<i>Buhom</i>	2	21	13	12	8	3
<i>Total</i>	4	66	38	22	13	10

Self-sufficiency farming: Local farmers use many practices and methods in the context of self-sufficiency farming. Use of animal dung waste as organic fertilizer is common farm practice. Similarly the use/ recycle of plants and fruit waste as a fertilizer exhibits the good potential of organic farming and use of the animal dropping as fish food is also a norm. Farmers also are familiar with using leaves and old stems to generate organic compost while utilize earth worms on soil and compost to create healthy soil. A few farmers are quite advanced in applying organic fruit fertilizer while some farmers avoid using chemicals. (Table 10)

Table 10: The self-sufficiency farming practices farmers use (survey n=100)

	<i>Umung</i>	<i>Phabaen</i>	<i>Buhom</i>	<i>Total</i>
<i>Use the animal dropping for the fish food</i>	6	2	9	17
<i>Use animal dung waste as organic fertilizer</i>	30	23	21	74
<i>Utilize waste plants as fertilizer and feeding</i>	24	7	16	47
<i>Leaves and old stem composting</i>	8	10	5	23
<i>Avoid-chemical kills good insects and weeds</i>	2	0	9	11
<i>Use earth worms on soil & compost</i>	4	1	4	9
<i>Other-fruit fertilizer & never do chemical</i>	2	0	1	3

Added value products: There are varieties of seasonal farm products made as added value products: dried fruits, fruit juices, fruit jams, wine and crafts. Dried banana is the highest possibility because it is basic farm products of all three villages and found in all seasons with 76%. Bamboo weaving, tamarind-mango fruit jam, coconut-guava-soybean fruit juice and dried coconut, papaya and guava are relatively popular among agricultural added value products while handicraft souvenirs and fruit-rice wine occasionally produced by local farmers is a local specialty. (Table 11)

Table 11: Added value products occurrences (survey n = 100)

<i>Dried fruits</i>					<i>Wine/Crafts</i>			
Banana	Coconut	Papaya	Guava	Other	Bamboo craft	Seed package	Wine	Handicraft
76%	36%	31%	24%	8%	45%	37%	5%	21%

<i>Fruit juice</i>					<i>Fruit jam</i>		
Tamarind	Coconut	Guava	Soy-bean	Other	Tamarind	Mango	Other
26%	44%	19%	16%	1%	43%	37%	2%

Local knowledge and familiarity with sustainable agricultural practices

Farmer’s knowledge and familiarity with sustainable agricultural practices are a foundation of understanding how to manage and sustain the farm and its products.

Conservation sensitivity: The survey picks those most common conservation methods available in the local villages such as rain harvesting, use of local material, the King’s efficiency theories, use of organic fertilizer, and care of loamy soil. Rain harvesting and use of local material are well-practiced in these three villages with 88.9%-97.5%. Similarly, applying the King’s efficiency theory and care of loamy soil are usual practices of 79-88%, followed by use of organic fertilizer at 59.4%-64.6%. We are safe to say that over 80% of the farmers in the three villages understand sustainable agriculture with a good representation of conservation sensitivity. (Table 12)

Table 12: Conservation sensitivity among three villages (survey n=100)

	<i>Rain harvest</i>	<i>Use of local material</i>	<i>King’s efficiency</i>	<i>Organic fertilizer</i>	<i>Care of loamy soil</i>
<i>Umung</i>	97.50%	92.50%	85.00%	59.38%	79.07%
<i>Phabaen</i>	96.30%	88.89%	85.19%	64.58%	89.29%
<i>Buhom</i>	93.94%	93.94%	81.82%	59.68%	88.24%

Familiarity with sustainable agriculture: The survey results show from 65.9%, 70.4% to 74.3% of farmers in Buhom, Umung and Phabaen respectively know the organic and mix grown farm practices and more than 77% to 81.5% household farmers are familiar with recycling farm material while farmers in Umung and Buhom score fairly well with 72.5% to 72.7% on familiarity with sustainable agriculture. (Table 13)

Table 13: Local farmers' familiarity with the notion of sustainable agriculture (survey n = 100)

<i>Notion of sustainable agriculture</i>	<i>Umung</i>	<i>Phabaen</i>	<i>Buham</i>
<i>Familiar with sustainable agriculture</i>	72.5%	51.9%	72.7%
<i>Organic/mix grown farm practices</i>	70.4%	74.3%	65.9%
<i>Recycle farm agricultural material</i>	77.5%	81.5%	78.8%

Discussions and Findings

Prospect to develop agritourism in rural Chiangkhan

This study found that the villages have all the supporting agritourism components and features. There are abundant agricultural farm products of fruits, rice, vegetables, livestock, flowers, and herbs. These three villages share similarity of agricultural characteristics and culturally constructed landscape with plenty of agricultural and natural features on working farms. Daily life experiences such as agricultural trail trekking, hands-on farm activities, temple sightseeing, village festival participation, home stay and farmers' market could be shared with visitors. Yearly local festivals held in the villages such as cherished Bun Phawet, Loy Krathong, and Songkran Festivals are fun for the outsiders. Besides food, language, custom, and friendly people, the local unique and authentic culture give out good indications that the studied villages are old traditional Thai communities with many attractions for tourism. All of these working farms have abundant natural and cultural assets with a variety of agriculture practices and geographic landscape allures. Therefore, these features and resources support agritourism development in the villages. Farmers can be part of the important drive of agritourism and have benefits in terms of extra income from agritourism activities and value-added products; they gain skills and host experience to enhance farming and other knowledge. The varieties of agriculture and natural features in the farm area are suitable for tourists to experience fresh farm product tasting, farm staying, and shopping for value-added products. Village farms have a variety of agriculture farm practices such as multi-crop planting, lowland and uphill rice paddies, and seasonal rotation planting; they allow visitors to have

hands-on farm activities and ultimately experience the front and back stage of the farm operation. It is clear that these existing agricultural, natural and farm traditional features in the rural villages have high potential to promote agritourism.

Uniqueness of villages' life style and local heritage

Chiangkhan district, Loei Province is considered an important tourism destination in Northeast Thailand, and is currently a very popular destination for tourists seeking relaxation as well as cultural experience. The selling point of Chiangkhan nowadays is its simple lifestyle as well as its evocation of the past from over 100-year-old towns along the Mekong River (Meekaew and Srisontisuk, 2013: 34). Agritourism is one of the fastest growing segments of the tourism industry because there is a trend for personal specialization among visitors. Visitors are not only seeking relaxation and vacation in rural farm destinations, but also seemingly are looking for adventure, history, culture, and interaction with local people and local lifestyles for hands on experience as all of those can be offered in the rural villages. Especially for city people who are “interested in traveling to rural agriculture areas with living cultural/heritage in those destinations is increasing and expected to continue” (Huh, 2002: ii). Local cultural heritage and agritourism are inextricably connected; the role cultural heritage plays for economic and social development is being more and more considered in local and regional development. One of the elements for agritourism development is local communities which are rich in people’s traditional beliefs and local heritage. The majority of the agritourism sites have merged with local community and its heritage to experience local farm life style, traditions, agricultural practices, and local vernaculars landscape; rural farmers are encouraged to preserve their traditions, promote the local culture activities, so as to attract agritourism and rural-visitors (UNWTO, 2013). These small villages are full of traditional ways-of-life transcending beautiful farming daily life and activities. The social gathering for raising fish, weaving textiles, local handicrafts, farm products and annual congregations for religious ceremonies, local festivals, and local identities are fascinating attractions

as major contribution to agritourism development.

Opportunity and activities for farm off-season

The climate and irrigation system can have impacts on livelihood and especially agricultural practices. The farm season changes to farm off-season during late February to May. After the winter harvest, the dry summer gives these village farmers an off-season and time for off-season activities. Other food sales and community activities are also found in the farm off-season when farmers bring their added value products, crafts, and weaving textiles to the local market or participate in community activities. These are interesting events that farmers engage in various activities during the farm off-season with added-value farm products or services in farmers' markets (Bagi and Reeder, 2012, pp. i, 24-25). This engagement in off-season activities can contribute to farm income so as to reduce the rural poverty of the households. As cited in the role of non-farm incomes in reducing rural poverty and inequality in China, farmers "...could freely allocate their time and choose their income strategies and productive activities." (Janvry et al., 2005: 3- 4). With the similar situation in the studied area, this might be a viable transitional process for household adjustment to climate impacts and seasonal changes to make up the part-time farm working and multiple local roles for off-farm income diversification. This is an extra advantage that could stabilize and support local income for household (McNamara and Weiss, 2001: 2, 6). This will develop the working farm into rural agritourism destination and promote self-awareness of agricultural livelihood with community unity and sustainability.

Sustainable agricultural elements that can be applied in the locality

The most dependable agriculture resource resides on the natural resources are land and water as the foundation of all working farms. Thailand just like many other third world countries has limited land resource, without proper soil conservation and sustainable techniques the condition of the land will get worse. Farmers need to input appropriate technology to optimize their production, and need to learn the knowledge

of how to efficient use of the land to be sustainable (Moncharoen et al., 2001: 182).

The studied villages have been farming for generations with their local traditional agricultural practices coupled with some young educated farmers' knowledge, and techniques learned from agricultural education and clubs; there are many sustainable agricultural elements in place. The followings are the most applicable sustainable agricultural elements in this locality: integrated pest management (IPM), soil conservation, water quality/wetland, cover crops, mixed crops for diversity, marketing, integrated farming system, organic farming, natural farming, agroforestry, new theory farming. To pave the way for successful introduction of agritourism in this locality, a well-integrated sustainable agriculture system within these farming villages which are rich in local cultural heritage, geographical features, agricultural products, and off farm activities is a positive reinforcement.

Sustainable agriculture practices that support conservation

While there are many ways to improve the sustainability of a farm, there are common practices that farmers do in the Asia region. In the UNESCO report "Module 15: Sustainable Agriculture", educators pointed out that "integrated pest management, rotational grazing, soil conservation, water quality/wetland, cover crops, crop/landscape diversity, nutrient management, agroforestry, and marketing" are the holistic approach that "will contribute to long-term farm profitability, environmental stewardship and rural quality of life." (Colliver et al., 2010: 5-6) The land holdings of these three villages are relatively small with majority of them within 10-30 rai range; most of these lands are adjacent to the foothills of the mountain forest, near the river and riparian forest. These agriculture practices have a major impact on the surrounding natural habitats. "Unsustainable farming practices may damage forests, biodiversity and fisheries, as well as polluting soil and water" (Jitsanguan, 2001: 3-4). The studied villages face similar types of situation which may be unsustainable if over exploiting the land resources, it is therefore a concern for conservation. In Thailand at least five main patterns of

sustainable agricultural system are being promoted, these are “integrated farming system, organic farming, natural farming, agroforestry and New Theory farming” (Jitsanguan, 2001: 4-6; Hirokawa, 2010: 356).

Sensitive to conservation of cultural heritage

Villagers practice sustainable agriculture through many different local methods and self-sufficiency farming to retain the natural and cultural heritage. Agritourism development could assist farmers to conserve and embellish these positive traits. Farmers are part of the bio-physical environment who can improve their farm by wise use of natural processes and cycles, they are the “expert of their own farm and makes decision based on their knowledge.” It is essential “to introduce support systems for farmer/community-based learning” and provide a linkage of farmers to “sources of knowledge and expertise”. It is also important to use of participatory methods to involve “farmers as the stakeholder of sustainability” and to “stimulate markets for ecologically produced products.” (Roling and Jiggins, 1996: 244-245)

Locally-owned and operated

Local villagers own individual working farms where they operate agriculture daily and generate income from the farm products. Community-based organizations would coordinate agritourism touring with locally-owned farms for guest visits and activities operated by farm owners who already have working farm experience. The sense of pride and ownership of belonging coupled with extra income retained locally would be the best incentive for farmers to be part of these community efforts. Lewis (2001) points out a method of sustainable tourism development which is locally-owned, developed, and operated in all tourism resources and activities both individual ownership and community organization can maintain and preserve resource capacity and lead to successful sustainable tourism through economic, social and resource development for local community (Lewis, 2001: 185, 187, 191).

Small scale home stay or farm stay

There are a variety of nature and culture elements in the villages with local farm livelihoods. Home stay and farm stay are the best way

to peek into the farmers' private life at home and their authentic working life on the farm. A good home stay or farm stay allows visitors to acquire the real experience of staying in a home or hut while exchange in culture and social etiquettes with each other. A real authentic experience could be achieved if this is done with mutual respect with true intent of an exchange. The case study in Japan of retired baby boomers as operators of sustainable rural tourism supported evidence that local people with their own small farm and resources mainly for social way of farming is the import foundation and element for tourism development in the countryside (Ohe, 2006: 255).

Bring economic benefits to local community

With the development of community-based agriculture activities, this can bring community farmers a viable supplementary income especially during the farm off-season. The rural Japan case study points to the same position that operating tourism on their own farm and involving local resources in the community contributes income source to local farmers and provides visitors an opportunity to learn rural life and culture (Ohe, 2006: 255). Farm activities and added-value farm products not only provide venues for visitors to enjoy and learn from these local attractions and to taste locally made specialties but also spawn rural economy in the countryside to spread benefits and income to community as the whole (Sharpley and Sharpley, 1997: 19).

Self-sufficiency farming for sustainable growth

There are good elements of natural resources and unique farm village heritage, self-sufficiency farming, traditional life, diversified farm products, well-integrated farm practices, and farmers' knowledge and skills are all good foundations to start agritourism in these villages. Local agriculture practices and farm management by local people is one of the important pluses to sustainable growth. A similar case study in sustainable agriculture discusses the fact that "agro-ecological strategy" linking development and management of sustainable agricultural systems promotes local biodiversity in agro system through local farming practice: multi-cropping, rotation, and agroforestry (Lichtfouse et al., 2009: 5).

With local villagers groups and farmers' networks, the leader can bring together all interested parties who have experience in farm tours and home/farm stay and who may be interested in joining agritourism. Together they can carefully plan for the future consequence of sustainable growth of tourism which villages may experience once the agritourism development gets started.

Conclusion

Agriculture with treasurable resources of nature and culture is the gateway for rural development and this will successfully happen if rural communities significantly observe and practice self-reliant and sustainable agriculture. Thailand's rapid economic growth model comes at the price of rural development neglect; it extracts labors and economic surplus from the agricultural sector while further "degrading the natural resources and human value" in the rural community. The 1997 financial crisis has awakened the Thai government to reexamine the importance of "sustainable agriculture." (Buch-Hansena, 2001: 137)

This study examined extensive elements and components of rural agriculture villages including the natural resources and attractions, the rural village lifestyles, local cultural heritage and agricultural practices, existing features that support agritourism, opportunities and activities for farm off-season, sustainable agriculture practices engaged by local farmers, knowledge of sustainable agricultural practices, and farmers' sensitivity to conservation; the results indicate a high potential to promote and develop agritourism and sustainable destination farm for this locality. With traditional local farm practices, abundant natural and cultural assets in the uniquely beautiful village landscape and interesting geography, the farm villages of Ban Umung, Ban Phabaen and Ban Buhom are suitable for rural agritourism development.

Rural communities need to employ sustainable agriculture practices and at the same time preserve their local cultural heritage. The ever increasing popular destination farms would then allow tourists to have the opportunity to see culturally constructed landscape, local cultural

heritage, local agricultural practices with sustainable means, and a glance of how rural farmers live and work in a real retrospective.

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