

TOURIST SATISFACTION ON ECOTOURISM FACILITIES AND SERVICES IN TAMAN NEGARA NATIONAL PARK, SUNGAI RELAU, MERAPOH, PAHANG

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ABSTRACT

Taman Negara National Park (TNNP), Sungai Relau in Merapoh, Pahang has had a declining number of incoming tourists since 2017, and this trend raises the research motivation to find out the reasons behind this result. The purpose of the research is to study tourists' expectations and performance scores towards the ecotourism facilities and services in TNNP and collect feedback and suggestions for improvement and future development. A total of 250 questionnaire forms in which the respondents must give a rating of 1-5 towards 20 dimensions of ecotourism in TNNP were distributed to visitors of TNNP from June 2019 to September 2019. The data collected were analysed using Expectation-Performance Analysis Grid (EPAG) method. The results from 147 respondents showed that overall tourists are not satisfied with the quality of ecotourism facilities and services provided by TNNP and the local communities in Merapoh, Pahang. Eight dimensions of ecotourism were grouped in the 'Excellence' Quadrant of the EPAG. 'Cleanliness of Attraction Points' was the only dimension present in the 'Urgent Action' Quadrant while 'Conditions of Toilets' shows the most significant gap between expectation and performance (-1.09) which highlights the importance and dissatisfaction towards cleanliness in general experienced by visitors to TNNP.

Keywords: Ecotourism, Taman Negara, Sungai Relau, tourism, satisfaction

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INTRODUCTION

Travel and tourism are one of the most important industries in Malaysia that can contribute income to the country through the taxes received from the taxpayers, mostly hawkers and service providers involved directly and indirectly in this industry. The travel and tourism industry contributed about 13.7% of Malaysia's GDP in 2016 which is also about RM167.5 billion, and these numbers are expected to increase in the following years (World Travel and Tourism Council, 2017). The increase in travel demand to tourist attractions in Malaysia has become the force to push the locals to develop their places and business based on their culture and uniqueness. Construction of accommodation resorts, chalets, restaurants, and other facilities are initiated for the convenience of tourists coming to the place (Butler, 2006; Chan, 2009; Eagles, 1992; Pradati, 2017).

Ecotourism is a nature-based tourism field that focuses on the natural environments that have the potential to be developed into tourist attractions without damaging their structure (Inskeep, 1987). The term 'ecotourism' has been officially given its definition by The International Ecotourism Society (TIES) as "Responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education" (The International Ecotourism Society (TIES), 2005). Ecotourism also indirectly drives the efforts to conserve natural resources and local well-being, such as the forest, rivers, and villages within the protected areas. This tourism sector also encourages environment conservation to protect wildlife and use the opportunities to develop the natural environment into another source of income for the operators and the local people (Scheyvens, 1999).

Tourism industry development can be rapid or slow depending on tourists' satisfaction level with the services and facilities they experienced during their travel. Moutinho (1987) stated that satisfaction is primarily a function of the relationship between pre-travel expectations and post-travel experiences. This shows that fulfilling the expectations of tourists are most likely to have their satisfaction after they enjoy the services, this was also mentioned by Weber (1997) as well when she studied tourist satisfaction from the German travel market in Australia. Therefore, the tourists' satisfaction can influence the industry's development either from their holiday satisfaction or dissatisfaction (Truong & King, 2009).

Measurement of tourist satisfaction can be done in various ways depending on the criteria needed for research. According to a market-based performance measure by Fornell *et al.* (1996), which is The American Customer Satisfaction Index (ACSI), customer expectations measures are collected in three ways: (1) overall expectations, (2) expectations regarding customization, and (3) expectations regarding reliability. Customers will give their feedback based on their experience with perceived goods or services by using three measures: (1) overall perceived quality, (2) perceived customization, and (3) perceived reliability. These two correlated measurements can help determine the degree of expectation and rating of their experience and can be used to find the tapped perceived value, quality relative to price, and price relative to quality. Besides, ACSI also states that there are three survey measures for overall customer satisfaction: (1) an overall rating of satisfaction, (2) the degree to which performance falls short of or exceeds expectations, and (3) a rating of performance relative to the customer's ideal good or service in the category (Fornell *et al.*, 1996). The results of the expectations survey can be used to compare with the results of customers' expectations of the tourism products that they received and find out the gap between both measurements to see the customers' feedback.

The satisfaction level of ecotourists can be increased if their expectations of the destinations are met in most of their travel moments. Wight (1996) concluded that ecotourists usually prefer to visit uncrowded locations and remote wilderness areas because a tranquil environment is the priority to enjoy nature, such as the flow of river water and insect sounds. Controlling the number of visitors entering the protected area can help preserve the environment's originality. Besides, ecotourists also like to learn more about the wildlife and nature living in the ecosystem as well, tourist guide services are essential to educating the knowledge of environmental conservation to the visitors and their performance will be a factor in determining whether the tourists are satisfied and motivated by the tourist guide to increase their awareness regarding the natural environment issues and so meet their expectations in the end. In terms of value for money, Um *et al.* (2006) concluded that perceived value for money is a significant predictor of revisit intention as well as satisfaction, and it is a combination of monetary price and non-monetary price such as time and convenience that can affect the tourists' revisit intention to a destination.

Taman Negara National Park (TNNP) is one of Malaysia's most important ecotourism sites, spanning three states. There are four main entrances to TNNP: Kuala Tahan (Pahang); Sungai Relau (Pahang); Kuala Koh (Kelantan); and Kenyir (Terengganu). One of the most attractive activities offered by TNNP is Gunung Tahan Expedition in which tourists hike the highest peak in Peninsular Malaysia (2187 m). Other activities include jungle trekking where tourists explore the 130 million years old virgin rainforest along the popular trails and

boardwalks. Waterfalls within the national park are also hotspots for tourists to enjoy swimming, fish feeding, and wading along the rivers. Fish feeding activities at Kelah Sanctuary provide the opportunities to feed the king of fresh water in Malaysia, Red Mahseer, and tourists can hold the fish with their bare hands or feel their bites.

Ecotourism can be seen as one of the most potential tourism branches that can be developed to generate more income for the local community and increase the awareness of the ecotourist on the conservation of the natural environment and its ecosystems within the area. The image of TNNP must be maintained in good status so that the public's perception of TNNP will always be positive in the long run. As stated by Rust *et al.* (1999), "perceptions about the quality are based on long-term, cognitive evaluations of a firm's service delivery". Hence, long-term planning for every aspect of ecotourism development is important so that the quality of facilities and services are always in line with the expectations of the tourists from different places and overseas. This includes consistent maintenance of ecotourism facilities within the ecotourism area that requires plenty of funds for the expenditure, which is also part of the destination marketing because Truong and King (2009) stated the importance of the destination image had been widely recognized.

No study has been performed regarding ecotourist satisfaction in Sungai Relau, as it is more famous for biodiversity research. However, it is one of the main entrances to hiking Mount Tahan, the tallest peak in Peninsular Malaysia. TNNP is constructing a canopy walk as an additional tourist attraction in Sungai Relau. Thus, any studies regarding ecotourism will be crucial for Sungai Relau going forward as well as providing a baseline measure to study the impact of the canopy walk on ecotourism. Similar studies have been performed in other entrances to TNNP such as Kuala Koh (Junus *et al.*, 2020) and Kuala Tahan (Tan *et al.*, 2015) however both of these studies do not compare the expectations of the tourist with performance. Junus *et al.* 2020 also focus more on the tourist's perception regarding ecotourism potential in Kuala Koh. Ecotourism surveys were also conducted in other ecotourism and protected areas around Malaysia such as Tadam Hill, Penang (Adnan & Omar, 2021), Kilim Karst Geoforest Park, Langkawi (Sapari *et al.*, 2013), and Semenggoh Nature Reserve, Sarawak (Chan *et al.*, 2021).

Various facilities and services are usually provided in the tourist attraction destination to fulfil their requirements in terms of basic needs and user experiences during their travel. However, the satisfaction level of the ecotourists for the facilities and services that they used and received during their travel are yet to be studied and data collection would provide a baseline current sentiment of the ecotourists and provide a focus on improving tourist satisfaction which can influence the development of the tourism industry (Truong & King, 2009). While

similar studies such has been done in other entrances to Taman Negara such as Tan *et al.* (2015) in Kuala Tahan and Junus *et al.* (2020) in Kuala Koh, both papers touch on facilities generally without a detailed breakdown of the facility components.

This study aims to elucidate the expectation of the ecotourists towards the performance of the facilities and services provided in Taman Negara National Park in Sungai Relau, Merapoh by questionnaire surveys under the assumption that the survey is a reliable measure of the tourist's expectations. This study will focus on the ecotourists' satisfaction level with the facilities and services provided in Taman Negara National Park in Sungai Relau, Merapoh in terms of expectations and performance scores. It is hypothesized that Sungai Relau will perform well in this area for both expectations and performances due to its richness in biodiversity. However, as tourist mostly comes for hiking, the facilities around the main gate are not that well maintained and are expected to perform slightly lower than other dimensions.

Visitors of Taman Negara National Park are usually nature lovers that support the initiatives of the management and government to explore its ecotourism potential, promote it to more people nationwide, and share their ideas to increase the popularity of this national park. This study also can be an alternative for the ecotourists to channel their opinions and feedback to stakeholders such as local authorities, service providers, and related government sectors. The outcome of this research can help the local government's tourism unit understand the visitors' opinions to improve the local ecotourism industry by making up development plans with developers in line with the core values of ecotourism.

MATERIALS AND METHODS

Study Area

Sungai Relau, Merapoh was selected as the area of study as it served as one of the entrances to TNNP. Sungai Relau is the entrance to the shortest hiking route to Mount Tahan. TNNP is a popular tourist attraction as it contains a strictly preserved 130 million years old virgin rainforest jungle with high biodiversity. Kelah Sanctuary is an essential site for conserving Red Mahseer fish in Sungai Relau. A sampling of ecotourists around the entrance area and activities area was performed within the national park during working hours (0700 hrs to 1800 hrs). In addition, sampling of ecotourists was also performed in tour agencies based in Merapoh, Pahang.

Questionnaire

Secondary data from PERHILITAN, mainly the entry permit sales as well as the total number of tourists traveling to Pahang state were used to estimate the sample size of respondents suitable for this study (Krejcie & Morgan, 1970). A questionnaire containing 20 questions was prepared to assess the demographic backgrounds of every respondent and their degree of satisfaction with the facilities and services provided based on different dimensions. The multi-item scale is used to measure tourist expectations and satisfaction with every facility and ecotourism service stated in the questionnaire, and this is to evaluate the sum of tourist evaluation of each ecotourism attribute in TNNP (Kozak & Rimmington, 2000; Tribe & Snaith, 1998). The questionnaire was available in a printed and online form and was distributed from June 2019 to September 2019. The online questionnaire was prepared using Google Form, and the link to the questionnaire was shared with tourists that prefer to answer the questionnaire online.

Data Analysis

The respondents' statistical data, which are represented by frequency and percentages, were calculated using IBM SPSS Statistics for Windows, version 26 (IBM Corp., Armonk, N.Y., USA) and Microsoft Excel (2016) spreadsheet. A reliability test (Cronbach's Alpha) is applied to each question to test the data reliability and internal consistency of all items and dimensions used (Cronbach, 1951; Kelley, 1942) with a threshold value of 0.8. All the 20 questions in the questionnaire are conducted to test the two sections, which are the expectation and perceived performance using the mean scores for each item. A 5-point Likert scale is used to measure the level of expectation and perceived performance from score '1' (Not Important/Very Dissatisfied) to '5' (Very Important/Very Satisfied).

Expectation-Performance Analysis was performed to show the gap score between the expectation of the tourists and the performance of the facilities and services in Taman Negara National Park and was graphically represented by a 2x2 grid graph using Microsoft Excel (Sapari *et al.*, 2013). The analysis grid has four quadrants that indicate "Excellent", "Urgent Action", "Care Free", and "Surplus" for the attributes of the ecotourism facilities and services.

RESULTS AND DISCUSSION

The Demographic Background of Respondents

In this study, a total of 250 questionnaire forms are distributed, and only 147 of 160 responses received are usable, yielding a response rate of 58.8%. Unusable responses can be missing and incomplete forms which cannot reflect their responses and opinions to the questions stated. The low response rate is mainly due to tourists who were mostly Gunung Tahan hikers rushing for their next destination by flight or express bus after returning from their hiking journey, and thus not having adequate time to complete the questionnaire survey form distributed to them. The demographic details of respondents are shown in Table 1.

The results of respondents' demographic details show that majority are female respondents (60.5%). In terms of nationality, Malaysians are the majority (81.6%) compared to non-Malaysian tourists. Studies in Kuala Koh, Kilim Geoforest Park and Tadom Hill also show that Malaysians are the majority of the ecotourist respondents (Junus *et al.*, 2020; Sapari, *et al.*, 2013; Adnan & Omar, 2021). European tourists are the largest group (74.1%) of non-Malaysian tourists and German tourists are the highest number (29.64%).

Tourists in 21-30 years age group make up the largest age group (53.1%) among other age groups of tourists. This can also be reflected in the Marital Status of the tourists with single tourist forming up a majority of the tourist (78.9%). TNNP seems to be a favourite single tourists attraction, as in Kuala Koh where 66% of the tourists are single (Tan *et al.*, 2015). Tourists aged 40 and below (85.8%) are the majority of tourists overall while only 8.2% are aged 51 and above. Students (55.8) and employed groups (40.8%), in which the majority of the respondents (22.4%) are in the middle-income group (RM1000 and RM4999).

For education level, 64.6% of respondents have at least an undergraduate education. Respondents living in urban/city are the majority group (51%) compared to sub-urban (25.9%) and rural/village (23.1%). The majority of respondents know about Sungai Relau from their friends and family (39.5%). For the mode of transport, respondents coming from public transport have the same number as those coming by own transport (37.4%). KTM train is the choice of the majority (48.15%) of respondents coming from the southern state in Peninsular Malaysia such as Johor, Negeri Sembilan, and Melaka, because they have a direct train to Merapoh train station. The express bus is the second most (35.19%) for many Malaysian coming from the northern and central regions in Peninsular Malaysia and foreign tourists taking transit in Kuala Lumpur transportation hub. Tourists that use taxis and E-hailing services are mostly from

Gua Musang, in Kelantan state, about 30 minutes from Merapoh, Pahang because their accommodations are in Gua Musang.

Table 1 Demographic details of tourists to the Sungai Relau National Park.

Background of Respondents			
Dimensions	Distribution	Frequency	Percentage (%)
1. Gender	Male	58	39.5
	Female	89	60.5
2. Nationality	Malaysian	120	81.6
	Non-Malaysian	27	18.4
3. Age	Below 20	21	14.3
	21-30	78	53.1
	31-40	27	18.4
	41-50	9	6.1
4. Marital status	Above 51	12	8.2
	Single	116	78.9
	Married	31	21.1
5. Income	Below RM1000	27	18.4
	RM1000-RM2999	15	10.2
	RM3000-RM4999	18	12.2
	RM5000 or above	24	16.3
	Prefer not to answer	63	42.9
6. Current Occupation	Employed	60	40.8
	Unemployed	2	1.4
	Student	82	55.8
	Retired	3	2
7. Education Level	Primary school	2	1.4
	Secondary school	32	21.8
	Undergraduate	95	64.6
	Postgraduate	18	12.2
8. Current living area	Urban/City	75	51
	Sub-urban	38	25.9
	Rural/Village	34	23.1
9. How do you know ecotourism spots in Merapoh, Pahang?	Newspaper	4	2.7
	Friends/Family	58	39.5
	Social media	36	24.5
	TV News	3	2
	Websites	18	12.2
	Others	28	19
10. Mode of transport	Public Transport	55	37.4
	Own Transport	55	37.4
	Others	37	25.2

This data is helpful in designing the type of activities that suits different demographic of tourists for a better marketing approach by the national park management team and the service providers. As female Malaysian forms the majority of the respondents, facilities catering to their needs are of the utmost concern. Accommodations with connecting washrooms will be more preferred by female Malaysians.

Data Reliability

The Cronbach's alpha value for expectation dimensions is 0.887 (Table 2). This means that 88.7% (0.887) of the variability by combining 20 items of the dimensions are considered true score variance, which indicates that they are reliable. Cronbach's alpha for the standardized item (0.901) showed less difference due to all the 20 items using the same scale of measurement which is 5-point Likert scale measurement for interval scale measurement. The Cronbach's alpha value of at least 0.8 is considered unidimensional for confirmatory purposes and is acceptable from the results of this reliability test (Garson, 2012). This means that the measure of its items measures a single latent trait or dimension (Tavakol & Dennick, 2011).

Table 2 Reliability Statistics

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
Expectation	0.887	0.901	20
Performance score	0.867	0.889	20

Evaluation of the Quality of the Ecotourism Facilities and Services

Measurement of tourists' satisfaction level in this study compares the difference between expectation mean score and performance mean score (Sapari *et al.*, 2013). A score of satisfaction is calculated by minus the mean score for expectation with the mean score of performance. A positive gap indicates satisfaction while a negative gap indicates dissatisfaction. A neutral gap value means that performances meet their expectations. The results of the mean score of expectation and performance for each of the 20 dimensions are shown in Table 3.

Table 3 Mean score for expectation and performance of tourists in Taman Negara National Park Sungai Relau.

No.	Dimensions	Mean Expectation	Mean Performance	Gap
1	An adequate number of parking spaces.	3.73	3.81	+0.08
2	Conditions of the car park.	3.75	3.63	-0.12
3	Conditions of the prayer room.	4.01	3.28	-0.73
4	Condition of the toilet.	4.05	2.96	-1.09
5	Conditions of camping sites.	3.96	3.54	-0.42
6	Signboards/Information boards around attraction points.	4.14	3.81	-0.33
7	Kelah Sanctuary is well-conserved.	4.34	4.12	-0.22
8	Safety conditions at attraction points.	4.35	4.03	-0.32
9	Cleanliness of attraction points.	4.37	3.84	-0.53
10	Condition of accommodation.	3.99	3.69	-0.30
11	The hospitality of accommodation service providers.	4.05	3.91	-0.14
12	The accommodation price is good value for money.	4.01	3.92	-0.09
13	Service quality of accommodation service providers.	4.10	3.78	-0.32
14	Tourist guides are helpful, well-experienced and knowledgeable.	4.50	4.31	-0.19
15	Friendliness of service crew.	4.35	4.03	-0.32
16	Communication with service crew.	4.34	4.29	-0.05
17	The service provided is good value for money.	4.24	4.14	-0.10
18	Service crews are prepared to help when needed.	4.35	4.20	-0.15
19	Services are provided according to the scheduled time.	4.19	4.02	-0.17
20	Important information/safety advice is provided before proceeding with activities.	4.40	4.24	-0.16
Overall mean		4.16	3.88	-0.28

Table 3 shows the overall mean scores of expectation and performance of 20 dimensions, which are 4.16 and 3.88, respectively. A negative gap value (-0.28) is shown when the overall mean performance score subtracts from the expectation overall mean score, indicating that tourists are not satisfied with the ecotourism facilities and services provided in TNNP and other services providers in the

Merapoh area. Only parking spaces exceeded the tourists' expectations with a positive gap value of +0.08. However, tourists of TNNP are still satisfied with the ecotourism facilities and services but with a low level of satisfaction since their overall mean score for both expectation and performance exceeds the score of 3.

Based on Table 3, “conditions of the toilet” show the most significant gap (-1.09) between expectation and performance, showing the highest dissatisfaction dimension of tourists among other dimensions. Generally, most tourists are very concerned about the cleanliness of the toilet and its conditions as it is related to their personal hygiene habits. This may be due to unstable water supply which causes inconvenience for tourists who want to use the toilet. Unavailable toilet room due to pending maintenance causes the limited supply of toilet facility. Similarly, Lian-Chan and Baum (2007) report that their respondents, consisting mainly, European ecotourists, also showed their disappointment with the poor sanitation conditions of the public toilet (Lian-Chan & Baum, 2007). While not specifying toilet, Adnan & Omar (2021) shows that the cleanliness and facilities of Tadom Hill Resorts show a positive gap between expectation and performance. However, this might be due to the low expectation set by the tourist in Tadom Hill (Mean: 3.6/5 for this dimensions) compared to the expectations set by the tourist in Sungai Relau (4.05) (Adnan & Omar, 2021).

The second biggest gap (-0.73) is related to the “conditions of prayer room/mosque”. In this study, only 65 respondents (67.01%) score in this dimension overall, mainly consisting of Muslim ecotourists. They have high expectations (4.01) in this dimension because prayer rooms and mosques are the holy places to fulfil their religious obligations daily. However, the actual conditions do not meet their expectation (3.28) overall. Prayer sites in Kelah Sanctuary have inadequate spaces for group prayers especially for female Muslim tourists and both male and female prayer sites are not properly separated by the cloth. The condition of the prayer room in Kilim Geoforest Park also shows a negative gap between expectation and performance (-0.3), however lower gaps can be attributed to the lower expectation of the tourist in Kilim Geoforest Park on a praying room (Sapari *et al.*, 2013). Studies from Hermawan and Wijayanti (2019) also showed a positive correlation between amenities and tourists' satisfaction and concluded that tourist's satisfaction could be improved by the development of amenities (Hermawan & Wijayanti, 2019).

Expectation-Performance Grid Analysis (EPA)

The average mean scores of expectation and performance for the 20 dimensions of facilities and services listed in Table 3 are shown in Figure 1, in which the mean value for performance is located on x-axis (3.88). In contrast, the mean value for expectation is located on y-axis (4.16). From Figure 1, shown below,

there are 20 dimensions for facilities and services in Taman Negara National Park scattered into four grid quadrants. The results of EPA Grid show that nine items fall into Quadrant I, one into Quadrant II, eight into Quadrant III and two into Quadrant IV. Only one out of twenty dimensions in the Urgent Action Quadrant is positive compared to the similar expectation-Performance Grid in Kilim Geoforest Park which has six out of twenty-six dimensions in the Urgent Action Quadrant (Sapari *et al.*, 2013).

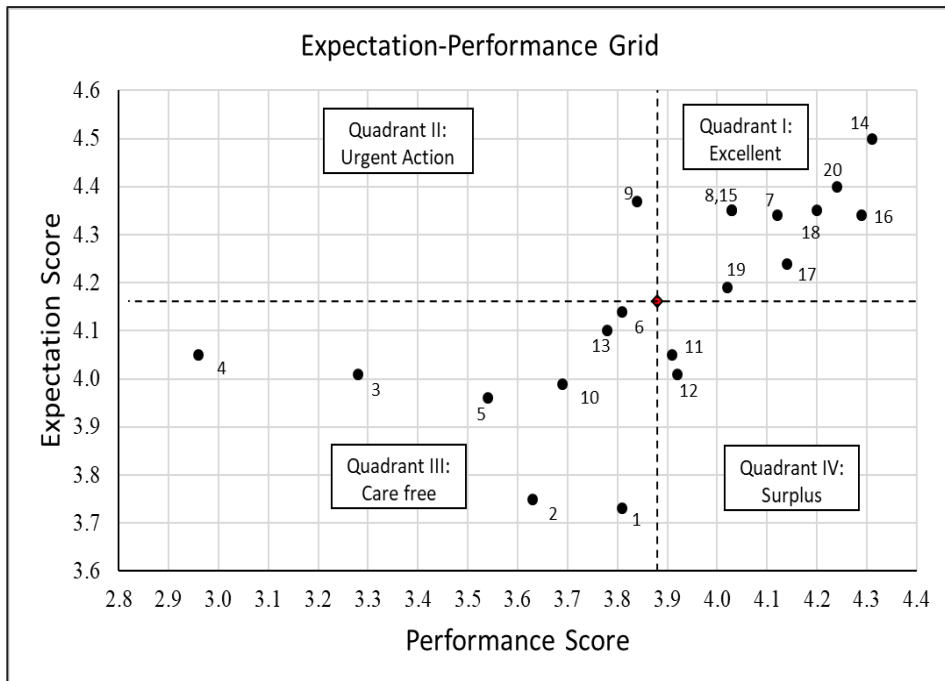


Figure 1 Expectation-Performance Analysis Grid for Tourist satisfaction on ecotourism facilities and services in Taman Negara National Park, Sungai Relau in Merapoh Pahang. The y-axis and the x-axis start at 3.6 and 2.8, respectively to better visualize the grid.

Quadrant 1 (Excellent area)

Of 20 dimensions of ecotourism facilities and services in this study, nine items fall into Quadrant I, which is the “Excellent” area. In this area, all the dimensions are given high expectations and performance scores by tourists coming to TNNP, indicating that those dimensions are considered as a competitive advantage to the ecotourism industry in TNNP and around the Merapoh area. Although the gap

score between mean expectation and mean performance shows negative values, tourists are still satisfied in these dimensions of facilities and services since their overall scores exceed score 4 (Important/Satisfied). Among these items in Quadrant I, “communication with service crew” (Item 16) have the lowest negative gap value (-0.05) followed by “service provided is good value for money”, “service crew are prepared to help when needed”, “Important information/safety advice is provided before proceeding to activities” and “services are provided according to the scheduled time”. Results show that most of the tourists are satisfied with the quality of services delivered to them and the conservation status and safety conditions of Kelah Sanctuary and Sungai Relau. Satisfaction in this area shows a good track record provided by experienced tour operators that has been operating in Sungai Relau for a long time. This shows that the good quality of attractions and services provided can increase tourist satisfaction levels in TNNP. This confirms the previous research on the relationships between attractions and service quality with tourists’ satisfaction (Adom *et al.*, 2012).

Quadrant II (Urgent action area)

Based on the results, only one item falls into this quadrant, which is “cleanliness of attraction points” and this item is one of the most concerned issues among tourists coming to TNNP. Tourists have a high overall expectation (4.37) towards the cleanliness of the attraction points, but the real situations did not meet their expectations (3.84), showing a negative gap of 0.53. Studies by Lian-Chan and Baum (2007) also found that their respondents have high expectations towards a clean and undisturbed environment during their in-depth interviews of European tourists in Lower Kinabatangan, Sabah (Lian-Chan & Baum, 2007). While tourist expectations towards cleanliness were not measured, the overall cleanliness satisfaction of Kuala Tahan’s tourist were generally good (Tan *et al.*, 2015). Tourist in Kuala Tahan also yearns for more trash cans in the park but having trash cans can be a challenge in parks as curious animals might scavenge and cause more pollution (Tan *et al.*, 2015). A more wildlife-friendly trash cans design will be required to solve this problem.

The cleanliness of attraction points is crucial in promoting the ecotourism spots to the public. Therefore, the management of TNNP should take action to keep all the environments clean and unpolluted by the waste or rubbish brought by the tourists. All tourists should be informed about the responsibility of managing their own rubbish by keeping their rubbish until they find a dustbin to discard their rubbish.

Quadrant III (Care free area)

Dimensions that fall into this quadrant indicate that tourists have low expectations towards the quality of ecotourism services and facilities provided by TNNP and service providers in the Merapoh area, and low-performance scores are also given to them. However, this does not mean that dimensions in this quadrant are not required to improve immediately. From the feedback of tourists, “conditions of the toilet” has high expectations (4.05) and the lowest performance score (2.96) among others in the same quadrant, and this is the only dimension that is rated as “dissatisfied” as it is lower than score 3. The same trend was also observed in other ecotourism places in Malaysia such as Kuala Tahan and Kilim Geoforest Park (Tan *et al.*, 2015; Sapari *et al.*, 2013). This shows that ecotourism sites in Malaysia need to improve their toilet facilities as it is one of the highest expectations by tourists and was often dissatisfied with. Hermawan and Wijayanti (2019) state that the satisfaction level of tourists is affected by the facilities provided (Adom *et al.*, 2012). Therefore, toilets in TNNP, especially in Kelah Sanctuary, must be given high priority to take actions, although this dimension falls into a care-free area in this EPA analysis so that TNNP can attract more tourists and give them good impressions.

Quadrant IV (Surplus area)

This section contains dimensions with low expectations but high-performance scores from tourists, showing that the perceived performance of ecotourism facilities and services exceeds the tourists’ overall mean expectations for those dimensions. Comparing to the overall mean score for both expectation and performance, two dimensions fall into this quadrant, namely “Hospitality of accommodation service providers” (Item 11) and “Price of accommodation is good value for money” (Item 12). Both dimensions do not show much gap score between expectation and performance which are -0.14 (Item 11) and -0.09 (Item 12), showing that overall, the tourists are satisfied with the price of the accommodation offered by local communities and also their hospitalities in the services. In general, the accommodation field is a very important element in the ecotourism industry, customer satisfaction in this service field can affect the future development of the ecotourism industry, especially by sharing their reviews on their experience on accommodation on different platforms online and on social media. Choi and Chu (2001) found that staff quality, room quality and value for money to be the most prevalent factors in determining hotel guests’ satisfaction (Choi & Ru, 2001). Chaves *et al.*, (2012) found that room, staff and location are the most frequent concepts of the ontology (CO) among all 24 COs identified in their study to qualify the concepts of customer satisfaction for hotel experience (Chaves *et al.*, 2012).

CONCLUSIONS

This research reveals that the tourists are less satisfied with the ecotourism services and facilities provided in TNNP and local communities in Merapoh, Pahang. Therefore, enhancing tourist's experience quality of exploring the ecotourism industry in Merapoh, Pahang and ensuring the service quality provided by the staff and local communities are important to maintain the sustainable development of this industry and provide a lucrative livelihood for the people in Merapoh, Pahang. This study highlights the important areas that could be improved based on tourists' sentiments and suggestions, with cleanliness being the main area that requires improvement. This could be resolved by having better drainage and sewage facilities as well as having more posters and signs to educate the tourist on maintaining cleanliness.

This paper should assist tourism operators and TNNP officials in understanding tourists' satisfaction levels and guide them in developing tourism products and services based on tourists' feedback. This research is considered a preliminary study of the ecotourism industry in Taman Negara National Park in Merapoh, Pahang. Further study on this ecotourism site is needed to explore more potentials and dimensions, such as social, political, and nature conservation perspectives. This study could also be a baseline for further research on improvements in tourist expectations and performance as the currently constructed canopy walk is completed and open to the public.

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