

Sustainable Remote And Rural Eco-Tourism: Applying A Systemic, Holistic, A Interdisciplinary And Participatory (Ship) Approach

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Long Lamai is a remote and rural Penan community in the interiors of Borneo in Sarawak, Malaysia. It is only accessible by either an 8-hour 4-wheel-drive on the logging road or an hour's flight via a 19-seater Twin Otter, and then a mandatory hour's river ride upriver. Long Lamai is being developed as an eco-tourism site, given the existence of natural attractions such as untouched flora and fauna, and the unique Penan's culture. A telecentre (which provides computing facilities and Internet connection via a satellite system, and using solar-power), was established in 2009. The management committee, which is running the telecentre, is also spearheading the use of ICTs in establishing Long Lamai as a tourist attraction and hence, to improve the socio-economic status. In addition to this, there are many aspects which need to be addressed, for example, the issues of environment, e-commerce, handicraft development, transportation, sourcing of food, sourcing of raw materials for the handicrafts, tour guiding, and development of tourism activities. One approach to the design and development of sustainable eco-tourism industry is by viewing the whole socio-economic transformation process as a complex system. The complex system comprises the various "sub-systems" such as those described above, e.g. environment, e-commerce, and handicraft development. All these sub-systems interact and affect each other, and has to work effectively and efficiently together. To understand this complex system, we take the SHIP (systemic, holistic, interdisciplinary and participatory) approach. This paper thus details a study of Long Lamai as an eco-tourism site from the SHIP perspective.

Key words: eco-tourism, socio-economic improvement, rural and remote communities, complex socio-technical systems, systemic, holistic, interdisciplinary and participatory, SHIP approach

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Introduction

Tourism is a major industry in many economies, also one of the fastest growing economic sectors across the world. It is an industry primarily which has dealt with rendering services to various classes of tourists. Considering the tremendous growth of tourism economics, there is a great optimism for rural tourism too. There exists the demand for rural tourism that is influenced by various factors at the individual level. An increased longing for the countryside as a result of the hustle-bustle of modern urban life, a booming natural food market, and a desire to conserve traditional rural life are among the factors that support the generation of this demand (Ertuna & Kırbaş, 2012). Many rural communities are finding that tourism is a lucrative local-based business – local ownership, local management and local spin-offs. It promotes the development of small scale businesses and family-based enterprises, for example homestay, lodging and recreation activities, that root in local scenery and tap into local culture.

Rural areas generally suffer high levels of poverty due to greater economic instability than the urban counterparts. Most poor people who live in rural areas are primarily engaged in low productivity farming activities, and due to the geographical conditions, have low-level of infrastructural development and access to essential services. Introducing rural tourism to rural areas can provide wider advantages to the people (Holland, Burian, & Dixey, 2003). As aforementioned, it promotes local-based businesses and enhances local participation in development. Apart from this, according to Gannon (1994) and Kieselbach and Long (1990), the development of tourism may be a panacea to address poverty alleviation and other benefits to rural areas, such as

- Economic growth, diversification, and stabilisation;
 - Employment creation, as primary or secondary source of income;
 - Decrease of rural-urban migration and depopulation;
 - Maintenance and improvement of public services and infrastructure
 - Revitalisation of local crafts, customs and cultural identities;
 - Protection and improvement of natural and built environment; and
 - Increase recognition of rural precedence by policy-makers and economic planners.
- Thus, rural tourism has vast potential to bring about social and economic transformation to remote and rural communities.

The development of rural tourism has also attracted extensive research interest. The scope of rural tourism policy has expanded its objective that is concerned as being sustainable. The basis of being sustainable for rural tourism seeks to keep triangular equilibrium between the tourism-operating environment (eg. tourists, tourism industries), the destination environment and the host community (Sharpley & Sharpley, 1997). An ideal aim for sustainable rural tourism is to minimise environment disturbance and cultural damage, optimise visitors' satisfaction, and meanwhile maximise long-term economic growth for the host region. Nevertheless, in the past, the industry players used to dominate the triangle alone, advocating a pro-development of rural tourism. The fragile environmental or ecological part is often left unnoticed. Conversely, there also exists the pro-conservation development of rural tourism often fails to take into account the economic implications.

However, research on the tourism sustainability is limited (Saarinen, 2006) and the study of tourism policy is difficult. Tourism policy development, explicitly and implicitly involves beliefs and values, about what is good and bad (Scott, 2011) that span across multitude of interested parties. As rural tourism involves processes

constructed around broad range of stakeholders with respect to the treatment of different dimensions of sustainability, a consequence of the complexity nature is that there will be differences in opinions without consensus over “appropriate” policies and strategies that would ensure the realisation of a dynamic system of sustainable rural tourism.

Sustainable Rural Tourism

The concept of “sustainable development” has been in spurts and starts, and it is understood today since the Brundtland Commission Report in 1987 by the World Commission on Environment and Development, as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*” (United Nations, 1987). Although the Brundtland Commission Report made no particular reference to tourism, the role of tourism itself as a development industry thus should adhere to the tenets of sustainable development. As noted in the previous section, the concept of sustainable rural tourism still remains elusive and literature is fraught with ambiguity, whether the focus should be on making the development of tourism itself more sustainable or on achieving sustainable development through tourism (Hunter, 1995). There is no clear direction on this subject that has led to a multiplicity of lines of thoughts. Thus, one practical way forward lies in the need to create proper and appropriate sustainable rural tourism curricula together with encouraging the appropriate change of mindset.

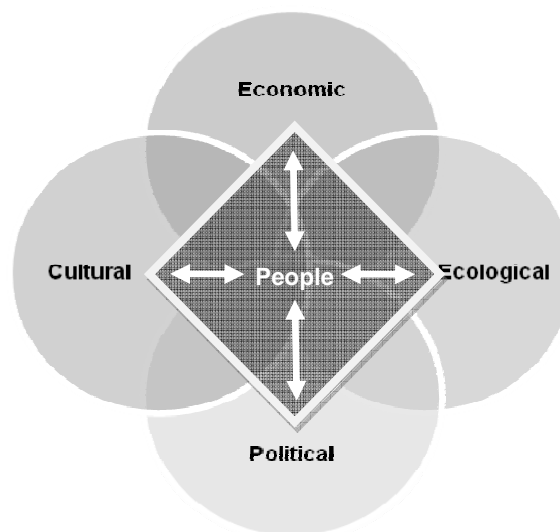


Figure 1: Complex system of rural tourism sustainability

The basis of sustainable development exists in four distinct constituent parts namely the economical, environmental/ecological, political and cultural sustainability. These dimensions not only exist individually but there are inter-relationships between each sector that need to be balanced. Rural tourism development is complex, considering the wide variety of interrelated large-impact aspects in societal, moreover involving various stakeholders. Given this multi-dimensionality, trying to understand and study the rural tourism industry is difficult (see Figure 1) given that it has to take into consideration the numerous factors which may be problematic and influence the solution. The rural tourism system cannot be studied based on each separate component, but as a whole, to achieve a sustainable result.

This paper presents the use of the SHIP approach (Manuaba, 2007) to attain the dynamic goal of sustainable rural tourism development. We will use Long Lamai, a village which aims to become a remote eco-tourism village, as a case study. SHIP stands for “systemic”, “holistic”, “interdisciplinary” and “participatory”. The SHIP approach provides community-based solutions that foster democratic participation and ownership. Such an approach entails the following:

- Firstly, to understand and regard the tourism project as a **system**, which then allow the identification of interconnections between component parts of the system and that within each part (sub-system);
- To view the system **holistically** as a whole, but not as isolated components of the system;
- For people from different disciplines to work collaboratively in a team (thus, the **interdisciplinary**);
- and to actively involve those who are concerned and committed to the issues that occur in the system; ensure that the target stakeholders **participate** in the process and solution. SHIP has been advocated in community development literature, notably the transformative agenda of consciousness raising and enhanced participatory democracy (Hitchcock & Wesner, 2008).

In this research, we will employ a SHIP approach which supports the notion of sustainable rural tourism by recognising “rural tourism” as a system incorporating many multi-disciplinary elements that need to be examined as part of a holistic analysis. We believe employing this approach will allow us to identify the important sub-systems, and then tackle issues of each sub-system (involving the stakeholders), how sub-systems interact as well as with other sub-systems as a collective whole.

Case Study

This section presents a case study that utilises the SHIP approach in identifying, analysing and solving issues faced in any rural tourism activity in the quest to attain sustainable results.

Long Lamai

Long Lamai is one of the biggest and oldest settlement of the Penan in Sarawak. Located in the remote interior of Sarawak near the border of Kalimantan, Indonesia, travelling to the settlement takes eight hours 4-wheel-drive on rough logging roads or an hour’s flight via a 19-seater Twin Otter, and then a mandatory hour’s river ride upriver or hiking through the dense rainforest.

The Long Lamai Penans were once nomadic people of the rain forest until in 1955 headman Belare Jabu was encouraged by the British colonial administration to settle at the current village site on Balong River. Today, Long Lamai has a population of approximately 500 people. Most of them live in subsistence farming and herding, but still continue to make long journey into the forest to collect various products for food and medicine. Nevertheless, the knowledge of the forest that they have amassed is still retained and is being passed generation to generation. They view the entire rainforest as their home, and lived a lifestyle that does not exploit or harm their home.



Hour-long journey to Long Lamai



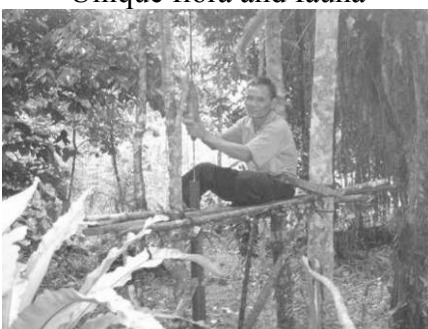
Telecentre in Long Lamai



Unique flora and fauna



Weaving of baskets



Making blowpipe the traditional way



Traditional costumes/customs still existing

Figure 2: Images of Lamai and its potential

Ngerabit e-Lamai Telecentre

In 2009, a community-led telecentre, Ngerabit e-Lamai, was established there. The community was provided with computer facilities and access to the Internet via a satellite telecommunication system, and powered by a solar (photo-voltaic) system. The community was given basic computer skills and relevant training to operate the telecentre. The telecentre is currently being run by community members and they are aware of the opportunities and risks presented by Internet access. The main role of the telecentre is envisaged as a means to bridge the digital divide, not only providing connectivity to a remote community but also as a catalyst to bring about socio-economic development.

Rural Tourism

Efforts are under way to integrate information and communication technologies (ICTs) to all sectors and new rural services. Rural tourism is one such area. Given that

the rich cultural heritage of the Penan people and the beauty of flora and fauna, makes Long Lamai a region which is ideal to take advantage of the interest in eco-tourism and cultural tourism (see Figure 2). In addition, the existence of the telecentre can act as an enabler to assist the new tourism industry in Long Lamai in terms of promotion, and e-commerce. Rural tourism would improve the livelihood of the rural community by generating enhanced source of income and creating alternative income options, which otherwise is dependent upon subsistence farming.

The local community in Long Lamai started to leverage on the telecentre by setting up an e-Commerce business to grow the handicraft industry. Handicrafts that produced by the Penans in Long Lamai varies from mat weaving to basketry, beading and blacksmithing. The Penans artisans are skilled in traditional handicraft making thus authenticity of their handiwork is highly sought and valued in the market, moreover highly relevant from a cultural perspective. Before e-Commerce is introduced, due to the remoteness of Long Lamai, their handicraft products may not achieve the asking price by directly going onto the open market; they may have to take an inferior amount that is offered by a middle vendor. Marketing and selling rural handicrafts online will not only expand the economy of people in Long Lamai, but also attract tourists to learn more about the uniqueness of handicrafts.

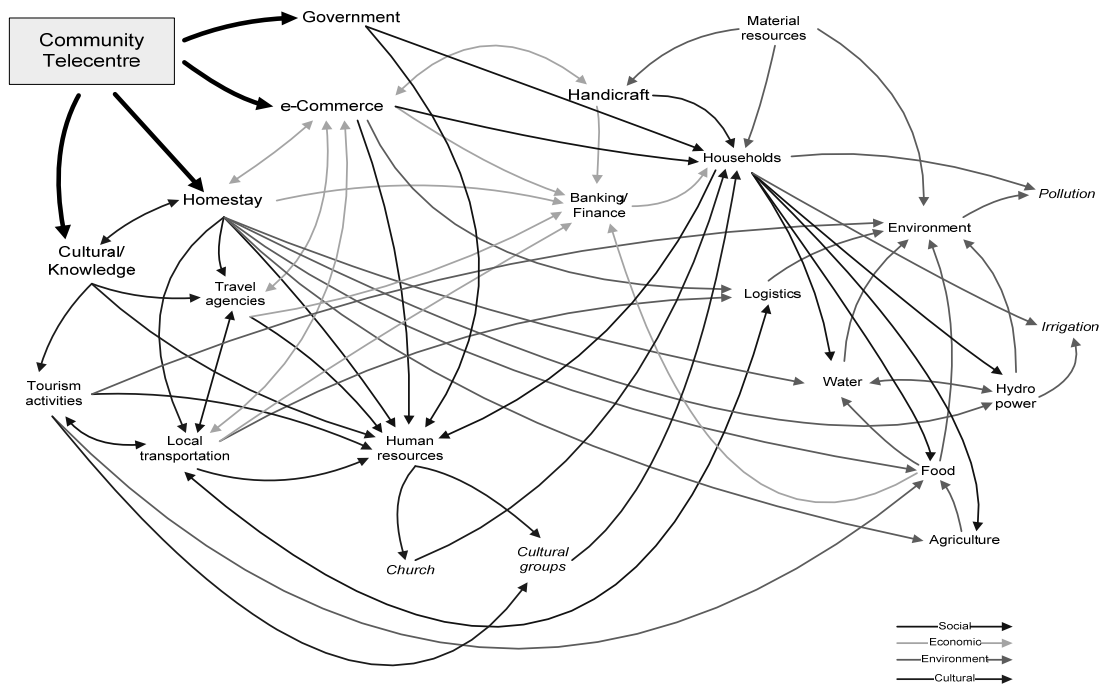


Figure 3: System design of rural tourism in Long Lamai

Besides, the community in Long Lamai has also started to establish community-based homestay programme where tourists stay with selected families, interact and experience the Penan culture and lifestyle. In addition, tourists are often involved in local activities planned in this remotely rural community such as jungle trekking, boat cruising or rafting, fishing, picnicking and cultural night performances. Like commercialising local handicraft through online, the community uses the telecentre in the marketing of the eco-tourism and homestay programme. As a result, rural tourism in Long Lamai has improved community facilities and public amenities such as transportation facilities and sewage system. The boatmen in Long Lamai gather and collaboratively arrange longboat transports for the tourists – by taking

turns so that everyone can benefit from another income. Some houses that provide homestay are building proper long drop toilets with in-ground septic tanks and privacy shed. A proper latrine system in rural area may improve better hygiene and sanitation practices by the people in Long Lamai.

Nevertheless, there are downsides with rural tourism development. While travelling, tourists may impact on the natural environment and climate. Natural stock of raw materials for handicraft making (such as rattan) may become scarce and deplete, or may only be available at certain time of the year. Greater number of tourists may cause environmental pressure such as water pollution (reducing quality of river water quality, which affects water consumption) and tranquillity of rural area (overcrowding). Competitive demands may exploit the limited natural resources and spoil the natural scenic beauty.

Rural tourism retailing (e.g. corporate travel agencies and operators) can also bring positive and negative economic and cultural changes, such as employment opportunities but the community may become too dependent on the urban entrepreneur or investor resulting local rural employees being exploited. Also, rural tourism may lead to modernisation which may hasten the loss of traditional values and cultural practices.

The following sections will employ the SHIP approach to identify and provide a platform to study the rural community and propose plans to move forward.

Systemic and Holistic

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The positive impact of rural tourism is favourably anticipated but the negative ones should be envisaged and overcome. Sustainable rural tourism development must encompass a *systemic* view of the structure and processes that occur in between the sub-system components (system parts). Each sub-system interact as they continually influence one another (directly or indirectly) in order to maintain or achieve a common goal; hence the adoption of “systems thinking” encourages thinking about the cause-and-effect between these elements. Systems thinking focuses on cyclical rather than linear cause-and-effect. It is best understood in the context of relationship with other sub-system, rather than in isolation. By doing so, each problem/goal can be identified and be solved by working on the relevant sub-systems, before continuing to work on the problem at a *holistic* level.

A system view of rural tourism in Long Lamai is illustrated in Figure 3 where tourism clusters are taken into account. The system gives an illustration of the cause-and-effect relationships between the sub-systems. These relationships can be subsequently analysed at the sub-systems level and later, holistically to achieve the goal of sustainable development or solving a problem. Taking the example of handicraft making industry in Long Lamai is perceived as an economical (sub-)system that generates income for the local people (Handicrafts to Banking/Finance connection in Figure 3). However when the (sub-)system is viewed at a higher level, it is found that handicraft activity may have an environmental issue as the source of raw materials are collected from the forest (Handicraft to Material resources-Environment connection in Figure 3). Thus, a solution is required to either use conservatively or to consider planting rattan to ensure a sustainable supply.

Interdisciplinary and Participatory

In addition, these problem need to be solved systematically and holistically, by means of an *interdisciplinary* approach. Each sub-system is different and needs of different expertise and knowledge. For example, rural handicraft industry involves the artisans, who have different knowledge from the farmers and agriculturalist. Farmers and agriculturalist may be needed to start the plantation to ensure a steady supply of raw materials (rattan). The solution requires the artisans, farmers and agriculturalist to discuss how to ensure a sustainable supply of rattan. One party by themselves would not have a complete solution. The gap between the different disciplines needs to be bridged to bring about a consolidated solution. There are six criteria which must be comprehensively assessed so that solution is technically (robust in rural environment and condition), economically (affordable, cost-effective), ergonomically (safer and healthier), socio-culturally sound (relevant to local cultures and practices), saves energy (green technology that works at limited energy resources), and it must preserve the environment (environmental friendly) (Manuaba, 2007). If one or more of these criteria gives a negative rating, steps needs to be taken to overcome these aspects; else a compromise may be required.

This in turn, implies a strong commitment of *participation* by the local rural communities. In order to be sustainable, it is imperatively to involve local community, provide to a certain extent of local control and to respect their concerns. In rural development, local community empowerment is important as a process that helps people to have a sense of ownership over the development being implemented at their area. In a Delphi survey by Miller (2001) highlighted that the importance of local stakeholder involvement, “*Locals are considered by many respondents to be key to the issue of sustainability and as such their negative perception of tourism are a ‘barrier to sustainability’.* *Locals must be convinced therefore of the benefits from tourism before any progress can be made towards a more sustainable positions*”. In fact, the study of eco-tourism in Long Lamai provides a good example of local active participation where the development is “locally-governed” and at the local community’s interest.

Conclusion

The development of sustainable rural tourism in Long Lamai can be studied from a total SHIP. Through this total approach, tourism development can be potentially more humane (at local’s interest), competitive (local community empowerment) and sustainable for survival and continual development. This paper concludes that using the SHIP approach, we can assist in the study of rural tourism industry in a more detailed manner, by identifying the components (actors and tourism clusters) and though a breakdown of the sub-systems, the relationships and the factors that induce the competitiveness at different level of interest (intra- and inter- issues). These sub-systems can be optimised to achieve the concept of sustainable development.

To-date rural tourism development is still on-going in Long Lamai which is making slow but steady progress in becoming an eco-tourism destination. While many of the facilities are not developed, through the SHIP approach, we believe a sustainable rural tourism industry is achievable.

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References

- Ertuna, B., & Kırbaşı, G. (2012). Local community involvement in rural tourism development: The case of Kastamonu, Turkey. *PASOS Journal of Tourism and Cultural Heritage* , 10 (No. 2. Special Issue), 17-24.
- Gannon, A. (1994). The effects of ecotourism in developing nations: An analysis of case studies. *Journal of Sustainable Tourism* , 8 (4), 288-304.
- Hitchcock, M., & Wesner, S. (2008). The 'SHIP' approach and its value as a community-based research method in Bali, Indonesia. *Current Issues in Tourism* , 11 (1), 84-100.
- Holland, J., Burian, M., & Dixey, L. (2003). Tourism in poor rural area: Diversifying the products and expanding the benefits in rural Uganda and the Czech Republic. PPT Working Paper No.12.
- Hunter, C. (1995). On the need to re-conceptualise sustainable tourism development. *Journal of Sustainable Tourism* , 3 (3), 155-165.
- Kieselbach, S., & Long, P. (1990). Tourism and the rural revitalization movement. *Parks and Recreations* , 25 (3), 62-66.
- Manuaba, A. (2007). A total approach in ergonomics is a must to attain humane, competitive and sustainable work systems and products. *Journal of Human Ergology* , 36 (2), 23-30.
- Miller, G. (2001). The development of indicators for sustainable tourism: Results of a Delphi survey of tourism researchers. *Tourism Management* , 22, 351-362.
- Scott, N. (2011). *Tourism policy: A strategic review*. Woodeaton, Oxford: Goodfellow Publishers Ltd.
- Sharpley, J., & Sharpley, R. (1997). *Rural tourism: An introduction*. London: International Thompson Business Press.
- United Nations. (1987). Report of the World Commission on Environment and Development. General Assembly Resolution , 42/187 .