

Ecotourism in Taman Negara National Park: Issues and Challenges

Zaiton, S.^{1*}, Aziz, Y. A.² and Mohd Rusli, Y.³

¹Department of Forest Management, Faculty of Forestry and Institute of Tropical Forestry and Forest Products, Universiti Putra Malaysia, 43400 Serdang, Malaysia

²Department of Management and Marketing, Faculty of Economics and Management, Universiti Putra Malaysia, 43400 Serdang, Malaysia

³Faculty of Environmental Studies, Universiti Putra Malaysia, 43400 Serdang, Malaysia

ABSTRACT

Ecotourism is one type of tourism that promotes conservation and minimises visitor impacts. This exploratory study employed a semi-structured face-to-face in-depth interview. This study involved 9 visitors in Taman Negara National Park (TNNP). It was designed to identify recent issues and problems faced by the management of TNNP. Current issues and problems faced at the park, including pricing policy dilemmas and the current funding situation, were identified and also discussed. It was found that the main problem at TNNP rooted from inefficiency in pricing policy. Other problems included natural resource conflicts, visitor management and environmental degradation. It is therefore debatable that the main ingredient for the survival of TNNP is the commitment and participation of the stakeholders involved, which comprised of the government, the park authority, private sector, local community, etc.

Keywords: Taman Negara National Park, ecotourism, pricing policy, in-depth interview, qualitative research.

INTRODUCTION

Ecotourism involves visiting untouched natural areas. It promotes conservation, encourages low visitor impact and creates

socio-economic involvement of the local population. Eagles (1992) asserted that ecotourism is one of the fastest growing sectors (estimated as growing at 10-15% annually) compared to other types of tourism. Chong (2002) added that ecotourism is the fastest growing form of tourism in Malaysia. This is due to the growth rate, which is an average of 35% a year and accounts for 10% of the total tourism receipts. A total

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E-mail addresses:

zaisa@upm.edu.my (Zaiton, S.),

yuhanis@upm.edu.my (Aziz, Y. A.),

mroy@upm.edu.my (Mohd Rusli, Y.)

* Corresponding author

of 918,523 visitors were recorded to visit Sabah in 2001. From this number, 406,009 were international visitors, and most of them had visited ecotourism places in Sabah such as the Kinabalu National Park, Danum Valley, etc. Malaysia has adopted the International Union for the Conservation of Nature (IUCN) definition of ecotourism. It stipulates that:

...environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying features - both past and present), that promotes conservation, has low visitor impact and provides the beneficially active socio-economic involvement of local populations (Ceballos-Lascurain, 1996).

This definition emphasises five main aspects, namely: (1) low impact on the environment and on the local culture; (2) covering nature as well as culture; (3) preventing damage as far as possible; (4) repairing whatever damage is unavoidable; and (5) benefits for the people of the area. The Department of Wildlife and National Parks (DWNP) is responsible for the management of ecotourism in Malaysia. The functions of DWNP in ecotourism include: (1) identifying and planning ecotourism programmes; (2) planning and preparing interpretive programmes and materials; (3) advising and providing input regarding ecotourism activities to various government

and non-governmental organizations, inside and outside the country; (4) assisting the Ministry of Tourism Malaysia with the planning and implementation of the National Ecotourism Plan; and (5) coordinating zoological gardens programmes and activities.

The most popular destination for ecotourism is the national park. Ecotourism is a new approach to the preservation of wild areas which are fragile and threatened. Poor management of the national park, due to an inefficient pricing policy, can lead to several other problems such as destructions of natural resources. Therefore, this study attempted to identify issues and challenges that would make the ecotourism industry more uncontrolled and vulnerable, as these might cause more harm than good to the environment. This paper consists of 6 sections. It starts with a general orientation of the study. Section 2 discusses study area, i.e., Taman Negara National Park (TNNP), and Section 3 focuses on the research methodology. Meanwhile, Section 4 presents results of the study, and Section 5 provides discussions and recommendations. Finally, section 6 presents a conclusion to the study.

TAMAN NEGARA NATIONAL PARK (TNNP)

Malaysia comprises Peninsular Malaysia, Sabah and Sarawak. In total, there are 24 national parks in Malaysia (Tourism Malaysia, 2009) and three of them are Peninsular Malaysia (Pahang National Park, Endau Rompin National Park and

Penang National Park), and six in Sabah (Kinabalu Park, Tunku Abdul Rahman Park, Bukit Tawau Park, Crocker Range National Park, Pulau Tiga Park and Turtle Islands Park). Meanwhile, fifteen others are in Sarawak (Bako National Park, Mulu National Park, Niah National Park, Lambir National Park, Similajau National Park, Kubah National Park, Gading National Park, Batang Ai National Park, Matang National Park, Semenggoh National Park, Sama Jaya National Park, Loagan Bunut National Park, Wind Cave National Park, Tanjung Batu National Park, and Talang Satang National Park).

TNNP covers the largest vicinity and it is located in three states, namely, Pahang, Kelantan and Terengganu. TNNP is claimed to be home to one of the oldest tropical rain forests in the world. It is Peninsular Malaysia's greatest national park and it covers an area of 4,343 sq. km (DWNP, 1989). It first received protection in 1925, when the state of Pahang established

legislation for 130,000 ha of it as Gunung Tahan Game Reserve (DWNP, 1986; 1987). It was declared a national park through enactments by the states of Pahang, Kelantan and Terengganu in 1938/39 and given the name King George V National Park (Rubeli, 1976). Following independence in 1957, the name was changed to Taman Negara, which means 'national park' (DWNP, 1986; 1987). The Taman Negara Enactments of 1938 and 1939 encompass three legislations. As noted before, TNNP straddles three states, Pahang, Kelantan and Terengganu, with each state having its own legislation. The largest is Taman Negara Pahang (2,477 sq. km), followed by Taman Negara Kelantan (1,043 sq. km) and Taman Negara Terengganu (853 sq. km).

Visitors' Profile

It has been found that the trend and visiting pattern are changing. It appears that international visitors are the dominant groups that have visited TNNP. This is in

TABLE 1
Malaysian and International Visitors to TNNP, 2001 - 2009

| Year | Malaysian visitors | International visitors | Total |
|------|--------------------|------------------------|-------|
| 2001 | 26149 | 32383 | 58532 |
| 2002 | 30108 | 30048 | 60156 |
| 2003 | 33326 | 20904 | 54230 |
| 2004 | 31233 | 28793 | 60026 |
| 2005 | 37819 | 33812 | 71631 |
| 2006 | 40877 | 38881 | 79758 |
| 2007 | 40358 | 41616 | 81974 |
| 2008 | 39579 | 44563 | 84142 |
| 2009 | 40617 | 46057 | 86674 |

Source: DWNP, 2010.

contrast with the previous times, where more Malaysian visitors visited the park. Table 1 shows a total of 46057 international visitors (53.1%) visited TNNP as compared to 40617 Malaysian visitors (46.9%) in 2009. It also shows that the total number of visitors keeps increasing year by year.

Charges for Permits and Licences at TNNP

Recently, TNNP has implemented several charges for permits and licences issued to their visitors. These cover entrance permits, fishing licences, camera licences, camping fees, the canopy walkway and the hide. Visitors are entitled to enter the park for a month on a payment of RM1 as an entrance permit. Other charges are shown in Table 2.

TABLE 2
Charges of Permits and Licences at TNNP

| Permit and licences | Charges (RM) |
|---------------------|------------------|
| 1. Entrance permit | RM1/entry |
| 2. Fishing licence | RM10/person |
| 3. Camera licence | RM5/camera |
| 4. Camping fee | RM1/day/person |
| 5. Canopy walkway | RM5/person |
| 6. Hide | RM5/person/night |

Source: DWNP, 2005.

METHODOLOGY

The current study is an exploratory qualitative research which applied in-depth interview as its main method. The qualitative method involves a process where the researcher describes some characteristics of people or events without any elements

of measurement. In other words, it is a method that has been designed to capture the social life experienced by participants. It differs from the quantitative method, where all these experiences are categorised and determined by the researcher. Three important characteristics of the qualitative method are: (1) Most of the data are in the forms of written and spoken words, and observation; (2) There is no direct numerical interpretation in qualitative data; and (3) The motive in the qualitative method is often exploration.

Jennings (2001) found that the qualitative approach is grounded in the positivist social science paradigm, which primarily reflects the scientific method of the natural sciences. It is often designated as an 'art' when compared to quantitative research, which is rigorous and scientific (Decrop, 1999). According to Gilbert (1993), qualitative methodologies allow researchers to discover levels of deeper meaning. As a result of the process of gathering in-depth information, qualitative research is subjective and it involves a small number of participants in the research process (Gunn, 1994). Finn *et al.* (2000) noted that qualitative research has the opportunity to present detailed snapshots of the participants under study. One of the limitations of qualitative research, however, is the total time involved in data collection, analysis and interpretation. Babbie (1998) explains that qualitative research involves more time in order to examine holistically and aggregately subjects' interactions, reactions and activities.

There are many types of qualitative method; these include in-depth interviews, participant observation and ethnography. The most popular of these is the in-depth interview; so it was applied in this study. Maykut and Morehouse (1994, p. 46) stated that:

The data of qualitative inquiry is most often people's words and actions, and thus requires methods that allow the researcher to capture language and behaviour. The most useful ways of gathering these forms of data are participant observation, in-depth interviews, group interviews, and the collection of relevant documents. Observation and interview data is collected by the researcher in the form of field notes and audio-taped interviews, which are later transcribed for use in data analysis.

In-depth interview is commonly used to determine individuals' perceptions and opinions. The method is described as a 'conversation with a purpose'. Similarly, Kvale (1996) also states that interviews are conversations, and defines qualitative interviews as 'attempts to understand the world from the subjects' points of view to unfold the meaning of peoples' experiences, and uncover their lived world prior to scientific explanations' (Kvale, 1996, p. 1). Babbie (1998, p. 282) sees an in-depth interview as 'a mainstay of participant observation, used both by participant

observers and by researchers who make no pretence of being a part of what is being studied'. Several advantages of in-depth interviews have been identified. These include exploring the boundaries of a problem, obtaining evidence for a particular problem or issue, evaluating potential solutions and managing the research process. In-depth interviews were chosen for the current research work because more and wider information could be elicited. Furthermore, skilled interviewers can gather information that may be left out through a survey or other techniques. Thus, the main role of the in-depth interviewer is to explore the respondents' points of view, feelings and perspectives. Such interviews have also been used to obtain systematic descriptions of interviewees' experiences. On the other hand, a disadvantage of this technique is that it involves personal interaction; sometimes we are not free to share our feelings with a person whom we do not know.

TNNP was used as a setting because it is one of the places for ecotourism in Malaysia. The respondents participated in the study were visitors who have had some experiences at TNNP. This research applied semi structured face-to-face interviews with 9 visitors from various backgrounds. The shortest interview was approximately 40 minutes, while the longest was around 1 hour 30 minutes; allowing the interviewees to identify and talk more on issues in TNNP. A standard interview guide was developed and used for all the interviews. All the interviews were recorded. Data analysis in the qualitative research starts with collecting

the required information from the field and sorting it into categories. The information received is formatted into a story, and finally written into a report (Denzin & Lincoln, 1994). According to Creswell (1994), qualitative research is a process of sorting information from interview transcripts, observational notes, documents and visual material. This study applied the technique of finding similar phrases and themes in in-depth interview analyses. In other words, this particular technique emphasises two items or characteristics, namely; word repetition and key words in context. D' Andrade (1991, p. 294) observes word repetitions as 'the most direct indication of schematic organisation in naturalistic discourse is found in repeated associative linkages'. In this study, word repetitions were analysed informally. This was done by noting the words that are synonyms and used by respondents frequently. Word repetitions can also be analysed formally by using a computer. Nonetheless, this study did not utilize any computer analysis because of the nature of the data gathered. It is easy to find word repetitions manually, as the data or information is precise and short. Meanwhile, key words were identified through the key words used in the interviews.

RESULTS AND FINDINGS

This section discusses issues and problems that have been identified from the in-depth interviews. It focuses on five issues, namely; pricing dilemmas and funding, resource conflicts, visitor management, and environmental degradation.

Pricing Dilemmas and Funding

Nowadays, the crisis in funding and problems of insufficient funds are the main items on the agenda at most park management meetings and conferences. Insufficient funding is highly related to the pricing system on permits and licences at the park, especially the entrance fee. An inappropriate or a low entrance fee will result in insufficient revenue, thus creating other problems at the park such as overcrowding, environmental deterioration and poor park facilities, as mentioned in the following:

Undercharging for parks increases the cost to the national treasury of maintaining the parks estate and fails to maximize revenue, much of it in the form of badly needed foreign exchange (Goodwin, 2000, p. 247).

An efficient pricing system is a tool for achieving sustainable management of park resources. Font *et al.* (2004) listed six main methods for raising funds to protect areas, and these included entrance fees, user fees, concessions and leases, direct operations of commercial activities, taxes, as well as volunteers and donations. However, according to Sherman and Dixon (1991), there are five main methods for revenue generation in protected areas: user fees, concession fees, royalties, taxation and donations. In some cases, income from entrance permits and user fees is sufficient enough for the maintenance and

operations of national parks and protected areas. However, some parks are in critical situation, as they face insufficient funds for park maintenance and operation.

Most of the respondents agreed that the current entrance permit of RM1 is too low. This is clearly evident in the following statement:

Entrance permit is only one ringgit. Too low. We got everything is this park. Beautiful rain forests, wildlife but we just pay only one ringgit. I went to other national park in Sarawak. We have to pay more. People now can afford to pay more because they got higher income and I can see they appreciate nature nowadays [Respondent 3].

I was surprised for the entrance fee. When you want to enter this park you have to pay one ringgit only. In this time, what can you do with one ringgit? [Respondent 9].

In the case of TNNP, the price of permits and licences is set by the Treasury. It is based on an Enactment of 1938/39. The price is proposed by the DWNP and must be supported by the Ministry of Tourism and the Cabinet before it goes to the Treasury (DWNP, 1987). Respondent 2 and respondent 8 have their own opinion about the setting price of TNNP:

Somebody told me that the entrance permit has been there for ages.

This park should properly set the price, since Taman Negara is a unique product. As our heritage, it is invaluable. Moreover, Taman Negara should also look at the current price of other national parks [Respondent 2].

I'm not very sure who put the price of the entrance fee. Responsible group should check the price. It is very cheap price [Respondent 8].

One of the issues faced by the parks and protected areas today is the issue of obtaining funds for their operations or their survival (Fennell, 1999). As solutions to this problem, there are suggestions that parks should be operated as business entities or that they should be privatized. TNNP is not free from the problems of insufficient funding. It has traditionally relied on the support from the government of Malaysia. To run the park, TNNP is highly dependent on allocations from government and other sources such as private companies and donations. In terms of the financial situation at TNNP, most of them knew that TNNP has recently received some funding from the government and the private sector. Respondent 4, respondent 7 and respondent 9 stated that:

I was told that this park gets some funding from the government and private company. Park should get more sponsors from private companies. In order to cut costs,

they can optimise their current staff by asking them to carry out maintenance or operating tasks such as cleaning the trails. They should not hire part-timers for those tasks [Respondent 4].

Giant company such as Petronas, Shell and Sime Darby should donate some of their money. Example, Honda had contributed some of their sales for the conservation of rhinoceros [Respondent 7].

Some private companies have done their job. Maybe they think it is their responsibility. I heard that some companies gave this money to this park for helping this park for the operation and maintenance [Respondent 9].

Meanwhile, one of the most effective and successful methods for revenue generation appears to be the entrance fee. Some parks employ a fee system whereby all income received goes back into the park's individual account. Studies have shown that visitors are more willing to pay higher entrance fees if the revenue is used for conservation and improving the quality of services (Font *et al.*, 2004). In 1989, Botswana raised the entrance fee for foreigners to their protected areas by 900%. Surprisingly, two years later, the number of tourists visiting their places increased

by 49%, and this resulted in an increase in the parks' revenues. Dharmaratne *et al.* (2000) believe that because these resources are unique, management authorities feel that they can charge higher prices. Walpole *et al.* (2001) and Zaiton (2008) found that international visitors were willing to pay more for fees at national parks.

Most of the respondents suggested that TNNP increased their permit and licence fees, especially the entrance permits to generate extra revenue. Some of them, including respondent 3 and respondent 2, said that the best option was through entrance permits. Respondent 3 and respondent 2 asserted that:

..... There are several actions that can be taken to increase their income. Firstly, increase the price of the current permit, especially the entrance permit. The charge has been there for a long time [Respondent 3].

The funding depends on the visitors' arrival time. When the number of visitors increases, TNNP's income will eventually go up. Along the same line, TNNP should increase the entrance fee and boost sponsors or donations from public and private sectors [Respondent 2].

Resource Conflicts

Dearden (2000) identified three reasons for resource conflicts in national parks. The

first conflict is over legitimate resources within the national parks. This conflict arises between recreation/tourism areas and the requirement to protect these resources for current and future generations. This means the park authorities are confused whether to fully exploit them or to preserve them for later. Consequently, conflicts arise between tourism and conservation. The second conflict is closely related to activities within the park. When a place becomes a national park, all the activities such as collecting wood and hunting animals will become illegal. Therefore, conflict occurs, especially over developing the country; these resources are often sources of income. This statement is supported by respondent 1 and respondent 9:

This Taman Negara is a source of income for aboriginal people. Before this, they collect honey, wood and plant from this forest, suddenly, government take this forest. What happen to them? Where would they find food and how would they survive? [Respondent 1].

This forest is a place for Orang Asli. They were born here; they built their house here. This is where their life is. Forest is where they can find food such as small animal, medicine, fruits, for them and sometime they sell them [Respondent 9].

The last conflict is over ‘external threats’. In other words, land uses outside the

national park sometimes have detrimental impacts on the protected national park. National parks today also face issues on managing the tourists and alleviating tourism’s impact.

As noted, national parks are the main sources of income for aboriginals and local people. However, when a national park is opened to the public, all the activities including collecting forest products are illegal. This often encourages poaching by aboriginals and local people. Respondent 8 gave the opinion that poaching is one of the most critical recent problems in TNNP. This can be seen in the following statement:

I think poaching is one of the problems at this park. I’ve seen in the newspaper before that it involved activities such as collecting forest product and c animals and then sell them at the higher price. There is a demand out there. I think this problem exists because the jungle used to be their place before. This forest is their life. It is not easy to change their mind because they believed they can take whatever they want from this forest [Respondent 8].

Poaching of forest products is a current problem at TNNP. According to DWNP (2005), there were 2,581 cases in contravention of the Protection of Wildlife Act 76/1972 in 2003. One of DWNP’s major recent activities is the enforcement of the Protection of Wildlife Act 76/1972.

Activities under this Act include the protection and patrolling of the wildlife reserve, forest reserve and important wildlife habitats where endangered wildlife species still exist (DWNP, 2005). The duties of DWNP are to inspect licensed dealers and private premises and control other forms of wildlife exploitations.

Respondent 5 proposed that TNNP hire more staff in order to combat this problem. In addition, she also said that Taman Negara should have better cooperation with the army in the attempt to minimize the poaching problem. This will perhaps help reduce poaching, and at the same time, reduce the operational costs of the park. Respondent 7 believes that the poaching problem could be solved through the involvement of the local people and aboriginals in park decisions.

Visitor Management

Visitor management in national park is particularly important for the sustainability of ecotourism resources. The problem of overcrowding and an excess of visitors is closely related to visitor management. One of the important issues related to national park is overcrowding. In the case of TNNP, this park is open throughout the year and there is no restriction on the number of visitors coming to the park. Respondent 1 and respondent 8 gave their opinions:

I can say there is a lack of visitor management at this park. People can enter this park without limit. You can see from the walking trails. The walking trail condition is so bad [Respondent 1].

I can see there's too many people allowed to enter this park. When too many people are allowed to enter, many problems will arise, especially overcrowding [Respondent 8].

The problem of overcrowding can be minimized by taking preventive action, such as limiting the number of visitors. Most of the respondents felt that limiting the number of visitors could overcome several problems at the park including erosion problem. Other possibilities forwarded were organizing special events out of the peak season (as suggested by respondent 7) and creating more attractive places at the park, which would avoid difficulties such as overcrowding in certain parts of TNNP (respondent 5). The two respondents gave their opinions as follows:

Another option to explore is new accesses to Taman Negara, which would be introduced by organizing special events out of peak season. This, in turn, will ease the congestion problem during those busy times [Respondent 7].

....This park should explore more places or create new tourism products. This will help to reduce congestion problems and avoid tourists from crowding just certain places [Respondent 5].

Environmental Degradation

Studies by Chin *et al.* (2000) at Bako National Park found that 69% of the visitors littering around the park as either a 'slight problem' or a 'serious problem'. This was followed by erosion along walk-trails (62%) and damages to natural vegetation (57%). Meanwhile, Yong (1990) identified several environmental problems at TNNP. These included: (1) littering problems by visitors, especially on walking trails, river banks and camp sites; (2) waste water disposal into the Sungai Tembeling; (3) sandy soil along the trails and camp sites; and (4) erosion along river banks. Erosion along Sungai Tembeling is caused by the waves created by boats passing along the river and by illegal logging activities in some parts of the park.

Respondent 3 found that erosion was a problem which occurred recently at the park. Several parts of the park, such as the trails and camp sites, are heavily used. The problem becomes worst after heavy rain as this makes the trails muddy. In order avoid mud, some visitors create new trails and this causes soil erosion and destruction of vegetation. Respondent 3 also made a suggestion that TNNP be closed for a certain period. He stated that:

... Some of the trails are overused and the soil is seriously eroded. Taman Negara should close this park for a certain period; let's say 3 months in order for the trails to be repaired and the soil to be recovered. Last but not least, it should also limit the number of visitors [Respondent 3].

Respondent 6 agreed with respondent 3, saying that:

Walking trail is so muddy and erosion is bad. When the rain is heavy, you can see a lot of water on the trail. Also, some part you can see problem of land slide [Respondent 6].

Littering also occurred in popular places such as the walking trails, river banks, camp sites, and canopy walkways. This led to environmental problems in these areas. Waste such as plastic bags and plastic bottles will result in air pollution if they are burnt, and contamination if buried. These are explained by respondent 1 and respondent 5 in the following statements:

I can see two problems, which are littering and insufficient number of staff to pick up the rubbish. ... TNNP should regularly carry out inspections or rounds and strictly enforce the rules [Respondent 1].

I don't understand with the attitude of some people. They throw rubbish where ever they want. I can see a lot of bins in the park but still they don't want to use the bin [Respondent 5].

Respondent 6 believes that environmental problems could be minimised through a mixture of the following measures: conservation education, information, law enforcement and participation. Perhaps

this combination can ensure that the park be successful for the present and future generations. Respondent 6 is firm in his belief that the park should:

Also, try to get local communities' involvement in planning and decision-making processes and spend on education and conservation programmes for both visitors and the local community.

DISCUSSION AND RECOMMENDATIONS

The main problem at TNNP is rooted in an inefficient pricing policy. The finding reported that entrance permit is very low. For this the respondents suggested a revised in the pricing policy could be a tool for generating extra income and smoothing the flow of finance at TNNP. So far, the government has been a major source of funding for certain national parks, especially those in developing countries. This has been the case for TNNP, but the park authority has to find other ways of raising funds for the survival of the park as well. Besides funding from the government, several mechanisms have been identified to raise park revenue including increasing income from private funding as discussed by some of the respondents.

The findings also revealed that resource conflicts also occurred in TNNP. Poaching can be minimized by creating a close relationship between park authority and the local communities, including aboriginal people. Meanwhile, the involvement of

the local community in policy-making and decision processes is important in ensuring that their opinions and ideas are heard by the park's authority. At the same time, such processes will enable TNNP to obtain better cooperation from the local community. Other actions include increases in law enforcement and fines for people who contravene the protection of Wildlife Act 76/1972. In 2003, the total revenue collected from enforcement activities was RM1,677,826.00 (DWNP, 2005). Of this figure, compound cases recorded RM76,508.00 and fines were around RM48,000.00 (DWNP, 2005).

As reported in the study, the best option to reduce congestion at TNNP is an attempt to channel the visitors into less crowded areas. This can be done by exploring and providing new places to attract them. Meanwhile, the trends in visitor arrivals in the peak season can be used by the park authority as guidelines in designing an efficient pricing system. As discussed earlier, pricing can be used as a tool to solve several problems such as overcrowding in TNNP. For example, the park authority can set a higher price during peak season or different prices for weekdays and weekends to assist in alleviating congestion problems. Finally, TNNP can design several programmes outside peak season as a strategy for attracting visitors.

As evident from the interview, environmental degradation is also one of the important issues at the park. There are various options for TNNP to reduce environmental problems in the park. The most vital is to educate visitors and the local

community about the importance of the rain forest and why it should be conserved. By increasing the level of awareness, especially among visitors and in the local community, people may be made to feel that they should take the responsibility and to cooperate with TNNP to ensure the park's survival for future generations. Hence, educating the visitors as well as the local community on the importance of sustaining the environment is critical so that they will understand and support the management's strategies in TNNP. In addition, it is clear that there is an apparent need to increase the promotion in term of tourism sustainability. Also reported is the fact that TNNP could limit the number of visitors, especially during the peak season to minimize the problems of overcrowding and erosion.

CONCLUSION

Ecotourism management will increasingly become a subject of interest as ecotourism activities are gaining popularity around the world. This paper has identified issues and challenges faced by TNNP. The findings showed that inefficient pricing policy, resource conflict, visitor management and environmental degradation occurred in TNNP. A national park is an untouched area of natural environment, which requires the maximum level of protection and was created to safeguard certain areas of the earth, land and water surfaces from market and other forces. National parks are also areas that contain natural resources of ecological importance or unique beauty, or flora and fauna of special importance.

Based on the preceding discussion, it is important to note that one of the major challenges in the management of ecotourism is to comprehensively develop a structured and integrated plan for environment management, particularly at TNNP. Accordingly, this requires a strong collaboration from respective stakeholders, which include Department of Wildlife and National Parks (DWNP), Department of Environment (DOE), and Ministry of Tourism Malaysia. More importantly, it is vital to involve the local community in the ecotourism sustainability planning so that they can suggest relevant ideas and consequently, value their endangered resources more highly.

Ecotourism in national parks brings benefits to the local communities through employment opportunities, and this increases the levels of income. However, proper planning is needed, because without it, such developments will bring negative effects to the economy, society and the environment. Similarly, a careful planning of visitor carrying capacity is also required to avoid congestion problem that impairs the environment in national parks. An overwhelming number of visitors will create a burden on the environment, and thus affect the habitat of flora and fauna. Thus, it is possible to suggest that the government, the private sector, local community and other stakeholders are the ones that safeguard the sustainability of ecotourism resources in TNNP.

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