Sustainability of Rural Land Use Based on an Integrated Tourism Model in Mae Kampong Village, Chiang Mai Province, Thailand

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Abstract This paper recreates an appropriate tourism model to sustain rural land use in Mae Kampong village, Chiang Mai province, Thailand. The study focuses on the village's current land use and existing tourism management. The data, collected by interview and field observation, were analyzed and compared with tourism trends in the area for modification into an integrated tourism model for sustainable rural land use. In this paper, the sustainability of rural land use is shown to derive from the maintenance and increase of community capital, including natural, human, social, financial or built, and cultural capital. These categories of capital can also be comparably merged with four elements of rural land use sustainability, ecological, economic, social, and cultural sustainability as a conceptual framework for an integrated tourism model. Land use in Mae Kampong village can be sustained by the existing tourism management model, which has been integrated mainly by community-based tourism and ecotourism. Recently, however, long-stay tourism and health tourism have arisen with the possibility of creating new resources and generating new wealth from tourism and rural land use, such as an increase in rental houses and resort hotels, the development of health products from forest tea, and the organic local food served to tourists in homestays. The recreated tourism model, therefore, is integrated by four types of tourism, community-based, long-stay, health, and ecotourism, so as to achieve a higher living standard which attributed the overall rural land use sustainability to four components of its sustainability.

Key words integrated tourism, sustainability, rural land use, community capitals, community-based tourism, ecotourism, health tourism, long-stay tourism

Introduction

The phenomenon and growth of mass tourism have had a negative impact on land use, resulting in land degradation, soil loss, and impoverished ecosystems (Haberl et al. 2004). As a result, community-based ecotourism (CBET) has been promoted as a popular means of supporting biodiversity conservation for sustainable development, particularly in developing countries (Agnes 2004). One example is Thailand, where the government promotes tourism to alleviate poverty in rural communities in which people are mostly farmers. This policy is concerned with rural land use sustainability in relation to resource value as an addition to community-based ecotourism via good management, and aims to develop the capabilities of the farmers in managing tourism activities (Phayakvichien 2007).

Mae Kampong, a small, upland-forest tea cultivation village in Chiang Mai province, is one of the communities that take community-based ecotourism as a tool for adding value to land use. Because the demand for “miang” a traditional chewing snack made from fermented forest tea since the days of ancient Lanna (a kingdom in northern Thailand from the 13th to 18th centuries) has recently decreased, the land for forest tea cultivation has also been abandoned. Between 1996 and 2004, the forest tea area decreased by 11% (Iamcheun 2004). This situation also affects new generations who have been moving away to work in urban areas and have let the land remain idle. In order to recover the wealth of land use to generate income, tourism in the village was officially initiated in 2000 and is continually promoted by the Tourism Authorities of Thailand (TAT). By contrast, tourism implementation has encountered such problems as the environmental impact caused by garbage and trampling. Therefore, the villagers cooperated in research on coping with these problems by putting the community-based ecotourism model into practice in 2002 (Puangmala 2002). Since then, it has become the underlying tourism model in land use development.

Regarding the existing tourism model of Mae Kampong, although it is an effective approach for sustain-
ing the land, it needs to be considered in conjunction with the phenomenon of tourism and tourism trends encroaching on the area. Tourism phenomenon in Mae Kampong in recent years has been focusing mainly on two issues: health and land tenure. Health issues have become a problem for the villagers because of the consumption of non-organic food purchased outside their community to provide for tourists (Puangmala 2006). At the same time, the land is gradually being sold to outsiders for building accommodation, thus invading the forest and having the potential to become an environmental problem in the near future (Thitichamroenporn 2011). These issues, therefore, should be urgently considered as they relate to tourism trends: solutions are needed for the health problems, and long-stay tourism must be considered in order to deal with the land problems.

These two types of tourism are related to each other by tourism marketing and within a certain segment of the tourist population. Schröder and Widmann (2007) state that the trends in selective tourism market segments should be examined for senior tourism. Senior tourism is a part of long-stay tourism that relates to the international retirement migration of aging populations, especially from Europe and Japan, to developing countries. Such demographic changes will have huge implications for medical care systems, housing for the elderly, and labor markets (Luecke 2005). Briggs (2001) notes that the greatest desire for this target group is to maintain health and independence along with a higher disposable income. As a consequence, health tourism and long-stay tourism are assumed to be important trends in tourism market segments.

In accord with these tourism trends, the phenomenon has been present in Thailand since the late 1990s, when the country received many international retirees, and health and medical tourism became important (Ono 2008). At present, many provinces are promoted for long-stay tourism. One is Chiang Mai, the center of northern Thailand’s tourism, which serves as a hub of medical and health tourism relating to long-stay in Thailand. Mae Kampong as a famous tourist village in Chiang Mai, should seriously consider this tremendous opportunity to re-create the existing tourism model with the intent of finding solutions and protection against the problems arising from tourism as well as sustaining its rural land use.

In this paper, the author focuses on rural land use and tourism management based on the existing tourism model in the case. The study was carried out by means of interviews, and field observations, and was combined with the tourism trends to form new elements for a modified tourism model. The interviews were conducted with 20 members of the Mae Kampong Mini-Hydro Cooperative and 2 officers of a tour company, Flight of the Gibbon. The members of the cooperative, which included all the villagers from 132 households, were divided into 2 groups, consisting of those members who participate and those who do not participate in community-based tourism (CBT). The members participating in CBT were around 30 households, of which 13 were selected for interviews. These included a village headman and 12 members from 7 occupational groups (i.e., 6 homestay entrepreneurs in 6 sub-villages, and 1 member from each of the following groups: tea pillow, tea and coffee, massage, local guide, herbal medicine, and musical). The members who did not participate in CBT comprised 7 interviewees: 2 farmers and 5 business stakeholders (i.e., 3 owners from a restaurant, coffee shop, and grocery shop; an officer from a resort hotel; and an owner of a rental house for long-stay). Field observations were taken during both participant observation (e.g., taking part in forest tea cultivating and producing, attending a welcome ceremony, and walking along with tourist groups) and non-participant observation (e.g., resource mapping and transect walks with a local guide). The collected data was segmented and de-contextualized into types of land use and tourism to modify the tourism model for generating community capital, the most significant factor in sustainable development. It was also analyzed using SWOT (strength, weakness, opportunity, threat) theory to contribute suggestions on strategic planning for four types of tourism: community-based, health, long-stay and ecotourism. It is hoped that the findings from data analysis will be integrated for maintenance, will increase the community capital in order to strengthen sustainability, and will provide an optional tool for rural land use development.

A Conceptual Framework for Investigating Sustainable Rural Land Use

The sustainability of land use in rural areas can be indicated using the physio-biotic and socio-economic dimensions (FAO 1995). With regard to rural tourism, the degradation of land used for recreation, including the loss of vegetation and soil erosion caused by trampling and vehicles, is an example of loss in the physio-biotic dimension (Chisholm and Dumsday 2009). The socio-economic dimension as affected by tourism in rural land use includes the decline of farm productivity and indigenous
cultural changes.

The use of such a conceptual approach to sustainable tourism development is significantly related to the research framework. The World Conservation Union (WTO 1993) has outlined a concept of sustainable tourism that includes four major principles: ecological, cultural, economic, and local sustainability. Mowforth and Munt (2003), somewhat similarly, discuss that sustainable tourism involves the sustainability of the ecology, economy, society, and culture. This notion conforms to the concept of rural sustainability offered by UNESCO APNIEVE 1998 (George et al. 2009:196):

- Ecological sustainability—development that takes into account the maintenance of ecological processes, biological diversity and biological resources.
- Economic sustainability—development that is economically efficient and the benefits of such development are distributed between generations.
- Social sustainability—development that improves the quality of life of all social groups by giving them the opportunity to participate in decision-making.
- Cultural sustainability—development that requires taking into account the values of the people affected by it and strengthens community identity.

Comparatively, rural sustainable development in capitalism is based on capital wealth, both man-made capital and natural capital (Pearce et al. 1996). In terms of capital wealth, George et al. (2009) modifies the identification of community capital to comprise the significant factors of rural sustainability that include human capital, natural capital, social capital, financial or built capital, and cultural capital. These types of capital will help with the achievement of rural land use sustainability in both the physio-biotic and socio-economic dimensions by providing new perspectives on sustainability. Accordingly, the conceptual framework for sustainable rural land use can be merged with five types of community capital, which are comparable to the four elements of sustainability (Figure 1). Namely, the physio-biotic dimension can be sustained by natural capital, which is related to ecological sustainability. Similarly, the socio-economic dimension which refers to the sustainability of the society, economy, and culture can be sustained by human capital, social capital, financial or built capital, and cultural capital. Generally speaking, human capital and social capital generate social sustainability, whereas financial capital produces economic sustainability, and cultural capital generates cultural sustainability.

**Tourism Trends in Rural Areas of Thailand and the Case of Mae Kampong village**

This research focuses on special interest tourism, which has been an increasing trend in rural tourism. In rural tourism, sustainable tourism is becoming more involved in ensuring that the visitors do not adversely affect the environment or host community (Briggs 2001). Thus, both ecotourism and community-based tourism are concerned with this awareness. Changes in the social-demographic affects arise from an increase in senior citizens, which extends the market segments in health tourism and long-stay tourism for the senior group (Schröder and Widmann 2007). This phenomenon, therefore, should also be considered in rural tourism. In recent years, health tourism in Thailand has become popular, in general, and in particular, in medical care, the fastest-
growing segment, which receives 400,000 foreign medical tourists every year (Bookman and Bookman 2007). This segment occupies a special niche market of long-stay tourism that has been promoted by the Tourism Authority of Thailand (TAT) since 1998 by focusing on the main target group of Japanese pensioner tourists. TAT has recently launched a campaign called “Long Stay in Thailand” to promote medical and health tourism. According to a long stay statistical survey from 2009, Thailand was among the 10 best countries for long-stay tourism (Long Stay Foundation 2011). These trends have been gradually expanding such types of tourists to the rural communities.

Rural tourism in Thailand, is currently moving toward merging with community-based tourism (CBT), which expanded during the “Amazing Thailand” years, 1998–1999. The expectation for CBT encouraged TAT to present “The Most Outstanding Community-Based Tourism Award” to 62 communities out of 183 candidates in 2007, of which Mae Kampong was one (Suriya 2010). For using CBT to develop the village, Mae Kampong received the “OTOP village” award. (OTOP stands for “One Tambon (meaning sub-district) One Product,” an idea adapted from the Oita Japanese model OVOP, “One Village One Product”). Furthermore, according to the assessment of CBT management villages in Thailand, Mae Kampong has most successfully developed a high quality CBT product (Sangkakorn 2008) in the form of homestay, which seems to be increasing after the village received “Thai Standard Homestay” certification according to the official standards set by the Ministry of Tourism and Sports. This may imply its value in offering better alternative accommodation than Chiang Mai (Silparcha and Hannam 2002). Thus, the increase in accommodations for community-minded visitors, long-stay tourism is possible, even though it is limited by the residential area (Sutthisrisilapa 2004). Mae Kampong, however, is dubious in terms of its viability and sustainability, like other communities heavily promoted by CBT. Suriya (2010) notes that CBT in Thailand has encountered two problems: low income generation in the introductory stage and uneven tourism income distribution. His discussion supports the notion from Mitchell and Muckosy (cited by Stone and Stone 2011) that many CBT projects have failed because of financial viability.

**Rural Land Use and Tourism in Mae Kampong**

Mae Kampong village is situated in the Huay Keaw sub-district, Mae On district, in Chiang Mai province, only 50 km east of Chiang Mai city. The village is also not far from other famous tourist attractions, such as the Muang On cave, the San Kamphaeng hot spring, and Bo Sang, a village well-known for hand-made umbrellas.
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It is part of the Mae On national reserve forest on the Pee Pun Nam mountain range, about 1,300 m above sea level. Villages adjacent to Mae Kampong are Mae Lai to the north, Mae Ruam to the south, Tarn Thong to the west, and Chae Son National Park in Lamphang province to the east. The community was founded more than 100 years ago by immigrants from the Doi Saket district in search of land for forest tea cultivation, and it was officially established in 1914. As of 2011, the village contained a total population of 386 persons with 132 households. The majority of the working population is currently engaged in fermented tea production, locally called "miang" as previously mentioned, which is a unique product because it is now rarely seen. Since its consumption has declined with the new generation, coffee has been grown with forest tea for additional income.

**Land use patterns and tourism resources**

The village occupies 622 hectares, which can be classified into three kinds of land use: residential, agricultural, and forest (Figure 3). The residential area ranges from the western to the eastern foothills over an area of 70 hectares. The residences are scattered along a narrow valley with a stream passing through it. In the past, most of the households were settled in two groups called Pang Nai and Pang Khon in the eastern part of the valley. Because of increased population, the residential area has been extended to the outer western part. At present, the village is further divided into six village groups with 132 households: Pang Nok (30 households), Pang Klang (19 households), Pang Khon (19 households), Pang Thon (15 households), Pang Nai 1 (13 households) and Pang Nai 2 (36 households) (Figure 4). In this area, various kinds of construction are used for almost any function: in particular, houses have been modified into homestays, grocery shops, and restaurants. Homestays have expanded from 7 homestays in 2001 to 22 in 2011. Other business, like coffee shops, resort hotels and long-stays to serve the tourism business, have also been gradually increasing. In particular, long-stays are influenced by urban dwellers and foreigners who bought the land and built their houses as vacation homes, which can also serve as rental houses for long-stays. Similarly, rental houses built by the villagers have tended to increase, particularly in Pang Nai 2, which has become a center for tourist accommodations because of its proximity to a waterfall and a main forest for tea cultivation.

Forest tea cultivation takes up the largest portion of land use at 403 hectares. Corresponding to the history of the settlement of the village, forest tea has been grown for more than a hundred years, and it remains a major crop in the agricultural area. In fact, it has been cultivated alongside Arabica coffee, herbal medicines, and the stunning natural forest, so it is considered as agroforestry (Figure 5). Much of the forest tea is used to produce miang, which local people chew as a snack after dinner or if they feel tired. To produce miang, only the tips of the tea leaves are picked to allow sunlight to reach the old leaves; thus, the farmers can harvest all year round. Knowledge of producing fermented forest tea, from cultivation to harvesting and processing, is part of the local wisdom of Mae Kampong, which has been accumulated.
and passed on for many generations. Though the forest tea leaves are available all year round, those harvested in winter are small, yellowish-green, and of low quality. Therefore, the farmers harvest coffee seeds instead during this period. Thus, Arabica coffee, which is cultivated with forest tea, can be harvested each year from the end of November to January after it has been planted for two years.

The cultivation of coffee has been promoted for a decade because it generates more income and increases the value of the agricultural land-use area. Accordingly, it can be said that the agricultural land is in use almost all year round, implying that such tourism activities as harvesting forest tea or coffee with the farmers can be done in every season.
Another part of land use that is important for tourism is the forest. This area is occupied by hills of evergreen forest with mixed deciduous forest as undergrowth and pine forest at the highest point (Figure 6). It has been preserved as community forest, which is called “pa chum chon.” It covers an area of 149 hectares to the north and east of Pang Nai 2, and is a dense forest, providing habitat for diverse species of flora and fauna. A distinctive flora are the cherry blossoms, locally called “Thai sakura" or “Nang Phraya Sue Krong,” which can be found on the high mountain near “Doi Mon Lan,” the highest point of the village (1,700 m), where a large area has been reforested with pines to provide a campsite for ecotourism. In this area, the community had set apart 3.2 hectares to be a herbal garden; thus, many species of local medical plants have been added to this herbal forest with its indigenous herbs. Besides the conservation of the forest, the watershed is well preserved. The Mae Kampong waterfall guarantees an abundance of streams, which enable the village to produce hydro electricity and pure drinking water, and serve as a major tourist attraction for the village (Figure 7). Accordingly, the forest generates both biodiversity and non-timber forest products (e.g., hydro-electricity, drinking water and herbs) that serve tourism.

**Tourism management: The existing tourism model**

Tourism management in the village has recently been based on the existing model previously mentioned, Community-Based Sustainable Ecotourism Management, in which two types of tourism have been well managed and promoted: ecotourism and community-based tourism. Ecotourism management concerns both nature-based and culture-based tourism. Nature-based tourism management primarily involves encouragement of environmental awareness in the management of walking trails in forest tea plantations, the waterfall and community forest, and a zipline canopy walk (i.e., “flying” from tree to tree by hanging in a sling that is attached to a rope strung between the trees in the jungle) in an abandoned forest tea plantation that belongs to a foreign investor. Culture-based tourism management refers to managing, conserving, and promoting the way of life unique to the

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**Figure 6.** A sample of land use transect of Mae Kam Pong village (Pang Nai 2).
Sources: Field survey and interview.

**Figure 7.** The Mae Kampong waterfall as a major attraction.
Taken by the author, December 2011.
cultivation and production of forest tea. Community-based tourism management is a strong point of the village. The income from tourism goes to a cooperative whose members receive dividends from the benefits. The engaged members come from seven occupational groups: homestay, tea pillow, tea and coffee, tour guide, massage, herbal, and musical and performance. Thus, two types of tourism are currently combined as a management tourism model in order to sustain the community.

Despite the existing tourism model of the village, the management of health therapy by traditional massage, herbal use, and local organic food consumption has been emphasized in community service, particularly in homestay. In addition, investments in resort hotels and rental houses in residential areas have been appearing gradually. Thus, health tourism should be investigated as an element to be added to the model. Because resort hotels and rental houses facilitate stays for long-term visitors, long-stay tourism is another factor that can influence the village land use.

Tourism management: Income distribution

Tourism income management based on the existing tourism model offers three tour programs, which are operated by community members. More than 30 households in Mae Kampong are actively involved in CBT. Villagers contribute towards the local cooperative, which generates income for all community members, in addition to funding a range of social and environmental activities. Income from tourism comes mainly from the service fees of the three tour programs: the one-day, homestay, and study tours provided to several target group of tourists.

Program 1 (One-Day Tour). This program includes a waterfall visit, short treks through the forest and forest tea cultivation area with local guides, and participating in such occupational activities as tea-pillow making. The major targets of this program are both domestic and international tourists who visit without prior inquiry. Domestic tourists are mostly walk-in visitors, whereas the international tourists are mostly westerners who buy the package from tour companies. No service fees will be charged to walk-in tourists, but the villagers obtain direct income from tourists’ expenditures. For example, they patronize the local restaurants and shops, hiring a local guide that costs 200 Baht (6.66 USD) per day. Therefore, the main part of the benefit shares from this program that are allocated to the village will be derived from tour companies. One tour company that commands the biggest segment of profit is Flight of the Gibbon, which provides mainly the zipline canopy tour. It has joined this program, paying 10% for forest conservation and including the annual rent for setting up its activities in the village.

Program 2 (Homestay). This program offers two main tour packages (either one- or two-night accommodation with meals and optional purchase of cultural activities at night), with advance reservations made either directly through the village’s officer or indirectly through tour agencies. The one-night accommodation package costs 550 Baht (18.33 USD) per person with three meals for each. The two-night package costs 900 Baht (30 USD) per person, and it comes with six meals. In addition, the program offers Lanna cultural performances by local musicians and student dancers (for 1000 Baht, 33.33 USD) and a welcome ceremony called “Bai Sri Sukhwan” (for 1,000–1,500 Baht or 33.33–50 USD). The main activities of these programs are sightseeing in the forest tea and coffee cultivating areas, waterfall visits, short or long treks in the community forest with local guides, tree planting, participating in occupational groups, and staying in homestays. This program targets community-based tourists, both domestic and international, who want to stay overnight and do rural-based activities.

Program 3 (Study Tour). This program targets the group of domestic tourists who make reservations in advance through the village. Those are students, educators, private and government organizations, and other villagers who want to study any special interests, such as the forest tea or coffee cultivation and production, hydroelectric power plant, homestay, and tourism management. The program may take one day or longer. If they choose an overnight stay, cultural activities (i.e., Lanna cultural performances and welcome ceremony) are also available if there is a request. The price of this program is subject to the numbers of visitors and activities. As mentioned before, all tour programs are linked to attractions by roads and walking trails as shown in Figure 8.

Tourism management is designed as a part of the Mae Kampong Mini-Hydro Cooperative. Because all villagers are members of the cooperative, incomes from the tourism will be shared equitably by means of annual dividends to the households. Even villagers who do not participate in the tourism can get profit shares. The villagers who participate in homestay will get around 60% of all the income, and about 40% of the income belongs to the village, along with income derived from other tourism services, of which 10% belongs to the village. That is, the income generated from all tourism programs are allocated to village development, which is divided into five budget funds: the Mae Kampong Mini-Hydro Cooperative (30%), the village development fund (20%), adminis-
trative management (25%), the community welfare fund (15%) and compensation to the community committee (10%).

The Mae Kampong Mini-Hydro Cooperative fund is an all-purpose, neutral budget used for community development, including the annual dividend to all the households. The village development fund is used for any development projects (e.g., environmental and forest conservation), and the administrative management fund is used for village administration (e.g., advertisement, marketing). The community welfare fund is a compensation fund used for health and education, and compensation to the committee village leaders. Table 1 shows an example of income management from the homestay program in which the one-night/two-day package is bought by one tourist. As noted already, the package price is 550 Baht (18.33 USD). The homestay owner will get 350 Bath (11.66 USD), and the village receives 200 Baht (6.66 USD). Then, the income allocated to the village will be distributed to the five budget funds and thence returned to the community and local people (Figure 9).

The circulation of income distribution indicates that community land use, tourism resources, and tourism income are involved with each other in terms of management. Because of the village funds, the community capital has been built up and the profits allocated fairly. Community capital is the most important factor for community sustainability, which involves its land use value and resources over the long term. For example, projects from the village development fund (e.g., infrastructure development, environmental management, and forest conservation) support the management of sustainable tourism. Generally speaking, the sustainable tourism management of Mae Kampong consists mainly of managing the community’s land use, resources, and tourism income.

### Table 1. Tourism income distributions from home-stays

<table>
<thead>
<tr>
<th>Types of fund</th>
<th>Income distributions</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Mae Kampong Mini-Hydro Cooperative</td>
<td>60 2 30</td>
<td></td>
</tr>
<tr>
<td>2. The village development</td>
<td>40 1.33 20</td>
<td></td>
</tr>
<tr>
<td>3. The administrative management</td>
<td>50 1.66 25</td>
<td></td>
</tr>
<tr>
<td>4. The community welfare</td>
<td>30 1 15</td>
<td></td>
</tr>
<tr>
<td>5. The compensation to the committee</td>
<td>20 0.66 10</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>200 6.66 100</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Interview, December 2011.

![Figure 8. The linkage of tourist attractions with the tour program management.](source)

Sources: Field survey and interview.

Tourism Model Modification for Sustainability of Rural Land Use

According to the trends in global tourism and as noted at the beginning of this paper, health tourism and long-stay tourism have been a significantly growing market segment (Schröder and Widmann 2007). Long-stay visitors to Thailand are steadily on the rise with elderly tourists or pensioner tourists, and the main need for this group is to maintain health. This trend has accelerated in recent years, particularly in Chiang Mai, which serves as a hub of medical and health tourism for long-stay tour-
ists in Thailand. Thus, for Mae Kampong as a tourism village, the best course is to use this opportunity to value and promote its land use. This notion agrees with the alternative uses of land identified by Found (1971) in which the highest value of land use is the opportunity cost. As a consequence, the model of tourism management now used by the village should be re-created by considering health tourism and long-stay tourism. The modified model, therefore, should comprise the four tourism types previously mentioned: community-based, long-stay, health, and ecotourism. Each type of tourism can be linked to its relationship with the sustainability of rural land use as the goal or the model. In this discussion, each tourism type is defined and linked with rural land use as follows.

- Ecotourism consists of traveling to natural areas of community in which the culture is related to conserving the environment (Wearing and Neil 2009) and sustaining the land use.
- Community-based tourism is traveling to a rural community in which the tourism management is conducted through the cooperation of the local people with an equitable income distribution (Robinson 2012), and tourism activities, for example, agritourism which facilitates the sustainability of land use.
- Long-stay tourism is the travel of long-stay visitors to communities for both short and long-term visits by staying with the local people in which the investment into the community enhances the value of the land.
- Health tourism is traveling for purpose of wellness and local medical care (e.g., massage, meditation, natural therapy, herbal use) (Smith and Puczko 2009); this type of tourism supports all the tourism types in community land use through the health services and health tourism products.

In terms of the relationships between each element of the recreated model, the sustainability of land use is generated from the accumulation of the five types of community capital. According to the model of community capital and system sustainability created by George et al. (2009), the five types of community capital are natural, human, social, financial or built, and cultural capital. For an integrated tourism model in this case, the definition of each form of capital is related to the area and the sustainability of its land use, as follows.

- Human capital is the stock of human resources that has its value embedded in the community’s ability to produce benefits from tourism; it consists of strong leaders, skilled villagers, well-educated persons, creative people, laborers, other employees, youths, and other stakeholders engaged in CBT, such as occupational groups.
- Social capital is the stock of accumulated obligations that can yield economic returns to the villagers through the societal investment of time and effort; it includes such social networks as the participation of local people, volunteers, educators, researchers, students, and investors.
- Natural capital consists of renewable natural capital, non-renewable natural capital, and cultivated natural

Figure 9. Tourism income distributions to the community and local people.

![Diagram](image-url)
capital. Renewable natural capital is the abundant ecosystem of the forest, including indigenous forest, community forest, and agro-forest. Non-renewable natural capital consists of the quality of the community's environment, such as the soil and water. Cultivated natural capital is the long-term utilization of agricultural areas such as the forest tea orchard, and coffee cultivation.

- Financial or built capital is stock from investment by the community in creating new resources, generating income, valuing the new wealth from good land use (e.g., homestays, long-stays, organic food and herbal products), and distributing the equity of benefits through the cooperatives.

- Cultural capital is the stock of cultural knowledge (e.g., ways of life, traditional massage, herbal medicine, music, dance, cuisine, and local wisdom), community uniqueness, and identity (i.e., forest tea cultivation and production) that returns value from the land use through developing specialized tourism products.

From the definition of the four tourism types and five categories of community capital, therefore, an integrated tourism model means the approach to maintaining and increasing the accumulation of community capital by ecotourism, community-based tourism, long-stay tourism, and health tourism in order to sustain the rural land use that contributes to all the types of community capital generated from the four types of tourism. The proceeds from each type of tourism can be distributed to the five types of capital with the existing and prospective capital of the village (Table 2).

The community capital derived from ecotourism and community-based tourism is the existing capital managed by the community except for the zipline canopy walk, which is operated by Flight of the Gibbon, a foreign company. The community capital of long-stay and health tourism includes both existing and prospective capital. However, it is necessary to support and develop both of them in order to serve the trends in long-stay and health tourism. For example, the health service center (prospective capital) should be established for the wealth of health services and products that are derived from land-use resources (e.g., herbs from the herbal garden or community forest, forest tea from the agricultural areas), and the resort hotels and rental houses (existing capital) for long-stay visitors must be planned and monitored in order to avoid negative environmental impact as well as promoted to long-stay visitors, particularly those from Chiang Mai. These suggestions may yield the highest economic rent from opportunity cost, which refers to the highest net value generated by production, the best use

Table 2. The generation of community capital from types of tourism in Mae Kampong village

<table>
<thead>
<tr>
<th>Types of Tourism</th>
<th>Natural capital</th>
<th>Human capital</th>
<th>Social capital</th>
<th>Financial or built capital</th>
<th>Cultural capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>– stream/waterfall</td>
<td>– educators</td>
<td>– tour agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– ecosystem</td>
<td>– researchers</td>
<td>– traveler agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community-based tourism</td>
<td>– forest tea and coffee plantation</td>
<td>– strong leaders</td>
<td>– tourists</td>
<td>– occupational groups</td>
<td>– Lanna musical and dance</td>
</tr>
<tr>
<td></td>
<td>– community forest</td>
<td>– youths</td>
<td>– government institutes (e.g., TAT, universities)</td>
<td>– drinking water manufacture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>– monks</td>
<td>– NGOs (e.g., CBT institute)</td>
<td>– hydro-electric city</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>– musicians</td>
<td>– cooperatives</td>
<td>– learning centers</td>
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<td>– performers</td>
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<td>– local guides</td>
<td>– tour agencies</td>
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<td>– educators</td>
<td>– flight agencies</td>
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<td>Long-stay tourism</td>
<td>– rural landscape</td>
<td>– laborers involved in the constructions</td>
<td>– long-stay tourists</td>
<td>– resorts</td>
<td>– language and cultural exchange</td>
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<td>– creative architects</td>
<td>– investors</td>
<td>– rental houses</td>
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<td>– educators</td>
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<td>– researchers</td>
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<td>Health tourism</td>
<td>– herbs garden</td>
<td>– persons skilled in herbal use and massage</td>
<td>– tourists/long stay</td>
<td>– health service centers or shops</td>
<td>– local wisdoms of herbal use and traditional massage</td>
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<td>– educators</td>
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<td>– spa resorts</td>
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<td>– natural therapy</td>
<td>– researchers</td>
<td>– tour agencies</td>
<td>– organic food products</td>
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<td>– organic crops</td>
<td>– researchers</td>
<td>– hospitals</td>
<td>– products</td>
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Note: The underlined word is considered as a prospective capital for tourism development.
of the land (Found 1971). Consequently, the generation of community capital by the four types of tourism will be a feasible approach to achieving the sustainability of the ecology, society, economy and culture, the four elements of rural land use sustainability following the conceptual framework shown in Figure 10.

According to Figure 10, the sustainability of rural land use in Mae Kampong is based on the integrated tourism model with community capital, as previously discussed. In theory, when resources are used to create new resources, they are called capital (George et al. 2009:183). Thus, community capital directly involves the optimization of land so that new resources can be generated by the existing resources. As a consequence, the notion of a sustainable rural community identified by George et al. (2009) and the sustainable rural land use discussed in this research become synonymous. Similarly, sustainable rural land use can be reassembled under the sustainability of nature, society, economy, and culture, which are the same as the components of sustainable rural community, which will be discussed according to each element.

First, ecological sustainability, the majority indicator of the physio-biotic dimension, is enhanced natural capital: renewable natural capital, non-renewable natural capital and cultivated natural capital. By way of increasing these types of capital, an integrated tourism model can effectively generate a stock of them. For example, ecotourism activities in a community forest such as nature trekking with local guides, zipline canopy walks and bird watching have the potential to foster biodiversity conservation by increasing the awareness of both tourists and local people about the importance of natural resources (Sharpley 2006; Wearing and Neil 2009). In the meantime, community-based tourism encourages the farmers to produce more agricultural products to supply tourist demand, and health tourism and long-stay tourism, as well, can promote an increase in the cultivation of organic crops or local herbs.

Second, social sustainability consists of human capital and social capital, which have an important role in land use management. Human capital, such as strong leaders and skilled villagers, contributes management abilities to an integrated tourism model. For example, the farmers have developed the skills of cultivation and have trained to function as interpreters on their farms; the youths have been taught to take part in local performances; and the housewives are skilled in optional careers, such as homestay service and traditional massage. Meanwhile, social capital can be powered by the social network of tourists, educators or researchers, and stakeholders, such as investors, and including support from government organizations or NGOs. For the development of a social network of tourists, long-stay tourism provides an option for getting foreign tourists to stay and work in the village.

![Figure 10. Five types of community capital generated from tourism sustain the rural land use.](image-url)
This idea may work for Mae Kampong, which is like other villages in many countries that are supported by some international organizations. For example, Willing Workers on Organic Farms, known as WWOOF, offers tourists the opportunity to stay with farmers and help them work on their farms (Lipman and Murphy 2012). According to Suithisrisilapa (2004), a major weakness of Mae Kampong in terms of tourism management is a lack of villagers who can communicate in English. The proposed social network of long-stay tourists to work on farms would help solve this problem. Namely, foreign tourists who participate in the project could support the value of village land use by acting as volunteer interpreters or temporary local guides.

Third, economic sustainability, is generated from the financial or built capital. Because an integrated tourism model is a form of alternative tourism, it needs to target the niche market segment of quality tourists who tend to spend time and money over the long-term and who are able to sustain the culture and environment of the rural community (Edgell 2006; Weaver 2006; Maruyama and Parker 2012). This model supports the notion of Maruyama and Parker (2012) that tourism in rural areas (which they call “slow tourism”) includes the idea of encouraging some tourists to live or work in those rural communities in order to revive the rural economy. With its focus on the economy, it is similar to “pro-poor” tourism for poverty alleviation that encompasses economic as well as environmental, social, and cultural dimensions (Chok et al. 2007). Thus, financial or built capital such as homestays, long-stays, resort hotels, forest tea and coffee production, organic local food service, drinking water and hydro-electricity can generate the sustainability of the economy.

Fourth, cultural sustainability, according to the types of community capital modified by George et al. (2009), relates to cultural capital, which is the central community asset is constituted by appropriating and converting elements of the other capital assets. Cultural resources, therefore, create new resources as other capital, as well as natural capital, in order to sustain the socio-economic dimension. By considering the inter-relationship of the four tourism types, an integrated tourism model can also encourage and promote community identity, “the miang” way of life (the typical life for villagers who cultivate forest tea and the culture accompanying it, such as the local cuisines and handicrafts) as a cultural commodification to sustain village land use. Because the cultivation of traditional forest tea or miang is the community’s unique and most significant cultural resource, it can be regenerated along with the various tourism resources that link the application of local wisdom to land use, including the local cuisine from forest tea as a part of organic health tourism products served in homestays or local restaurants, handicrafts made from forest tea leaves, and forest tea cultivation programs for long-stay tourists. Accordingly, the importance of “the miang” identity, which underpins an integrated tourism model, can optimize the sustainable use of agricultural and forest area, including the revitalization of the residential area.

Considerations Concerning an Integrated Tourism Model in Relation to Strategic Planning

As this discussion has shown, however, the framework of rural land use sustainability cannot be powered without capital. Capital, as De Sato (2000) states, cannot be created by money but by people who think about how they can get the assets they accumulate to deploy additional production. Thus, integrating sustainability into strategic planning is the most significant implementation that can provide long-range protection of resources, the basic elements of capital (Gunn and Var 2002). Here, integrating sustainability means using the integrated tourism model to energize the framework of rural land use sustainability, which will be integrated by the accumulated balance of the sustainability of ecology, society, economy, and culture. Effective strategic planning by local people should make it a priority to start with a SWOT analysis, which consists of a consideration of the factors that are likely to make the implementation a success or a failure and should look at both internal and external organization (Briggs 2001). In the case of Mae Kampong, the SWOT analysis can be discussed with the integrated tourism model as follows:

- Strengths—the cultural identity of forest tea cultivation and local participation in tourism management to improve the economic status, which highlight its rural land use as a featured community-based ecotourism village.
- Weaknesses—lack of quality production and facilitation of forest tea and other local vegetation in supporting health tourism in various optional tourism products.
- Opportunities—the reputation of the village in attracting long-stay tourists from Chiang Mai and especially Japanese retirees. The Japanese residential community will invest in a mega project near the San Kampheng Hot Spring, which is approximately
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18 km from Mae Kampong village. This project will provide a tremendous opportunity to maintain and increase community capital, particularly the social and financial capital from Japanese long-stay tourists who are mostly interested in health tourism.

• Threats—the potential to develop amenities in the residential areas is limited in scale (e.g., accommodation, health centers, and parking).

Accordingly, any strategic planning should emphasize the tactics that can generate community capital for supporting the sustainability of community land use by taking the strengths, weaknesses, and opportunities to identify the action plan or establish the projects, and addressing threats in order to monitor the problems. The action plans or new projects based on an integrated tourism model should focus on promoting health tourism, which is still implemented within the concept of community-based ecotourism. It should consider the commodification of forest tea and other local vegetation which can be produced as various health tourism products: examples might include the transformation of organic food products from forest tea, coffee or other local vegetables; the development of herbal products used for hot springs or spas; a tour program on meditation and sports activities, such as cycling and mountain climbing; linking a health tour program with other attractions around the village, such as the San Kampheang or Chea Sorn Hot Springs, adventure walking in the Muang On cave. In accord with these ideas, all villagers interviewed for this project strongly agreed with the development of health products in four groups; food, herbal medicine, body care, and spas which have been proposed by the village headman, Phromin Puangmala. He stated that the food service in all homestays should be standardized in taste and quality by means of cooking from local organic ingredients and using the same recipes; local herbs should be developed as herbal medicine with good packaging; forest tea and coffee should be transformed into body care products, such as coffee soap; and chinquapin wood should be used for making sauna rooms because it has a fragrant aroma.

Health tourism, therefore, can be extremely useful in sustaining the land use of the village in both the physio-biotic and socioeconomic dimensions. In the physio-biotic dimension, health tourism requires natural products for health and wellness treatment, which may be derived from the abundant natural resources on the land. Similarly, the socioeconomic dimension may be obtained from the requirements of the health tourism products and activities produced by land use. It appears quite clear that health tourism under the control of a community-based ecotourism model could maintain rural land use in terms of the generated wealth of natural resources, and could be transformed into community capital for land use sustainability.

Besides health tourism, which should be emphasized in the action plan or program to achieve the goal of the strategic plan, long-stay tourism should also be heavily emphasized as a tourism policy for monitoring the problems that may arise from threats to the space for amenity development. According to the trends in demography that influence the boom of international migration, the opportunity to derive a multiplier effect from long-stay tourism in rural areas is high. Such tourism is a deliberate alternative tourism type; the regulation or policy, therefore, is long-term in its timeframe, and is intended to maintain the community’s well-being by such means as restricting the number of visitors, requiring accommodations to have a majority local ownership, designating architectural standards and requiring that most goods and services be obtained from local sources (Weaver 2006). Ideally, long-stay tourism in Mae Kampong, which has been appearing by means of a gradually increasing number of resort hotels and rental houses in recent years, should be monitored by the local community. Regulations should be established for controlling this phenomenon, including oversight for the expansion of residential space to the agricultural area or forest area, or for other uses, such as shops, restaurants, and parking lots.

In addition, amenity development, particularly in the construction of accommodation for supporting long-stay visitors, should be friendly to the cultural and natural environment by means of such structures as eco-lodges. Some of the homestay entrepreneurs shared several ideas about how some of the vacant houses should be gentrified into homestay facilities or that homestays should be constructed with enough space for privacy, with some developed as one-floor houses for the elderly. Furthermore, the management should support community-based ecotourism, the existing model that is the strength of the village; that is, it was suggested that the benefits from long-stay tourism, such as income from rental houses, should be partly allocated to the village funds in the same way as income generated from homestays. Though this idea was not accepted by a resort hotel belonging to one outsider investor, other residential interviewees, even a rental house owner agreed. The unanimity among those interviewed seems to indicate that there were no substantial differences of opinion concerning tourism development among the residential interviewees in the six village groups.
The guidelines resulting from this research suggest that the policies monitoring long-stay tourism are likely to result in the re-creation of the rural landscape, which will be able to generate the value of natural capital as a part of the physio-biotic dimension. Meanwhile, the allocation of income from long-term rental accommodations could contribute to the accumulation of financial capital; the volunteer networks of long-stay tourists or stakeholders can generate wealth in terms of human capital, social capital, and cultural capital, which reflect sustainable rural land use in the socio-economic dimension.

**Sustainability of Rural Land Use based on an Integrated Tourism Model: Conclusion**

The purpose of this study is to modify the tourism management model of Mae Kampong village by analyzing land use and tourism management according to its existing tourism model. According to the analysis, community-based tourism and ecotourism are unique and the strongest points of tourism management in community land use, informed by an awareness of environmental and natural resource conservation and income distribution. There appears to be a trend toward long-stay tourism and health tourism, although they are not currently emphasized for the sustainability of rural land use with relation to tourism. Consequently, community-based tourism, ecotourism, long-stay tourism, and health tourism are integrated in developing a new tourism management model for Mae Kampong.

Although the existing tourism model of the village is mainly integrated through ecotourism and community-based tourism, it can still sustain community land use. However, long-stay and health tourism can create new resources and generate new wealth from tourism and rural land use. In addition, social networks can be formed with long-term tourists, increasing the value of the cultural landscape of rural community with volunteer activities relating to language and cultural exchange between the international visitors and local people. As a result, Mae Kampong village, including the stakeholders, should seriously consider the development of long-stay and health tourism, integrating them into their existing model so as to maintain and increase more community capital, the most important factor for rural land use sustainability (Figure 11). Specifically, natural capital generates ecological sustainability, which is the sustainability of the physio-biotic dimension of rural land use. Similarly, human, social, financial or built, and cultural capital generate the sustainability of the society, economy, and culture, which are integral parts of the sustainability of the socio-economic dimension of rural land use. Generally speaking, human and social capital generate social sustainability, while financial capital produces economic sustainability, and cultural capital generates cultural sustainability.

In conclusion, five types of community capital play an important role as the stock of resources that will produce sustainability. Meanwhile, an integrated tourism model will be the ultimate dynamic tool for accumulating community capital and generating the sustainability of rural land use, while the interrelationship between the four types of tourism and accumulative community capital is a conceptual framework for the sustainability of rural land use in Mae Kampong village. It should also be considered.
as a practical framework for the next step in tourism strategic planning based on an appropriate model of alternative tourism.

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References


Sustainability of Rural Land Use Based on an Integrated Tourism Model in Mae Kampong Village, Chiang Mai Province, Thailand


(T) written in Thai
(TE) written in Thai with English abstract