

Exploring potential ecotourism products in Sabah, Malaysia

Journal of Tourism, Hospitality
& Culinary Arts (JTHCA)
2020, Vol. 12 (1) pp 158-176
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UITM Press
Submit date: 03rd August 2019
Accept date: 03rd September 2019
Publish date: 29th February 2020

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Proposed citation:

Kunjuraman, V., & Hussin, R. (2020). Exploring potential ecotourism products in Sabah, Malaysia. *Journal of Tourism, Hospitality & Culinary Arts*, 12(1), 158-176.

Abstract

In line with the vision of sustainable development goals, ecotourism may be regarded as a tool for human awareness to protect the natural environment and local community development. Since ecotourism relies on natural resources and setting in rural areas, community participation is considered as a viable method to achieve sustainable ecotourism development as well as to enhance local community sustainable livelihoods. This study aims to investigate the potential of ecotourism products in the Ramsar site of the lower Kinabatangan area of Sabah, East Malaysia, as a sustainable livelihood activity for the villagers. The fieldwork was conducted between September to November 2014. This study used multiple data collection methods such as in-depth and focus group interviews, household survey through questionnaire, and field observation in order to support the research findings. There are many potential ecotourism products based on the natural environment that could be developed in the Ramsar site and local participation is vital in the development of the products. Finally, several recommendations to promote the natural attractions along the Ramsar site by relevant stakeholders are highlighted.

Keywords:

Ecotourism, Local Participation, Ramsar Site, Sustainable Livelihood Approach

1 Introduction

Tourism is one of the most powerful sectors in the world and seldom occurs in isolation (Tao & Wall, 2009). Resources in the world are important means for the survival of this sector and natural resources are the key element for the existence of ecotourism (Caballos-Lascrain, 1996). According to the International Ecotourism Society (2006), ecotourism has been growing at the rate of 20-34% annually, which is considered as faster than the tourism industry as a whole with noted international markets since 1990 (Rivera & Croes, 2010, p. 85). With this realization, many countries worldwide have begun to boost their economic advancement with this type of tourism (Bhuiyan, Siwar, Ismail & Islam, 2011). According to Dehoorne and Tatar (2013, p. 21), "tourism is the main source of foreign currency for the Caribbean and it is a vital sector of activity in the region's development". Meanwhile, Weinberg, Bellows, and Ekster (2012) successfully presented an empirical work on ecotourism that involves two successful case studies from Costa Rica and New Zealand. Ecotourism is a popular subject among tourism researchers worldwide and many useful insights have been contributed from numerous scopes of many studies (Weinberg, Bellows & Ekster, 2012; Dehoorne & Tatar, 2013; Bhuiyan, et al. 2011; Skanavis & Giannoulis, 2010; Scheyvens, 1999; Reimer & Walter, 2013; Petrovska, Reckoski & Reckoska, 2009; Orams, 1995; Newsome, Moore & Dowling 2013; Mat Som & Baum, 2005; Karmakar, 2011; Hussin & Mat Som, 2008; Hussin, 2006, 2008, 2009). Furthermore, ecotourism does not only provide economic benefits; it is also a means of community development (Scheyvens, 1999; Weinberg, et al. 2012; Hussin, 2006, 2008, 2009) and enhancement of the livelihoods among rural communities in tourist destinations.

Accordingly, ecotourism is a popular tourist activity in many developing countries including Malaysia where the government is keen to promote the country as an ecotourism destination. The vision of Malaysia as an ecotourism destination can be seen when the Ministry of Tourism, Arts and Culture Malaysia (MOTAC), a single government agency is given the responsibility to look into ecotourism issues. This agency is generally responsible to promote Malaysia as a preferred tourism destination by implementing promotional activities in order to encourage the arrival of tourists to the country. According to the report by CNN Travel, Malaysia has been recognized as one of the 17 must-visit destinations in 2017 (MOTAC, 2019).

In Malaysia, ecotourism plays an important role to boost the country's income by attracting a large number of international tourists. Malaysia has been aggressively promoting its tourism destinations to tourists who come from different regions around the world, particularly with the launch of a major tourism campaign, *Visit Malaysia 2020* (VM2020), which aims to attract 30 million international tourist arrivals in 2020. Figure 1 illustrates the logo of VM2020. In order to achieve the vision of promoting Malaysia as one of the nature-based tourism destinations in the world, several strategies and issues have been addressed especially by putting emphasis on ecotourism development. For instance, the Malaysian government has been paying serious attention on ecotourism development since two decades ago when the National Ecotourism Plan

(NEP) was introduced in 1996. This plan was drafted on the basis of promoting Malaysia as an ecotourism destination and in ensuring the conservation and long term sustainability of cultural heritages in Malaysia. However, the previous NEP was revised and enhanced through recent studies towards developing potential ecotourism destinations. The new NEP 2016-2025 is introduced with three main objectives: (1) consolidate recent reviews and studies of the NEP 1996, (2) review the success and shortcomings in the implementation of the NEP 1996, and (3) recommend policies, strategies and action plans to improve the planning, sustainable management, conservation, financing, promotion and operation of ecotourism sites.



Figure 1: VM2020 Logo (Tourism Malaysia, 2019)

There are many ecotourism sites in East Malaysia, notably the National Park in Pahang; Bako National Park, Mulu National Park, and Niah National Park in Sarawak; and Kinabalu National Park, Kundasang, Tunku Abdul Rahman National Park, Kinabatangan Floodplain, and Sukau in Sabah. The lower Kinabatangan River in Sabah is one of the ten special destinations for Malaysian ecotourism and is highlighted in the Malaysian National Ecotourism Plan 1996. Moreover, the lower Kinabatangan area is a 'protected area' for wildlife under the Wildlife Conservation Enactment established in December 1997; the sanctuary is protected under the State Land Ordinance (1930) (Vaz & Payne, 1997, p. 8). In the early 1990s, WWF of Malaysia, in collaboration with the Ministry of Tourism, Culture, and Environment Sabah (previously known as the Ministry of Tourism, Environment, Science, and Technology), designed the Malaysian National Ecotourism Plan, whereby the lower Kinabatangan area was recognized as 'an ecotourism hotspot' in Malaysia. In this paper, the context of the study revolves around the Ramsar site, which is located in the lower Kinabatangan area of Sabah because of its potential as an ecotourism destination in Sabah.

The lower Kinabatangan Segama Wetlands (LKSW) area (the Ramsar site) covers 78,803 hectares and consists of three forest reserves: The Trusan Kinabatangan forest reserve (40,471 ha), the Kulamba Wildlife forest reserve (20,682 ha), and the Kuala Maruap-Kuala Segama forest reserve (17,650 ha). This Ramsar site has a great potential for ecotourism activities due to its richness in natural resources. The involvement of local communities is deemed vital in order to promote this site as an ecotourism destination. A total of six villages along the Ramsar site of the lower Kinabatangan area are covered in this study namely the Abai Village, Bongon Village, Mumiang Village, Pitas Village, Tundon Bohangin Village, and Sri Ganda Village.

Studies on ecotourism in the lower Kinabatangan area of Sabah, which mainly focused on the Sukau Village research had been undertaken by several researchers in the field of tourism (Hussin, 2008, 2009; Hussin & Mat Som, 2008; Chan & Baum, 2007). Empirical research on the potential of ecotourism products and activities, especially for villages located within the Ramsar site and other areas in lower Kinabatangan is needed as to assess the potential and benefits of ecotourism in the area. This study examines the current ecotourism activities at the Ramsar site in lower Kinabatangan, where local communities are actively involved in the ecotourism development. This study proposes the following objectives; (1) to identify the potential of community-based ecotourism products in the Ramsar site of the lower Kinabatangan area of Sabah, and (2) to provide recommendations in terms of implementation of ecotourism programmes based on the research findings.

2 Literature review

2.1 Sustainable Livelihood Approach (SLA)

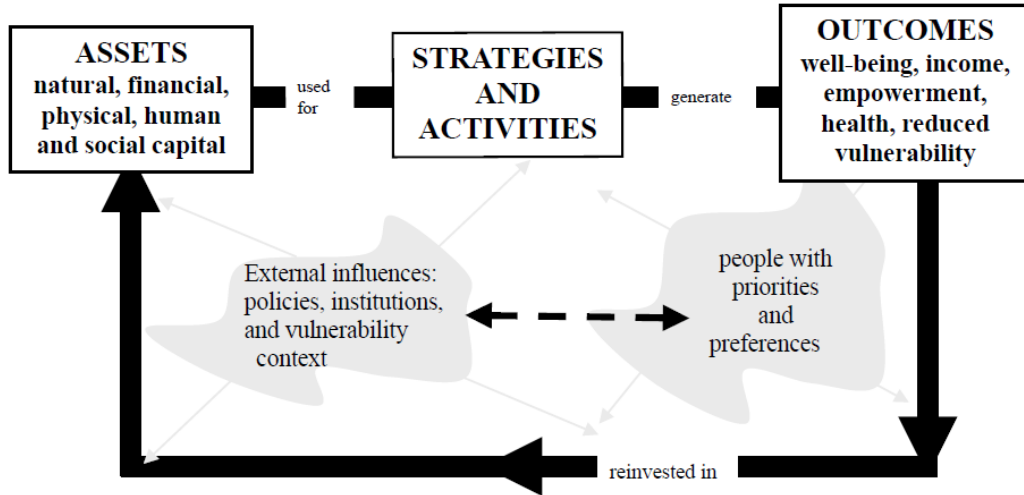
Figure 2 depicts the conceptual framework for the study, which is based on Ashley's Sustainable Livelihood Approach (SLA). The framework is used as guidelines to examine how the rural communities in the Ramsar site secure their livelihoods through tourism activities as the majority of them are fishermen, located in remote areas in lower Kinabatangan. This framework was also suggested by Scoones (1998) as to examine how rural communities secure their livelihoods by doing extra jobs, instead of relying on their main job. This approach is applicable in this study as the community-based ecotourism activities were initiated by the locals in some villages, namely the Abai Village and Sri Ganda Village, in order to raise their income and livelihoods. Besides that, this framework was applied by Tao and Wall (2009) in their study of the Cou indigenous community in Shanmei, Taiwan. There are many interpretations pertaining to the concept of livelihood. For instance, Tao and Wall (2009, p. 91) argued that 'livelihood' is a more concrete concept than 'development' and is easier to discuss, observe, describe, as well as quantify. Meanwhile, an earlier work by Chambers and Conway (1992) offered useful insights about the SLA by focusing on people, their capacity, resources that they control, as well as the skills and knowledge they have in order to sustain their livelihoods. According to Chambers and Conway (1992, p. 6), SLA is:

“A livelihood that comprises of the capabilities, assets (stores, resources, claims, and access), and activities required for the means of living: a sustainable livelihood is that which can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to the other livelihoods at the local level and global levels and in the short and long term”.

Moreover, SLA is a relatively new orientation in poverty alleviation that goes beyond the conventional definitions of the issue. For the conventional approach (e.g. The Integrated Rural Development Approach), the focus is on certain aspects of poverty, such as to address the aspects of the livelihood of the poor in relation to low income, but does not consider other vital aspects of poverty, such as vulnerability and social exclusion. On the other hand, SLA pays more attention to the various factors and processes that could enhance the ability among the poor to make a living in an economically, ecologically, and socially sustainable manner (Krantz, 2001). Thus, SLA offers a more coherent and integrated approach to poverty. Poverty, in fact, as conceived by the poor themselves, is not only a question of low income, but also other dimensions such as bad health, illiteracy, lack of public and social services such as clean water supply, as well as a general state of vulnerability and feelings of powerlessness among people. Therefore, the intention of SLA is to employ a holistic perspective in the analysis of livelihoods to identify issues of intervention that could be strategically important for poverty reduction at the local or policy level.

In many situations, the way resources and other livelihood opportunities are distributed locally is often influenced by informal structures of social dominance and power within the communities themselves. Thus, gender relation issues as an aspect of social relations between men and women commonly characterized or marked by inequality and social domination at the village level should be seriously considered or examined. Such an evaluation is important because gender relations are one aspect of the 'transforming processes' of poverty alleviation in rural areas. On top of that, evolving access to natural resources is another aspect of change that is important in understanding socio-economic status. Since the bulk of the population in the Ramsar site has been reported as being highly dependent on natural resources, especially rivers, mangroves, and wetlands (LKSW Ramsar Management Plan, 2011), reduced access to ecosystems services has dire implications to livelihoods.

Six villages along the Ramsar site of the lower Kinabatangan area are covered in this study, namely Abai, Bongon, Mumiang, Pitas, Tundon Bohangin, and Sri Ganda. The major economic activities of the areas surrounding the Ramsar site are logging, palm oil, and tourism, with the last two sectors dominating the economic landscape in recent years. Nevertheless, the populations within the Ramsar site and a few villages nearby have somehow failed to benefit greatly from the latter two industries, except for tourism (ecological tourism), which has emerged since the early 2000 and is slowly taking root (Hussin, 2008). Meanwhile, in terms of sustainable livelihood, majority of the villagers depend on natural resources in the Ramsar site of the lower Kinabatangan area.



Source: Adapted from Ashley, (2000, p. 14)

Figure 2: A Sustainable livelihood (SL) framework

Additionally, most of the villagers are still living below the poverty line as the Ramsar site areas are no longer rich with marine resources and fishing activities due to seasonal pollutions and threats by trawlers fishing. Due to these conditions, the local communities seek alternative economic activities related to community-based tourism (CBT) such as providing homestay service. CBT is an alternative approach to encourage participations among the local community in tourism development. This approach was coined by Murphy (1985), and community participation is the key element to develop tourism in a way that is more compatible with the rural context (Johnson, 2010). The concept of CBT is relevant to the study since it involves an assessment of tourism activities and development by the locals.

3 Methodology

The fieldwork was conducted between September and November 2014. This study employed qualitative research approach involving in-depth interviews, household survey, and field observation to explain the research findings. In-depth interviews with key informants were carried out with local community leaders (formal and informal). Formal leaders are the government officials, namely the village head (*ketua kampung*) and other members (especially the chairman) of the village department, as well as the *Majlis Pengurusan Komuniti Kampung (MPKK)* previously known as *Jawatankuasa Kemajuan, Kebajikan dan Keselamatan Kampung (JKKK)*. Meanwhile, informal leaders refer to non-selected leaders, including those involved in non-government organisations (NGOs), influential figures, and respected elders. In addition, a member of the *Koperasi Pelancongan Mukim Batu Puteh (Kopel Bhd)* was interviewed on his key contributions to the eco-tourism project in Abai. The main objective of the in-depth key informant interview is to explore in detail the themes and issues related to ecotourism

development. In this stance, eight in-depth interviews were conducted. On the other hand, a household survey, which is a face-to-face interview through a structured interview protocol, was conducted with household heads or their representatives. The survey also investigated the demography of the respondents, as well as their current socio-economic status. Lastly, field observations were made throughout the study concerning the life of the local community in terms of social, economic, and political dynamics in ecotourism development.

A total of ten researchers from the Ethnography and Development Research Unit, Universiti Malaysia Sabah, were involved in this study, including three PhD holders with expertise in tourism and development studies and seven postgraduate students. This is to ensure the credibility of the study and that potential biasness could be avoided. During data collection, the researchers spent fourteen days at Abai homestays and three days at Sri Ganda homestays. Due to the lack of accommodation (e.g. homestays) at Mumiang, Bongon, Pitas, and Tundon Bohangin, the researchers only spent two days at each village. On top of that, secondary data from journals, magazines, maps, government reports, legislations, newspapers, online database, and books were used to support the primary research findings. Subsequent to sampling, all data sources were independently analysed using the parallel mixed analysis strategy and the results were integrated in the interpretation phase to address the objectives of the research. In this paper, the findings are provided based on the fieldwork involved and mainly focus on the potential of community-based ecotourism products in the study sites.

4 Findings

The findings of this study reveal that several ecotourism products based on the natural environment in the study sites have the potential to be developed and promoted as tourist attractions. This section explains the characteristics of the ecotourism products based on the primary data from the fieldwork. Furthermore, it is worth noting that the background of livelihood activities engaged by the villagers in the study sites. It is important to know how tourism will become a sustainable livelihood activity for the villagers in the near future, with some of them are already beginning to engage in tourism-related activities. Table 1 depicts the population involved in a range of livelihoods and in several sectors based on the survey data from September to November 2014. The details pertaining to the types of occupations by sector and by village are also outlined in Table 1. The listing was contributed by 167 respondents, who provided the primary and the secondary occupations held by their household members. The household members include those who live elsewhere outside of the villages.

The main sector of employment is fishery, which includes various types of fishermen whose catch may derive from the rivers or the sea; and which also includes clam (*lokán*) collectors. Meanwhile, the second sector is business, which mainly refers to retail businesses, especially village grocery stores or salted fish producers/retailers. The third sector, agriculture, can be subdivided into agriculture for subsistence (paddy and vegetables) and for cash (small holders of palm oil, vegetables, and coconut). Fourth,

the service sector includes homemakers (housewives), security guards, school cleaners, and religious leaders (*imam*); while the fifth sector is the government, which consists of appointed local officials especially JKKK members and village heads; and the sixth sector, tourism, includes homestay operators, as well as those involved in conservation work and in organisations concerning conservation and community development.

Tourism and retail trade, although considered as part of the service industry, are separated in order to highlight their presence in the village livelihood profile. With regard to fishing, given that artisanal fishing produces a lower income, the fishermen found a viable activity in raising caged fish (*ikan sangkar*). Caged fish are raised at Mumiang, Pitas, Tundon Bohangin, and Sri Ganda. From the interviews, it is clear that a range of fish is raised, but two main ones, namely *kerapu* and *ikan merah*, have commercial demands in Sandakan Town. Such fish are collected by wholesalers upon availability of supply. The fishermen stated that they supply to middlemen residing in the villages either weekly or once every week depending on the availability. Alternatively, the fishermen would go to Sandakan Town themselves to sell directly to wholesalers at a higher price than that offered by the middlemen.

Apart from that, a second group of fishermen at Mumiang and Tundon Bohangin only sell their fish occasionally. In this instance, caged fish are used as a “safety net”, especially when they could not go fishing due to bad weather, or when they need money for specific reasons, as they would then sell the caged fish (*ikan sangkar*) to make ends meet. On the other hand, women are actively involved as the producers of salted fish, but are subsumed in Table 1 under the fishery’s occupational category. Meanwhile, in the agricultural sector, palm oil is produced by small holders at Sri Ganda, Mumiang, and Abai. The villagers at Sri Ganda were originally from Tundon Bohangin, who left the latter to look for alternative livelihoods to improve their socio-economic well-being, which they found in palm oil agriculture. Unfortunately, after they begin growing palm oil, they discover that their lands are included in the zoning for the Ramsar site.

Also, in the agricultural sector, some respondents are engaged in the sale of vegetables and coconuts (at Bongon and Mumiang). In the service sector, homemakers/housewives are found in all locations and form the biggest group in the service sector. Those engaged in the tourism industry are separated from the service industry to indicate a new form of livelihood that is experimented on. Nonetheless, interestingly, although many are involved in the tourism sector, such as in Abai, such work is not viewed by the respondents as their main occupation.

Table 1: Household Occupation by Sector and by Village (N=167)

Sectors of Occupation	Primary and Secondary Occupation						Total (%)
	Villages						
	Bongon	Abai	Mumiang	Sri Ganda	Tundon Bohangin	Pitas	

Fishery	34	36	76	21	40	27	234 (22%)
Agriculture	-	3	2	5	-	-	10 (1%)
Services	20	59	66	38	48	16	247 (23%)
Business	-	2	4	3	4	-	13 (1%)
Government	-	7	4	-	1	1	13 (1%)
Tourism	-	8	-	-	-	-	8 (1%)
Education	11	56	58	85	68	2	280 (26%)
No occupation	52	44	62	13	48	36	255 (24%)
Total	117	215	272	165	209	82	1060 (100%)

Note: Multiple responses to include household members living away from home who hold primary as well as secondary occupations.

No occupation – Those unable to work because of age (too old or too young), or unhealthy.

Service – Housewife/homemaker, security guard, shop assistant (*pekerja kedai*), cleaner, factory worker, technician (*pekerja pendawaian*), housekeeper.

Tourism – Homestay operator, tourist guide, member of people's organisation (i.e. CAP).

Education – Households' children who are still schooling.

4.1 Potential of community-based ecotourism activities in six villages at the Ramsar site as an alternative livelihood

Even though the locals are largely involved in fishery activities for their livelihoods, such occupation no longer provides main source of income to them because of certain challenges. An in-depth interview was conducted with a homestay operator in Abai who views fishing activities as irrelevant because the marine resources in the Kinabatangan River have decreased compared to five years ago. Thus, tourism-related activities become the alternative form of livelihood activity that provide opportunities to locals to enhance their livelihoods. In this study, the researchers suggest the potential of community-based ecotourism activities in the six villages located at the Ramsar site. These villages have their own attractions to be offered as tourist products:

4.1.1 Homestay programme in Abai Village

An interview with the chairperson of the Community of Abai Project (CAP) revealed that CAP is a local organization established in 2010 as an initiative for the homestay programme. The homestay programme began in 2001 with five homestays. However,

at present, the homestay operators in Abai Village decrease to four homestays due to unavoidable circumstances including unstable financial crises from the homestays, sudden deaths of the head of homestays due to disease, and improper homestays' maintenance. The establishment of CAP is a local community initiative which is formed to organize the homestay programme. The homestay programme is completely managed by the locals of Abai Village and it successfully implements nature-based tourism activities as a tourism product under the programme. CAP organization receives assistance from Kopel Bhd to gain community support. Due to this assistance, an early exposure about ecotourism management is gained by some of the villagers in Abai and Sri Ganda whereas the remaining villages are still in the progress to identify and develop their own nature-based ecotourism products.

In the early stages, the World Wildlife Fund Malaysia (WWF) provided assistance for the homestay programme in terms of preparatory courses in homestay management and in getting homestay certification. The preparation course was necessary to equip the participants with homestay management skills since they did not have basic experience in operating homestays. An additional consideration for developing the homestay programme became the potential of offering tourists the value of natural surroundings around Abai Village, which include forests and wild animals. In this sense, WWF was the first to introduce the idea of linking the homestay programme with forest restoration to the villagers such as in Abai. CAP organization is composed of twelve committee members who are empowered to decide on activities and programmes. Any conflict or disagreement among its members is resolved through negotiation. Committee meetings are held once a week and meetings with all members are held once a month. CAP is a registered organization under the Registrar of Societies, which is with the Malaysian Ministry of Home Affairs. CAP has seven units comprising of the cultural unit, handicraft, boat services, tourist guide, homestay, restoration, and nursery. Each unit has its own committee head. At least 80% of the population in Abai Village are registered community members.

In addition, numerous activities have been organized under CAP. The formation of CAP is to generate income among its committee members, especially among women in the Abai Village. Inevitably, CAP generates income among its members through many ways, one of which involves foreign tourist activities. The total number of tourists with the accumulated profit margins is portrayed in Table 2 below:

Table 2: Number of Tourists and Profit Margin in Abai Village

<i>Year</i>	<i>Number of Tourists</i>	<i>Profit Margin (RM)</i>
2012	169	15,000
2013	305	49,000
2014	400	129,000

This profit margin comes from various activities, such as boat services, homestay, tourist guide, and forest restoration. Apart from these activities, CAP also charges a “conservation fee” amounting to RM 25 per person per visit. This money is allocated for the welfare of their members and their children. There are two reserve funds for CAP: (i) 10% from the profit margin, and (ii) the conservation fee. CAP commercializes its activities and programmes through Facebook, website, and email. The Facebook page, which is maintained by a local volunteer from Sandakan, has also attracted foreign agents and tourists from both within the country and abroad.

The social activities aim to increase the level of community cooperation, improve social relations, and enhance comprehension with the cooperation among CAP members. These activities are comprised of numerous programmes such as Family day, Sports and Cultural day, breaking fast together during the Muslim fasting month of Ramadan, and Hari Raya celebration. An important aspect of community development is the visiting/exposure programmes to other community-initiated projects. Additionally, in the homestay programme, a number of products can become tourist attractions, such as river cruise, wildlife viewing, firefly watching, boat services, tree planting or restoration activities, local traditional foods, cultural performances, showcasing the traditional method of catching prawns, showing mass flowering of mangifera (a prominent species around the Lower Kinabatangan Sanctuary), and many others. When asked about the most favourite activities in the homestay programme preferred by the tourists, the homestay operator added:

“Here we prioritise activities in the homestay programme because the tourists prefer to go outside for activities, such as wildlife viewing and river cruise. Moreover, indoor activities like eating traditional foods are among the popular activities to them. The tourists prefer eating our traditional foods because they never taste such foods in their lives. Moreover, many tourists like outdoor activities and they enjoy their time looking at the wildlife animals namely orang utan and elephants.”

The same informant also mentioned that the tourists are extremely happy during their stay in the homestay and they are taught about the culture of the local community, such as the local traditional food, cultural performances, and having meals using their hands. These are the things they prefer in the homestay programme, which is entirely based on the local culture and can rarely be found in urban areas. On the other hand, other tourist attraction activities run by the homestay operators, such as river cruise along the Ramsar Site, Balat Damit Wildlife Reserve, Lower Kinabatangan Wildlife Sanctuary, Irrawaddy Dolphin Cruise, and Firefly River Cruise are among the activities undertaken by the locals in order to attract tourists. Moreover, these activities have been targeted by researchers, wildlife enthusiasts, student groups, and independent travellers from domestic areas as well as overseas. This is proven in the report from CAP (refer to Table 2) as there has been an increase of tourist arrivals to Abai Village which is a good sign to boost income among the household of the participants. Besides, it was observed that Abai Village has successfully established a homestay programme managed by the locals in order to enhance their livelihoods by participating in

ecotourism-related activities. With that, the objective of the study to explore the potential of community-based ecotourism activities in Abai Village has been achieved.

4.1.2 *Homestay Programme in Sri Ganda Village*

Sri Ganda Village is a village located near the Ramsar site. Sri Ganda Village is rich with natural resources, for instance, the forest reserve has the potential to be developed as a tourist attraction destination. Similar to Abai Village, Sri Ganda Village has also successfully established a homestay programme fully managed by the locals. The homestay programme started in 2014 and has slowly developed its ecotourism products as well as the management as a whole. At present, the locals in Sri Ganda village have realised that tourism activities through the homestay programme are their livelihood strategy despite being involved in their main employment, such as being fishermen and palm oil workers. Furthermore, the survey (refer Table 1) reveals that the fishery sector is the main sector involved by the households at Sri Ganda. Thus, the alternative livelihood through tourism activities is relevant and the people have started up homestay programmes in collaboration with other stakeholders, such as the Ministry of Tourism, Culture, and Environment Sabah and local heads. In an interview, a homestay coordinator shared some experiences of implementing the homestay programme and its potential products within the programme. The following are the identified nature-based products which have the potential to be developed as community-based ecotourism products in Sri Ganda village.

i. Trip to 'Volcanic Mud'

Sri Ganda Village is blessed with a unique natural attraction called the 'Volcanic Mud' located in the Kulamba Wildlife Reserve about 27 km from the Sri Ganda Homestay. This is an interesting place in lower Kinabatangan as the 'Volcanic Mud' can only be seen here. The researchers observed that the 'Volcanic Mud' in lower Kinabatangan has the potential to be developed and it could be a suitable place to be included in the homestay programme package in Sri Ganda Village. The site is only accessible by four-wheel vehicle. This Volcanic Mud is rich with natural flora and fauna, and tourists will definitely enjoy visiting this place. An in-depth interview with one of the homestay operators reveals the uniqueness of this mud which has medicinal features as the mud can be applied on the human body and is good for the skin. In fact, a villager from Sri Ganda who suffered from a skin disease tried applying this mud onto his skin. As a result, that person recovered from the skin disease and proved that the mud has some medicinal significance. Those who have heard about this have visited the place and the homestay programme becomes popular among visitors, especially in Sandakan Town. Thus, the Volcanic Mud has the potential to be included in the homestay programme and tourists will be interested to visit.

ii. Trip to 'Gelukob Stone' (*Batu Gelukob*)

The Gelukob Stone is located in the middle of the Gelukob River and the estimated distance is about 18 km from the homestay. Moreover, this place is popular for its fishing

activity and some tourists enjoy this activity. Based on an interview with the local head, this place has a great potential to be developed and they are currently promoting this place to outsiders through Facebook pages and other alternative media.

iii. Trip to Memoyoh Cave (*Gua Memoyoh*)

The Memoyoh Cave is another potential tourist attraction and is currently being popularised through the homestay programme in Sri Ganda Village. This cave is located near the Memoyoh River along the Kinabatangan River. Moreover, this cave is surrounded by a mangrove forest and has a beautiful as well as natural scenery. This cave is accessible by boat and is about 13 km from the homestay at Sri Ganda, which is around a 30-minute journey. Throughout the journey to this cave from the homestay, visitors have the chance to see many natural resources, including different species of trees, mangrove, and wildlife animals such as birds and monkeys. Sometimes, visitors could also get a chance to see different species of monkeys along the river, as well as crocodiles.

4.2 Identifying the potential of ecotourism products in other four villages

The study also observes that villages like Mumiang, Tundon Bohangin, Pitas, and Bongon have not started any ecotourism activities. Almost a majority of the residents in these villages are fishermen and depended on natural resources, such as marine and forest resources, for their survival. In-depth interviews with the informants reveal that they are very much interested to engage in tourism and they express their full support if they are given the opportunity. Based on the interviews with the respondents, the study indicates that financial problems are the main obstacle for them to engage in tourism development, followed by lack of skills and knowledge in tourism development, and improper guidance from relevant stakeholders. These problems could be solved if important parties in those villages co-operate and work together to introduce ecotourism products with the engagement of local communities. The findings also identify a few products in these villages that have the potential to be developed as tourism products as presented in Table 3.

Moreover, it was also observed that the local residents in Mumiang, Tundon Bohangin, Pitas, and Bongon are not ready to take part in tourism activities as they claim that they suffer from many problems mentioned above. Thus, tourism development in those areas still need some time as the locals will start to engage in tourism development when they receive guidance and assistance from the stakeholders, especially the government, NGOs, private companies, and local leaders. The assistance from NGOs contributes towards the facilitation of strategies among villagers to diversify their sources of income, but in a larger sense provides villagers with exposure to viable alternatives in social and economic development. The main objective of the exposure is to promote villagers to plans for themselves and to develop community capacity to implement those plans. The plans are largely concerned with the kind of development the community want and need and their own limits to that development. The NGO activities are mostly held in Abai and have yet to reach other villages. Thus, as

mentioned above, the engagement of stakeholders should be diversified to other villages to enhance the level of community participation in tourism development. For instance, Kopel Bhd, a local NGO like HUTAN in Sukau and other development agencies need to work together to build a partnership to be involved in the development of ecotourism products in the study sites. Table 3 presents the potential of community-based ecotourism activities in the Ramsar site representing four villages namely, Mumiang, Tundon Bohangin, Pitas and Bongon identified in the study.

Table 3: Potential community-based ecotourism products in Ramsar site

Villages	Ecotourism products	Current status
Mumiang	-Traditional cultural performances -Serving of traditional local foods -Showcasing traditional method of catching prawns and clams -River boating along mangrove areas in the Ramsar site -Wildlife viewing -Seafood BBQ	in progress
Tundon Bohangin	-Traditional cultural performances -Serving of traditional local foods -Showcasing traditional method of catching prawns and clams -River boating along mangrove areas in the Ramsar site -Wildlife viewing	in progress
Pitas	-River boating along mangrove areas in the Ramsar Site -Mangrove forest -Jungle trekking -Camping and picnic -Drinking fresh coconut water	in progress
Bongon	-Traditional cultural performances -River boating along mangrove areas in the Ramsar Site -Fishing activities -Drinking fresh coconut water -Seafood BBQ -Serving of traditional local foods	in progress

Source: based on interview and field observation conducted in 2014

5 Conclusion

5.1 Ecotourism as a mechanism for sustainable livelihoods

There is a great deal of interests in ecotourism among the communities interviewed. Homestays are available in Abai, and in the last couple of years, at Sri Ganda. Besides

that, tourist activities at Abai have been developed to capitalise on wildlife and nature. The other villages either have heard about ecotourism but do not know how to go about implementing the concept or have not been exposed at all to the idea and practices of this kind of tourism. However, they have a great deal to offer in terms of culture and ecology. As for Abai, where ecotourism has been initiated, and Sri Ganda where homestays have already been started by two families, the challenge is to develop a bigger market and expand tourism to a larger but ecologically and economically viable scale. Moreover, some communities are in awe about what Abai is doing but fear the financial implications (real or imagined) that such an endeavour might entail. Hence, this study highlights the huge potential of tourism development to be developed in the Ramsar site where Abai and Sri Ganda are examples of successful stories. Other villages also have the potential to be developed as tourist destinations, where several limitations have occurred and posed as obstacles for local participation. Thus, relevant stakeholders should play an important role to combat these limitations and ensure the livelihoods of local communities that can sustain in the long run.

In early 2001, Teoh, Andrew, Cede, Caroline and Josep were concerned that the ecotourism activity at Sukau in lower Kinabatangan could become saturated in the near future:

If tourism becomes even more concentrated in a small area, difficulties may arise. There would be impacts on wildlife. Tourism could crowd the river with boats emitting diesel fumes. An increasing number of tourists might exercise their personal choice not to go there because of overcrowding, and through loss of wildlife caused by the continued fragmentation and degradation of forest (p. 36).

Developing ecotourism away from Sukau in the Ramsar villages could make ecotourism a more viable industry because of the inclusion of the lower Kinabatangan into the tourism sector. Moreover, as highlighted by the concern of Teoh, et al. (2001) about 'overcrowding', the relative inaccessibility of the Ramsar villages by road could be a plus point for ecological tourism in the area, as it could act as a deterrent to those less persistent or only mildly interested in wildlife or local cultures. Another deterrent could be the cost involved to travel by river (and by sea from Sandakan), which could be high. On the other hand, if the efforts of Abai (and to a smaller extent, Sri Ganda) to initiate a small-scale ecotourism project are to be supported, it could become the hub of tourism for the five Ramsar villages. Thus, development of ecotourism should continue the tradition that has already been established at Batu Puteh by Kopel Bhd and involve a large number of villagers in planning and developing ecological-based tourism that has been proven to be socially as well as ecologically sustainable.

Kopel Bhd has been developed to a level that it is able to maintain its own website to capture the ecotourism market and become involved in environmental regeneration (the alluvial plains) in the Pin Supu forest reserve after winning a contract from the Sabah Forestry Department for forest regeneration work a few years ago. Kopel's forest conservation work continues through its involvement in the regeneration of the Kinabatangan Corridor of Life area (interviews, Batu Puteh 30 November 2014). At Batu

Puteh, participation is not taken as an end, but as a journey or a process where the main objective is to identify the capacity of the developing community to make decisions. Such decisions include the number of tourists to welcome per year and what ecological and social limits to observe. Considerations about ecological and social limits intertwine with other major considerations of economic returns for the members.

The initiative of Abai in looking towards Batu Puteh for guidance could be something that the government could provide support on. Suitable levels of financial assistance for establishing homestays and other activities are also useful. More importantly, however, and aside from financial support, Abai communities need training on specific community capacity building measures, including:

- The social skills to rise above fractionalisation and community jealousy;
- Social and technical (planning) skills in dealing with tourism numbers;
- Ability to raise environmental awareness across all sections of the community about ecological limits in development;
- Ability to plan in such a way that a larger proportion of benefits from ecotourism remains in the community through job creation for youths, the formation of more homestay programmes, tree planting, and tourist guidance;
- Ability to plan for a sustainable future for themselves, for example, how to seek alternative avenues for income generation when regeneration work has been completed and space is no longer available for tree planting, or how to reap viable returns from the trees that they themselves have planted since the trees in the end belong (in most instances) to the government; and
- Other kinds of training that would lead to a more sustainable (secure) socio-ecological future.

Presently, NGOs like Kopel Bhd have already started to play an advisory role to CAP at Abai. However, such one-to-one attention is a luxury. An alternative way is for the Ramsar communities to link up with local, national or Southeast Asian networks. Members of such networks (individual and organisational) provide a rich pool of experience and expertise that could be contacted to provide exposure needed by the communities. To name a couple, there is the network for *Jaringan Orang Asal seMalaysia* (JOAS), and the Forum for Indigenous Peoples of the Highlands in the Heart of Borneo (FORMADAT). Thus, the engagement of stakeholders and co-operation are significant to enhance the level of participation among the Ramsar communities, as well as to promote community-based ecotourism activities within their areas.

Community-based ecotourism activities in Abai and Sri Ganda Villages have successfully developed a homestay programme compared to the other four villages, namely Bongon, Mumiang, Pitas, and Tundon Bohangin. The research findings reveal that many respondents in the other four villages express their interest to become homestay operators and are keen to engage in tourism development in their respective areas. Besides, there are many potential ecotourism products that could be developed

in these villages along the Ramsar site, as mentioned above. Thus, the findings of this study are significant to stakeholders in the tourism industry in the lower Kinabatangan area where Ramsar site is, as these villages possess their own attractions to promote tourism activities and will benefit the locals to sustain their livelihoods.

Apart from that, the adoption of the sustainable livelihood approach (SLA) offers a way forward where this approach has been successfully applied in the lower Kinabatangan area in Sabah. It is also worth noted that this is the second study in tourism research to employ the concept of sustainable livelihoods after Tao and Wall (2009). Community-based ecotourism activities in the Ramsar site have a great potential to be developed, whereby Abai and Sri Ganda have established homestay programmes as a starting point. It is also hoped that other villages, such as Mumiang, Pitas, Bongon, and Tundon Bohangin could initiate tourism activities with the support of stakeholders, besides Abai and Sri Ganda, in becoming role models. Moreover, ecotourism operations could introduce appropriate strategies in order to develop sustainable ecotourism activities in the Ramsar site with the support of the locals and relevant stakeholders. Nevertheless, future studies are encouraged to look into and explore the potential of ecotourism products in other villages located in the Ramsar site, such as Tidong Village, Parit Village, Dagat Village, and Kuala Meruap Village. From the perspective of policy, the findings retrieved from this study are of great value in the formulation of relevant interventions in the future. Finally, this paper concludes and suggests that stakeholders (government, NGOs, and private companies) should provide finance and capital incentives as an empowerment to the local community to control the resources to ensure local community participation in ecotourism development that could sustain their future livelihoods.

6 About the authors

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