

Ecotourism impacts in Pulau Kukup National Park: Exploring resident perspectives

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Abstract

Studies on resident perceptions toward the impacts of tourism development provide crucial feedbacks and information to the local tourism authorities. This study, in particular, investigated the effects of eco-tourism activities from environmental, economic, and social perspectives using social exchange theory as the theoretical foundation. A total of 200 questionnaires were distributed to the local residents who live in Kukup, a small fishing town adjacent to Pulau Kukup National Park to assess their views on the above aspects. The sampling procedure employed was a systematic random sampling of every 5th house in Kukup with a random starting point. The results of the descriptive analysis indicated that the residents, in general, perceived the environmental, economic, and social impacts in both positive and negative manners. However, residents tend to score higher on the positive aspects than the negative aspects of all three dimensions of impacts. In particular, residents rated the economic impacts very positively than environmental and social impacts. Besides the above, the ANOVA and t-test analyses also suggest that the resident perceptions varied significantly according to age, education, occupation, and income.

Keywords:

Resident perceptions; eco-tourism; impact; Pulau Kukup; national park

1 Introduction

Tourism is one of the largest and fastest-growing industries in the world today. Tourism becomes the major attributes for culture and economy, and it offers various opportunities to the local residents. The growth of the tourism industry is crucial to the destination's economic growth as well as for other aspects such as transportation, leisure services and hospitality (Telfer, 2002). There are many types of tourism, such as educational tourism, cultural tourism, sports tourism, adventure tourism, medical tourism, eco-tourism, and the list goes on. This study in particular focused solely on eco-tourism development in Pulau Kukup National Park. According to Cheia (2013), there are about 85 published definitions of eco-tourism, all of which referred to the concepts of 'conservation', 'sustainability', 'education', and 'local benefit'. In other words, eco-tourism is a type of tourism where tourists travel to the protected natural areas which are highly regulated to minimize the negative impacts and at the same time brings benefits to the local residents. In that process, both the tourists and host are also educated about the importance of natural area conservation.

1.1 Problem statement

The involvements of local communities are considered as one of the main components in eco-tourism development (Jamal & Getz, 1995; Lee, 2013; Senko, Scheneller, Solis, Ollervides, & Nicholas, 2011). According to Ap (1992, p.665), "the perceptions and attitudes of residents towards the impacts of tourism are likely to be an important planning and policy consideration for the successful development, marketing, and operation of existing and future programs and projects". It is also embedded in the Malaysian National Ecotourism Plan that promotes community-based tourism, via active involvement of local communities with aims to achieve both sustainable tourism development and environmental conservation (Ministry of Tourism & Culture Malaysia, 2016). Therefore, local communities' concerns about the impacts of eco-tourism development must be taken seriously in the planning process. In addition, as the host communities, they are also able to help and work with local tourism authorities in developing a sustainable eco-tourism destination.

In particular, minimal studies have been found to systematically examine the impacts of eco-tourism in Pulau Kukup National Park from the perspective of local communities. Although many studies have been carried out examining the same issues in other places, however scholars in consensus disagree with the pre-supposition that sustainable tourism development issues are identical from one destination to another (Bramwell & Sharman, 1999; Lee, Kang, Long, & Reisinger, 2010). Literature suggests that place-specific characteristics and locality context must be addressed in this kind of study (Nunkoo & Gursoy, 2012; Sharpley, 2014). This is attributed to the debates that perceived impacts of tourism might be influenced by various factors including the socio-economic, political, and geographic character of a destination (Chen & Chen, 2010; Nunkoo & Ramkissoon, 2011).

It is also crucial to evaluate the impacts of eco-tourism in Pulau Kukup National Park due to its status as an international Ramsar site. Any undesirable adverse impacts may jeopardize the integrity of its natural values. In addition, many residents earn their livelihoods from eco-tourism activities in the area, thus protecting its resources can be considered as a noble cause, in order to protect the stakeholders and the natural resources, this study aimed at investigating the impacts currently experienced by the national parks from the residents perspectives. In conclusion, the outcomes of this research could contribute significantly to tourism literature, and can be used as a reference by related tourism authorities in future planning.

2 Literature Review

2.1 Residents' perceptions

Examining resident perception is one of the most reliable and widely used methods in assessing the current situation of the local area (Cottrell & Vaske, 2006; Meimand, Khalifah, Zavadskas, Mardani, Najafipour, & Ahmad, 2017). Local residents are often seen as the key stakeholder that can significantly affect and being affected by tourism development (Aas, Ladkin, & Flether, 2005). Researches on this topic have been conducted extensively around the world. However, some discrepancies have been observed on how local residents perceived the impacts in different locations. In general yet, residents' perceptions of tourism impacts can be categorized into three main dimensions, namely economic impacts, environmental impacts, and social impacts (Jalani, 2012; Long, 2012; Naidoo & Ramseook-Munhurrin, 2011; Nejati, Mohamed, & Omar, 2014; Türker & Öztürk, 2013).

A study by Türker and Öztürk (2013) in Küre Mountains National Park, found that residents perceived the tourism impacts in both positive and negative manners. The local residents were positive towards the economic benefits of tourism to their local area, such as improving the standard of living of the local residents. In addition, tourism also found to create many social and cultural benefits, including stronger relationships amongst the local people. However, some negative environmental impacts, such as traffic congestion and pollution, were also observed by the local residents. Meanwhile, Jalani (2012), examined the views of the local community on the impacts of eco-tourism and the importance of natural resources in Sabang, Palawan, Philippines. The study has shown that the majority of the respondents perceived eco-tourism in the Subterranean River as a favourable. It is because tourism has become the main source of income for the household in tourism-related activities such as tour guide, boatman, and inns operator. However, those who are not affiliated with the tourism industry commented that there is no effect on them from eco-tourism activities. Similarly, a study by Long (2012) on residents' profile, perceptions, and attitudes towards tourism impacts and tourism development in Ha Long Bay, Vietnam's first World Heritage Site (recognized in 1994) found that local residents have positive perceptions and have high expectation towards the success of tourism development. One of the reasons for such positive

perception could be attributed to the dependency of local residents on tourism as their livelihoods.

On the other hand, Naidoo and Ramseook-Munhurrin (2011) carried out a study to investigate the residents' attitudes towards tourism development in Mauritius, a small island developing state in Africa. Their study covered three impacts of tourism, including social-cultural, economic, and environmental aspects. Majority of the residents were very supportive of tourism development in the region, and they also perceived tourism as beneficial towards the economic and socio-cultural aspects, especially in terms of improvement of quality of life. However, the local residents have also perceived environmental impacts negatively, and they were very concerned with this issue. Another study was also conducted by Long and Kayat (2011) in Cuc Phuong National Park (CPNP). The results of the survey indicated that residents, in general, tend to have positive perceptions of tourism, and this led to support for tourism development. Besides, they also value the socio-cultural and environmental impacts of tourism higher than economic impacts because most of them were highly dependent on the park's resources for traditional economic activities and thus far have received little economic benefits from the tourism industry. The results of the study also suggest that socio-demographic characteristics of residents especially income, ethnicity, education level, and job status have played significant influences on their perceptions and evaluation of tourism impacts as well as their support for tourism development.

Han, Fang, and Huang (2011) examined residents' perceptions of tourism at the initial stage of development in China's Tiantangzhai scenic area. The result of the study indicated that development and economic management approach of a natural area has a close relationship with residents' perceptions of tourism at the initial stages of development. Residents' perceptions of tourism impacts were also found to be influenced by demographic factors, including age, length of residence, and current work status. For example, residents in the older age group with a long period of residency perceived tourism positively as they have stronger community attachment, close family relations, and lifelong commitment to the community. Similarly, residents who have direct contact with the tourism industry also perceived tourism positively compared to those who live in a remote area far from main tourism activities. In the same vein, residents who live closer to the scenic area were also found to have positive perceptions of tourism.

Meanwhile in Malaysia, a study by Hanafiah, Jamaluddin, and Zulkifly (2013) pointed out that local residents of Tioman Island perceived the economic and social impact of tourism positively but perceived negatively towards the environmental impacts. In addition, the communities have also expressed their support towards the future tourism development in Tioman Island attributed to the personal benefits they have long enjoyed. The finding is also consistent with a study by King (1993), who proposed that the lives of residents on small islands will be greatly affected by tourism when their place becomes a tourist destination. According to Kumar, Sakthivel, and

Ramanathan (2013) in their study in tourism village of Kumbalangy, in the state of Kerala India, suggested that those who are benefited from tourism will likely have the interest in promoting tourism and vice versa. Majority of the residents felt that the prosperity of tourism has led to an increase in cost living and the costs of goods and services (economic impacts). Besides, tourism has also caused increases in road accidents and illegal activities. Traffic congestion was one of the concerns for residents in Kumbalangy (social impacts). In addition, there were some respondents who feel that the environment and the ecosystem have been significantly damaged due to the increase in tourism activities (environmental impacts).

In relation to the above, Dhodi and Bhatt (2015) further analyzed local residents' perceptions of tourism impacts and their attitudes toward sustainable tourism development in Yamuna Valley of Garhwal Himalayas. The outcomes indicated that some of the local residents perceived tourism negatively due to the uneven distribution of economic benefits and costs at the destination. Despite the case, local residents have the intention to promote tourism and provide continuous support for government initiatives. One of the main reasons for such support could relate to the opinions that tourism has the potential to bring prosperity to the region and its local residents. In general, tourism is also perceived to improve the income, health and hygiene conditions and provide a better living standard for the local residents. Some residents also think that tourism development could protect rather than damage, the local, regional cultural and natural heritage.

Nejati et al. (2014) investigated local residents' perceptions on two touristic islands in Malaysia, namely, Perhentian Island and Redang Island from the perspectives of economic, social, environmental, and cultural impacts. The results suggest that local residents from both islands tend to perceive economic, social, and cultural impacts more positively than their costs. In particular, local residents in Perhentian Island have a better perception of the economic impacts than those in Redang Island. This could be due to a higher level of control over tourism development by the local residents in Perhentian Island than Redang Island. In the case of Redang Island, the tourism industry is mainly controlled by outsiders and large companies. In addition, the local residents of both islands perceived high environmental costs in terms of water quality, wildlife, and air quality degradation. However, residents in Redang Island perceived the level of the environmental impact of tourism much lesser than those in Perhentian Island.

Based on existing literature as discussed above, this present study examined the eco-tourism impacts in Kukup National Park according to three dimensions, namely environmental, economic, and social aspects. In conclusion, understanding residents' perceptions could help the destination developers and policymakers for better assessment of the local situations. Positive perceptions will likely lead to local residents' support for tourism development. Support for tourism development is the key factor in implementing a successful initiative. Thus local residents should take an active part in tourism development within their community.

2.2 Pulau Kukup National Park

Kukup is a century-old fishing village which has 150 years old of history situated at the southwest tip of Malaysian Peninsular. Kukup is about 20 kilometres from Pontian and 70 kilometres away from Johor Bahru, the capital city of Johor. The population of Kukup has been estimated to be about 1,000 residents, and the majority of them are Hokkien Chinese (Barau & Stringer, 2015). Kukup is also famous for its fresh seafood restaurants attracting customers from both local and oversea. Moreover, Kukup is not only a fishing village but also a tourist destination in itself with a number of excellent resorts for tourists to stay and to get away from the bustle of the city's life. In addition, there were about 57 houses used as holiday chalets out of the total 172 homes (Tripod, 2016). At the fishing village, tourists can enjoy beautiful seascape and sunset, sea breeze, and first-hand experience of fishing activities. Between the period of 2010 and 2012, a total 92,299 local and international tourists visited Pulau Kukup National Park (Sanmargaraja & Wee, 2013).

Locals or international tourists are able to take the ferry from the Kukup jetty to reach Pulau Kukup National Park around five minutes, one of the world's largest mangrove swamp islands. Pulau Kukup National Park is a small island about 15 square kilometres which located in the state of Johor, and it is one of the largest uninhabited mangrove forests available in the world where it is completely covered by mangrove forest and mudflats (Tan, 2007). Pulau Kukup National Park was also declared as a Ramsar site or wetlands of international importance on 31st January 2003, and also protected under the Johor State Park Corporation Enactment (1989) for the preservation purpose of mangrove habitats (Tan, 2007). This mangrove forest has the quality to dissipate wind and waves, thus protecting the crops, aquacultures, villagers, and properties adjacent to the coasts. In addition to that, the mangrove forest also provides refuge, food, and a place for different types of birds such as wild birds, migrant birds, and insects to reproduce and home to fishes, shrimps, crabs, shellfishes, and others sea creatures and providing food to them as well (Kukup Mangrove National Park, 2016). Although Pulau Kukup is a small isolated island, it is rich with various types of biodiversity. For example, there are 27 species of mangroves, and some of it is very rare the likes of *Bakau Minyak*, *Bakau Kurap*, *Tumu* dan *Api-Api*. In addition, a total of 12 species of wildlife inventoried such as smooth otter, long-tailed macaque, and dusky leaf monkey, at least 76 bird species include forest birds, raptors, and water birds such as Collared Kingfisher, and Brahminy Kite.

2.3 Social Exchange Theory (SET)

Various researches on residents' attitudes towards tourism development have utilized the social exchange theory in explaining the exchange situation (Alrwajfah, Almeida-Carcía, Cortés-Macías, 2019; Ap, 1992; Lee, Kang, Long, & Reisinger, 2010). This theory postulates that residents evaluate tourism development in terms of expected benefits or costs experienced in return for their services - that is 'social exchange'. Those who believe that tourism development brings benefits to him or her will express

positive attitudes and vice-versa. In other words, those with positive attitudes are often inclined to be involved in the exchange and, thus endorse future tourism development in their community (Allen, Hafer, Long and Perdue 1993).

3 Methodology

The research approach used in this study was the quantitative method. The word 'quantitative' indicates the amount or quantity which related with numbers, and thus the information and data collected are in quantified or numeric form is referred as statistical evidence (White & Millar, 2014). According to Cohen (1980) as cited in Sukamolson (2007, p.2), "quantitative research is defined as social research that employs empirical methods and empirical statements". There are various types of approaches to quantitative research include surveys, telephone surveys, internet surveys, self-administered questionnaire surveys, and custom surveys (Sukamolson, 2007). Consequently, a self-administered questionnaire survey was chosen for this research.

3.1 Survey instruments

The self-administered questionnaire was developed based upon extensive literature review (Eshliki & Kaboudi, 2012; Long, 2012; Hanafiah et al., 2013; Naidoo & Ramseook-Munhurrin, 2011; Türker & Öztürk, 2013; Yoon, Gürsoy, & Joseph, 2011). There are two main sections, (1) demographic profile of the respondent such as age, gender, education, birthplace, length of residence, ethnicity, income, and occupation; (2) perceptions towards the impacts of eco-tourism in Pulau Kukup National Park. Likert Scale was used to quantify the responses as follows: 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5- strongly agree.

3.2 Selection of respondents

The respondents of this research study were the local residents residing in the Kukup town. The total number of the local population is estimated at 1,000 local residents (Barau & Stringer, 2015). Following Krejcie and Morgan's (1970) sampling table, a total of 200 respondents was chosen as the sample size. The selection of respondents was then carried out based on systematic random sampling. Systematic random sampling is one of the probability sampling techniques and highly preferred by the researchers because of its convenience. According to Frey, Botan, and Kreps (2000, p. 4) "systematic random sampling is also called as ordinal sampling or pseudo-simple random samples." The most important element in systematic random sampling is the beginning point of the population list is picked randomly (Fowler, 1993). Thus in this study, the residents were chosen from every 5th house with a random starting point.

3.3 Data analysis

The Statistical Package for Social Science (SPSS) was the tool used to process and analyze the data collected. SPSS is the package that enables to obtain statistics ranging

from simple descriptive numbers to complex analyses of multivariate matrices. The statistical analysis involved in this study were descriptive analysis, ANOVA and t-test.

4 Findings

This section presents the findings of the study into two main sections, namely the socio-demographic profiles and residents' perceptions of eco-tourism impacts.

Table 1: Socio-demographic Profile of Respondents

Category	Frequency (N)	Percentage (%)
Gender (N=200)		
Male	93	46.5
Female	107	53.5
Age (N=200)		
18-28	65	32.5
29-39	47	23.5
40-50	48	24.0
51-61	25	12.5
62-72	12	6.0
73 and above	3	1.5
Ethnicity (N=200)		
Malay	33	16.5
Chinese	167	83.5
Indian	0	0
Others	0	0
Birthplace (N=200)		
Kukup	184	92.0
Other place	16	8.0
Length of residence (N=200)		
Since birth	174	87.0
5-10 years	4	2.0
11-16 years	6	3.0
17-22 years	6	3.0
22 years and above	10	5.0
Education (N=200)		
Primary school	31	15.5
Secondary school	103	51.5
Undergraduate university	35	17.5
Postgraduate university	26	13.0
No education	5	2.5
Occupation (N=200)		
Retailer	18	9.0
Government staff	10	5.0
Fisherman	13	6.5

Tour guide	6	3.0
Restaurant operator	12	6.0
Homestay operator	10	5.0
Boat operator	8	4.0
Self-employed	68	34.0
Students	30	15.0
Housewife	25	12.5

N=200

Based on the table above, the majority of respondents were female (53.5%), age group between 18-28 years old (32.5%), Chinese ethnic (83.5%), born in Kukup (92.0%), secondary school graduates (51.5%), and self-employed (34.0%). In particular, only 36.0% worked in tourism-related businesses which include occupations as a tour guide, restaurant operator, homestay operator, and boat operator. On the other hand, the following section discusses resident perceptions towards eco-tourism impacts according to three main dimensions, namely environmental impacts, economic impacts, and socio-cultural impacts.

Table 2: Resident perceptions of environmental impacts of eco-tourism activities

Positive environmental impacts	Mean (M=3.42)	Standard Deviation
Tourism has preserved the natural resources and environment of the Pulau Kukup National Park.	3.34	0.959
Tourism has protected the park and wildlife in Pulau Kukup National Park.	3.35	0.970
Tourism has increased the quality of the natural environment.	3.40	1.098
Tourism has provided an incentive for the conservation of natural resources.	3.55	1.069
Tourism has improved the area's appearance (visual and aesthetic).	3.71	0.944
Tourism has brought peace and silence to the Pulau Kukup National Park.	3.16	1.289
Negative environmental impacts	Mean (M=3.29)	Standard Deviation
Tourism has brought damage to the landscape of Pulau Kukup National Park.	2.89	1.018
Tourism has destroyed the local ecosystem in Pulau Kukup National Park.	2.93	1.098
Tourism has destroyed the natural environment.	3.07	1.136
Tourism has caused wildlife destruction.	3.15	1.120
Tourism has caused air, water, and noise pollution.	3.50	1.089
Tourism has caused environmental pollution rises in Pulau Kukup National Park.	3.37	1.019
Tourism has caused vandalism.	3.06	1.170
Tourism has caused littering.	3.57	1.064

Tourism has caused traffic congestion and crowding.	3.63	1.153
Tourism has produced large quantities of waste products.	3.59	1.131
Tourism has decayed natural resources.	3.30	1.165

Table 2 indicates in general that residents perceived the environmental impacts more positively than its negative impacts. In particular, they believed that eco-tourism in Pulau Kukup contributes to the betterment of local area's appearance (M=3.71), natural conservation (M=3.55), and improves the quality of natural environment (M=3.40). On the other hand, eco-tourism activities were also perceived to cause traffic congestion and crowding (M=3.63), littering (M=3.57), accumulation of waste (M=3.59), and pollutions (M=3.50).

Table 3: Resident perceptions of the economic impacts of eco-tourism activities

Positive economic impacts	Mean (M=3.80)	Standard Deviation
Tourism has increased the standard of living in Kukup.	3.51	0.972
Tourism has stimulated new investments in Kukup.	3.84	0.823
Tourism has brought economic benefits to the local residents who lived in Kukup.	3.88	1.037
Tourism has increased employment opportunities to Kukup residents.	3.88	1.110
Tourism has brought additional income for Kukup residents.	3.87	1.055
Tourism has created part-time jobs for Kukup residents.	3.78	1.005
Tourism has led the Kukup residents to more spending in Kukup.	3.74	0.952
Tourism has increased the number of restaurants and souvenir shops.	3.89	0.968
Negative economic impacts	Mean (M=3.49)	Standard Deviation
Tourism has caused increases in the prices of services and goods in Kukup.	3.58	1.024
Tourism has caused increases in the prices of houses and lands in Kukup.	3.39	1.092
Tourism has increased the local tax.	3.38	1.045
Tourism has caused inflation.	3.61	1.041

Based on descriptive statistics in Table 3, residents were found to evaluate the economic impacts more positively than its negative aspects. To them, eco-tourism leads to a number of economic benefits among others the opening of more restaurants and souvenir shops (M=3.89), employment opportunities (M=3.88), additional incomes (M=3.87), new investment (M=3.84), and creation of part-time jobs (M=3.78). Despite its benefits, several negative aspects were also recorded, such as inflation (M=3.61) and tax increases (M=3.38).

Table 4: Perceptions of social impacts of eco-tourism activities

Positive social impacts	Mean (M=3.48)	Standard Deviation
Tourism has brought friendliness among people in Kukup (good human relation).	3.34	0.969
Tourism has brought a resurgence of traditional crafts and ceremonies in Kukup.	3.40	0.940
Tourism has increased the festivals and activities in Kukup.	3.49	1.017
Tourism has increased the understanding of culture and society in Kukup.	3.64	0.982
Tourism has improved destination image of Kukup.	3.81	1.004
Tourism has improved the service quality in restaurants and shops in Kukup.	3.53	1.102
Tourism has cultivated cultural exchange between tourists and resident in Kukup.	3.43	1.010
Tourism has increase resident's pride in the local culture.	3.40	1.022
Tourism did not modify local culture and living style.	3.34	1.127
Tourism has increased the popularity of Pulau Kukup National Park as a tourist destination.	3.82	1.008
Tourism has protected the local culture.	3.38	1.010
Tourism has increased the population of residents.	3.13	1.100
Negative social impacts	Mean (M=3.25)	Standard Deviation
Tourism has increased the crimes of theft and burglary.	3.01	1.160
Tourism has increased the conflicts on the use of lands.	3.08	1.125
Tourism has caused changes in traditional cultures.	3.27	1.106
Tourism has caused changes in local people's habits.	3.37	1.100
Tourism has caused a negative way of life in Kukup.	2.98	1.209
Tourism has caused changes in conventional lifestyles.	3.40	1.125
Tourism has interrupted quiet life in Kukup.	3.65	1.189

Similarly, in Table 4, local residents rated the positive aspects of social impacts higher than the negative aspects. Among the benefits of the social impact-rated highly were destination popularity (M=3.82), improvement of destination image (M=3.81), understanding of local culture (M=3.64), numbers of the festival (M=3.49), and cultural exchange between tourists and local people (M=3.43). Meanwhile, the negative social impacts greatly concerned by local residents were interruption of quiet life in Kukup (M=3.65), and changes in local people's lifestyles (M=3.40).

The following section discusses the results of ANOVA and t-test that evaluate the differences in residents' perceptions according to socio-demographic characteristics, including age, occupation, and income. The result of t-test indicates that perceived positive environmental impacts ($F=2.720$, $p<0.05$) and negative environmental impacts ($F=3.163$, $p<0.05$) were significantly different according to age groups. A closer examination revealed that the older groups perceived highly than, the younger age

groups for both the positive and negative environmental impacts. However, perceived economic and social impacts failed to reveal any significant differences based on age groups.

Meanwhile, ANOVA indicates that both perceived positive ($F=3.340$, $p<0.05$) and negative environmental impacts ($F=2.743$, $p<0.05$) were significantly affected by the level of education. In addition, the perceived positive economic impacts ($F=2.404$, $p<0.05$) was also influenced by the level of education. Further analysis found that residents with a higher level of education were very much concerned about environmental impacts. In terms of occupation, both perceived positive environmental impacts ($F=2.229$, $p<0.05$) and perceived negative environmental impacts ($F=3.005$, $p<0.05$) were found to have significant differences. Those who work in tourism-related occupation rated the environmental impacts more positively than the rest. On the other hand, those who work as fisherman and boat operators rated the environmental impacts more negatively than other types of occupations. The perceived positive economic impacts ($F=4.134$, $p<0.01$) and perceived positive social impacts ($F=2.683$, $p<0.01$) were also found to be significantly different in terms of income. A closer examination found that residents from lower-income groups rated the economic impacts more positively than the higher income groups. Similarly, results were also evident in the case of perceived positive social impacts.

5 Discussion and Conclusion

The findings of this study are consistent with the majority of studies especially when it comes to the perceived economic benefits of tourism (Jalani, 2012; Naidoo & Ramseook-Munhurrin, 2011; Türker & Öztürk, 2013). This is because people firmly believe that tourism is the catalyst for local economic development. Tourism industry creates job opportunities, business growth, foreign investment, and so forth, which are very much needed by the locals. In fact, economic benefits often being rated highly by the local residents compared to other impacts such as social and environmental benefits. This is often the case in many developing countries where the local economy is strongly dependent on tourism (Var, Kendall, & Tarakcoglu, 1985; Walpole & Goodwin, 2000). However, although the rating of the environmental benefits is not as high as the economic benefits, residents still believe that eco-tourism activities contribute to the preservation of natural habitats of fauna and flora. In fact, eco-tourism is also said to improve the local area's appearance. From social perspectives, eco-tourism is said to promote cultural understanding through cultural exchanges between hosts and guests. It also helps elevate the image of the destination.

Socio-demographic characteristics such as age, education, occupation, and income were also found to influence residents' perceptions towards eco-tourism impacts significantly. In general, perception towards environmental impacts was strongly influenced by residents in the category of older age groups, and tourism-related occupation. Meanwhile, residents with lower income categories perceived eco-tourism

positively in terms of economic impacts. This is understandable as tourism is often seen as a provider of job and business opportunities. In terms of implications, authorities in charge of Pulau Kukup could use the outcomes of this research as an indicator for eco-tourism impacts experienced by the local residents. The feedback given by respondents may provide some clues on a sustainable tourism development strategy that could be formulated for the future. In addition, future studies should examine in more significant details on the responses of residents via in-depth interview to understand the issues better.

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