

Ecotourism and Environmental Conservation in Small Islands in the East Coast of Peninsular Malaysia

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ABSTRACT

Many small islands off the east coast of Peninsular Malaysia have become well-known destinations both to foreign as well as local tourists. However, as tourism authorities, hotels and tour operators increasingly focus on mass tourism and economics, environmental degradation and other issues are affecting tourism negatively. In recent decades, Malaysia has realised the need for protection of environmental attractions and has embarked on many conservation programmes, but most of them are ad hoc and not sustained. This article examines how tourists perceive environmental conservation, willingness to pay, reasons for coming, length of stay, favourite destinations, favourite activities, etc. The results of questionnaire interviews show that small islands off the east coast of Peninsular Malaysia are currently facing serious environmental degradation, with little or no comprehensive conservation, poor enforcement, with no clear-cut vision from the authorities as to their future. The study shows that there is a need for a well-planned vision of development for the small islands and stricter control from the authorities. Without better control and implementation of a vision of sustainable development, it is envisaged that these small islands will continue to deteriorate and lose their glamour and attractions gradually. They need to be conserved and stay competitive to survive, given the competition from islands in neighbouring countries.

ABSTRAK

Banyak pulau-pulau kecil di pinggir pantai timur Semenanjung Malaysia telah menjadi destinasi terkenal bagi pelancong asing dan tempatan. Bagaimanapun, apabila pihak berkuasa pelancongan, hotel dan pengendali perjalanan lebih memfokuskan kepada pelancongan massa dan ekonomi, kemerosotan alam sekitar dan isu-isu lain telah mempengaruhi pelancongan secara negatif. Sejak beberapa dekad yang lalu Malaysia telah menyedari betapa pentingnya penjagaan tarikan alam sekitar dan telah memulakan beberapa program pemuliharaan, tetapi sebahagian besarnya merupakan tindakan spontan dan tidak berterusan. Makalah ini memeriksa bagaimana pelancong

mempersiapkan pemuliharaan alam sekitar, kesediaan mereka untuk membayar, sebab-sebab mereka melakukan kunjungan, lama masa mereka tinggal, destinasi kesukaan mereka, aktiviti kegemaran mereka, dan sebagainya. Hasil soal-selidik menunjukkan bahawa pulau-pulau kecil di pinggir pantai timur Semenanjung Malaysia kini mengalami kemerosotan alam sekitar yang serius, dengan sedikit atau tanpa langkah-langkah pemuliharaan yang komprehensif, kurang penguatkuasaan, dan tanpa visi yang jelas dari pihak berkuasa tentang masa depannya. Kajian menunjukkan perlunya visi pembangunan yang dirancang dengan baik dan kawalan yang lebih ketat daripada pihak berkuasa. Tanpa kawalan yang lebih baik dan pelaksanaan visi pembangunan mapan, dijangkakan pulau-pulau kecil tersebut akan terus mengalami kemerosotan dan akan lama-kelamaan hilang keistimewaan serta tarikannya. Pulau-pulau tersebut perlu dipulihara dan kekal berdaya saing memandangkan wujud saingan dari pulau-pulau di negara jiran.

INTRODUCTION

Small islands are generally defined as islands generally below 10,000 km² in size with populations of half a million or less (Hess 1990). Small islands' development and their impacts are generally very different from large islands and those of their adjacent mainlands, mostly because of the limitations of their small sizes and their limited resources. In essence, their inaccessibility and small populations also restrict infrastructure development. Nevertheless, these may be the strong points of small islands as their relative inaccessibility and sparse population inhibit rapid development. Conversely, this may result in conservation and the relative "untouched" characteristics of small islands. McLean (1980) and Brookfield (1990) went further to classify small islands as "specialised" environments in that they are highly vulnerable to human activities/development, natural processes as well as sea level rise in the context of global warming. In describing the impact of human activities, particularly tourism, Voon (2000) demonstrated that the impacts on the environment in small islands are significant. Chan (2000) studied environmental impacts of rapid development in Penang island, a highly urbanised small island off the west coast of Peninsular Malaysia, and showed that many aspects of the environment in the island are irreversible. Wallis (2000), who lived for several years on Perhentian island, described the steady deterioration of the environment. Similarly, Tan (2000) also observed degradation in the Perhentian islands due to the tourism sector. In some small islands, in order to cater to the increasing

Japanese market, golf courses are built. This results in severe environmental impacts (Tengku Shamsul & Teh 2000a). Given the push by the tourism authorities in recent decades where millions of Ringgits have been pumped into the advertisement and tourism campaigns to promote Malaysia, and the move to built and/or improve infrastructure, amenities, hotels, airports, jetties and other related structures (it is envisaged that the islands would come under increased pressures of development that would ultimately impact negatively on their environments and natural treasures (Chan 2008). Both tourist arrivals and receipts have increased phenomenally from 1998 (5.5 million visitors and RM8.6 billion receipts) to 2007 (20.9 million visitors and RM46 billion in receipts) (Tourism Malaysia 2008).

In the not too distant past, the islands of Perhentian, Redang and Tioman are among the most beautiful islands in Malaysia and are popular tourist destinations on the east coast of the peninsula (Teh 2000a). They still are, but they are under threat from rapid tourism and other developments. For example, the island of Perhentian is well known for its natural beauty, sparkling beaches and crystal clear waters teeming with marine life (Zabidi Ishar 2008). It is one of the major tourist destination but not many realise that it is also home to about 2,000 people, mostly fishermen depending on the surroundings seas for their livelihood. However, rapid development of the tourism industry is Perhentian's biggest threat. The Natural Resources and Environment Ministry acknowledges Perhentian's marine ecosystem and coral reefs are at risk due to pollution (The Star, May 24, 2008). Nearby Redang island is also a pristine island with rich corals and crystal clear waters rich in biodiversity. It is a divers' paradise but the tremendous increase in the number of tourists over the past decade or so has resulted in degradation of coral reefs, deforestation as well as general degradation of environmental quality. The recent launching of the East Coast Economic Region (ECER) by the Prime Minister results in an aggressive push in tourism initiatives targeting 3.5 million tourists for the Visit Terengganu Year (VTY) 2008 campaign. The tourism sector contributed RM1.47bil to the state's economy (The Star, March 24, 2008). Of the three islands, Tioman is the largest and better known. It is also a popular destination for divers as it has pristine dive sites. A recently launched "Mega Dive" event has created awareness on the importance of conserving the environment surrounding the island. Tioman is reputed to be one of most beautiful islands in the world, located 56 km off the east coast of the peninsula towards the south. It has rocky and sand beaches, calm, turquoise water and sensational sunset views (Khoo & Nik 2008). The

building of a new jetty drew a lot of protests due to the environmental impacts (Sia 2004; Rahman & Serina 2005; Mohd. Nizam Basiron 2004). When Tioman was declared as duty-free in 2002, there was a surge in tourist arrivals and the current airport in Kampung Tekek which can only accommodate a 42-seat aircraft needs to give way to a new airport. However, the new airport proposal received protests from villagers and chalet operators in Kampung Paya, Kampung Genting and Kampung Mukut who were concerned about its effects on marine life and tourist arrivals (Khoo & Nik 2008). Overall, all three islands have been plagued by haphazard rapid development, lack of environmental conservation, poor enforcement and public apathy amongst tour operators and tourists has contributed towards environmental degradation in the islands (Ainul Raihan Hj Ahmad 2003). Overall, Teh (2000b) concludes that the current rapid development in the small islands of Malaysia, inclusive of Perhentian, Redang and Tioman, has severely damaged the environment and ecosystems. He recommends that the authorities should plan development properly with a long term sustainable plan with sustainable development and environmental management as its objectives. Without such a plan, the small islands will most likely degrade and their environments destroyed much like what has happened to Penang island, Ketam island, Pangkor island and many other small islands off the coast of Malaysia.

MATERIALS AND METHODS

This paper is based on both quantitative as well as qualitative questionnaire surveys. In terms of the quantitative questionnaire survey, primary data was collected over three periods in the month of May, July and September 2007 via a quantitative questionnaire survey of tourists in the three islands of Perhentian, Redang and Tioman. Sampling was based on a stratified random survey with a fixed number of tourists picked from selected resorts, a selection of foreign and local tourists, a selection of tourists of both genders, and a selection of tourists of different age groups and education. Tourists were selected from resorts as well as tourists “on the go” (i.e. those interviewed while sunbathing, dining or doing something not in the resorts). Table 1 shows the number of interviews administered in each of the three islands. The questionnaire data was processed and analysed with the software SPSSPC 13. In addition, some qualitative interviews with detailed indepth accounts of the changing environment and tourism in the islands by the locals was also carried out. Finally, secondary data was also obtained from government reports,

academic reports, reports from resorts, tour operators and other sources. Of these, the book based on a wide spectrum of researchers' view by Teh (2000a) was used as a reference text and baseline reference for comparison.

Table 1. Number of tourists interviewed in the three islands of Perhentian, Redang and Tioman

Location	Frequency	Percent
Perhentian	54	34.8
Redang	51	32.9
Tioman	50	32.3
Total	155	100.0

RESULTS AND DISCUSSION

This article is based on a tourist perception survey of 155 tourists in 2007/2008. Results indicate that the majority of tourists (31.0 %) are from Europe followed by local tourists (24.5 %), tourists from Southeast Asia (12.9 %) and tourists from Oceania (9.0 %) (see also Chan 2008). The ratio of foreign tourists to local tourists is 75.5 % to 24.5 %. Most tourists are of the age group 21-40 years (63.2 %), and most of them are graduates (63.2 %) who are exposed to environmental awareness, with relatively high average monthly incomes (especially foreign tourists), indicating a good ability to spend. Only 5.2 % of respondents were with an education level of high school or below. In terms of income, 45.8 % of tourists earned below US\$2000 per month. Only 7.7 % earned incomes above US\$5000 per month. Most local tourists, however, earned incomes below US\$2000 per month. Surprisingly, a significant number of tourists (40.6 %) found out about the three islands from friends or relatives. This was high compared to only 11.6 % from travel agents, 4.5 % from the mass media, 21.9 % from the internet, and 20.0 % from books. Most tourists (55.5 %) opt for short stays spending between 3 to 6 days on the islands compared to long stay tourists (41.9 %) spending between 1 to 4 weeks. Hence, there is great potential to increase tourist earnings if the authorities and tour operators can think of new innovative ideas and products to keep the tourists in the three islands. Tourist spending is average with the majority of tourists (65.8 %) spending less than US\$500 for their visit. If this figure is divided by the 3 to 6 days on average spent in the islands, the average per day is less than US\$100. This is poor by

any standards, indicating that most tourists arriving at the three islands are from the budget travellers category. This is another area the authorities should be working on, i.e. how to attract tourists from the higher income categories that have greater spending power.

Although the three islands are found to be undergoing rapid environmental change (mostly degradation), tourists still find them attractive. This is perhaps understandable if one were to consider where the tourists come from (i.e. from cities where the environment is polluted, from places where there is no sea, and from countries with cold weather). Results indicate that the vast majority of tourists (96.1 %) feel a high level of satisfaction of their visit to the islands, the main reason being the affordability (27.1 %), cultural diversity (20.0 %), natural beauty of the islands (21.9 %), the warm climate and friendly locals (2.6 %) (Table 2). The analysis showed that there were no significant differences when location (i.e. the three islands), age, gender, educational and income were tested individually against satisfaction. Only a small minority (3.9 %) were dissatisfied, the reasons being limited attractions, expensive hotels and security. The islands with the highest level of satisfaction was Perhentian island (66.7 %) followed by Tioman (64.0 %) and Redang (35.3 %) respectively. Many tourists are now aware of the rapid development in Tioman and Redang, and the bad publicity caused by the protests against new developments in these two islands such as new airport and new jetties is affecting tourists' perception and level of satisfaction. This will in turn affect tourist arrivals.

Table 2. Level of satisfaction of tourists visiting Perhentian, Redang and Tioman islands

Location	Level of Satisfaction				Total
	Yes, Very Satisfied	Yes, Moderately Satisfied	No, Dissatisfied	No, Very Dissatisfied	
Perhentian	36	16	1	1	54
Redang	18	29	1	3	51
Tioman	32	18	0	0	50
Total	86	63	2	4	155

In terms of ecotourism, the three islands have loads to offer. According to Clifton (2004), "Ecotourism refers to a sector of the tourism industry geared towards providing nature-based holiday experiences

which also generate positive economic and socio-cultural benefits for host communities". As a form of tourism, ecotourism has gained popularity from conventional tourism due to increasing availability of relatively cheap air travel, greater spending power and greater awareness of the world due to television and the mass media. Significantly, the rise in ecotourism is in line with the environmental movement, with an increasing level of environmental awareness amongst world citizens as well as the capitalisation of natural treasures and heritage by host countries. Many researchers have attempted to identify the impacts of ecotourism as the significance of this industry has increased and the number of ecotourism operators has proliferated. Clifton (2004) has evaluated the impacts of ecotourism with reference to economic and socio-cultural aspects of host communities and the consequences with regard to local participation in conservation and found that the benefits to ecotourists are substantial but the benefits to local communities are still not forthcoming.

In this research, the majority of tourists enjoyed and experienced activities related to nature (although some are strictly not ecotourism by nature if the above definition is adopted) such as swimming (89.7 %), sun bathing (69.0 %), diving (24.5 %), snorkelling (88.4 %) and hiking (30.3 %). In terms of swimming, the Chi-Square test showed that there were significant differences between foreign and local tourists, the former indulging in the activity much more than locals. In terms of sun bathing, there were significant differences between foreign and local tourists, the former indulging in the activity much more than locals who shun the sun. However, in terms of diving, snorkelling and hiking (all nature activities), there was no significant difference between foreign or local tourists with roughly a quarter of tourists from both groups engaging in these activities. Table 3 illustrates the willingness of foreign and local tourists to volunteer for ecotourism activities and initiatives with a view to helping local communities gain from ecotourism. Surprisingly, despite the relative higher awareness of foreign tourists towards environmentalism and conservation, the results clearly show that local tourists were more inclined to volunteer compared to foreign tourists. The Chi-Square test also shows that there are significant differences in volunteerism between foreign and local tourists. The reason for this is perhaps the fact that foreign tourists are only in Malaysia on holiday once, and would like to maximize their holiday rather than work as volunteers. Locals, on the other hand, feel that such activities are rewarding and that they can learn something in the process. This indicates

that there is good potential to develop the area of volunteerism in ecotourism activities as well as homestay programmes amongst locals.

Table 3. Cross-tab between foreign and local tourists against willingness to volunteer for ecotourism activities

			V30Volunteer			Total
			Yes	No	Maybe	
V6Local Foreign	Foreign	Count	30	54	33	117
		% within V6LocalForeign	25.6%	46.2%	28.2%	100.0%
		% within V30Volunteer	63.8%	88.5%	70.2%	75.5%
	Local	Count	17	7	14	38
		% within V6LocalForeign	44.7%	18.4%	36.8%	100.0%
		% within V30Volunteer	36.2%	11.5%	29.8%	24.5%
Total	Count	47	61	47	155	
	% within V6LocalForeign	30.3%	39.4%	30.3%	100.0%	
	% within V30Volunteer	100.0%	100.0%	100.0%	100.0%	

Table 4 illustrates the willingness to pay in order to conserve the environment for ecotourism activities between foreign and local tourists. Interestingly, a larger percentage of foreign tourists (36.8 %) are willing to pay compared to local tourists (28.9 %). The Chi-Square test also shows that there are significant differences in willingness to pay for conservation purposes between foreign and local tourists. The reason for

Table 4. Cross-tab between foreign and local tourists against willingness to pay to conserve the environment for ecotourism activities

			V31Will2Pay			Total
			Yes	No	Maybe	
V6Local Foreign	Foreign	Count	43	29	45	117
		% within V6LocalForeign	36.8%	24.8%	38.5%	100.0%
		% within V31Will2Pay	79.6%	87.9%	66.2%	75.5%
	Local	Count	11	4	23	38
		% within V6LocalForeign	28.9%	10.5%	60.5%	100.0%
		% within V31Will2Pay	20.4%	12.1%	33.8%	24.5%
Total	Count	54	33	68	155	
	% within V6LocalForeign	34.8%	21.3%	43.9%	100.0%	
	% within V31Will2Pay	100.0%	100.0%	100.0%	100.0%	

this is perhaps the fact that foreign tourists earning power is higher and are more environmentally sensitized than local tourists. Locals, on the other hand, are less environmentally aware. Hence, they are much less inclined to contribute or pay towards environmental conservation. Many also feel that it is not their responsibility to do so, as they feel it is the government's responsibility. Hence, despite being able to understand that environmental degradation will destroy the environment (e.g. corals, the seas, the beaches, etc), local tourists generally give less priority to this. This indicates that there is much more locals need to learn and much more that the Malaysian Government need to educate them and raise their awareness in environmental conservation.

Table 5 shows the rating of ecotourism products by foreign and local tourists in the three islands of Perhentian, Redang and Tioman. The results indicate that 24.8 % of foreign tourists rated ecotourism products as excellent and good while 39.5 % of local tourists did so. These percentages are by far rather low and indicate that ecotourism is not being promoted by the authorities as well as the resorts and tour operators. Most of the foreign and local tourists actually rated ecotourism products offered in the three islands as average. The results indicate that despite their natural charms, ecotourism is not promoted in comparison to mass tourism focusing on swimming, snorkeling, sea sports and resort activities. As such, there is great scope and potentials for promotion and development of ecotourism products in the three islands. This is what the authorities, resorts and tour operators should do.

In terms of the environment of the islands, tourists enjoyed the most popular activities like swimming, sun bathing, diving, snorkelling, hiking, jogging and fishing. In swimming, young or old alike loved it and there was no significant difference when tested with the Chi-Square Test. There was also no significant difference when age was tested for sun bathing in the Chi-Square Test. In the case of scuba diving, however, age was significant as more of the younger tourists experienced this activity compared to the older tourists. However, snorkelling, a much easier activity showed no significant difference between young and old. Other popular activities such as jogging, fishing and hiking also did not show any significant difference with age. Sea sports, which requires strength, endurance and higher risks, was more popular with the younger tourists compared to the older ones. The difference was significant.

Table 5. Rating of ecotourism products by foreign and local tourists in the three islands of Perhentian, Redang and Tioman

		Excellent	Good	Average	Poor	Very Poor	Total
Foreign	Count	2	27	58	16	11	117
	% within V6LocalForeign	1.7%	23.1%	49.6%	13.7%	9.4%	100.0%
	% within V34EcoProducts	28.6%	73.0%	74.4%	88.9%	91.7%	75.5%
Local	Count	5	10	20	2	1	38
	% within V6LocalForeign	13.2%	26.3%	52.6%	5.3%	2.6%	100.0%
	% within V34EcoProducts	71.4%	27.0%	25.6%	11.1%	8.3%	24.5%
Total	Count	7	37	78	18	12	155
	% within V6LocalForeign	4.5%	23.9%	50.3%	11.6%	7.7%	100.0%
	% within V34EcoProducts	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

In terms of ranking of popular activities, nature, climate and related activities were ranked high to highest compared to night life, food, good hotel and shopping. Night life on the islands was ranked very low as there is almost nothing to do at night, except in the big hotels. Nevertheless, young and old liked the night life as there was no significant difference. Gender, education and income level did not show any significant difference when tested against night life. Generally, the low ranking of night life indicates that tourists coming to the three islands are pretty much focused on nature activities found in the islands and do not expect to enjoy themselves with night life. Many in fact go to the three islands to relax. Similarly, hiking, camping and shopping were also ranked very low. Tourists reasoned that all these activities can be sought back home or elsewhere. The majority of tourists perceived and viewed Malaysia as a good value for money destination, cheap and affordable being the main reason. Highest ranked in terms of attractions was good climate and pristine natural beauty (including sea and beach) followed by rich culture and affordable hotels (Table 6). Despite the three islands' main attractions being sun, sea and sand (and other natural attractions such as corals and forests), it is indeed encouraging to note that many tourists perceive and rank local culture quite highly. Tourists, especially foreign ones are attracted to the rich diversity of cultures that make Malaysia what it is – a melting pot of mixed cultures of Malay, Chinese, Indian, Kadazan, Iban, etc. With such a perception, there is good potential for the tourism authorities to capitalize on it and market local culture in terms of

performances, cultural villages, homestays, handicrafts, etc. However, in the three islands, not much of the local culture is marketed by the authorities and the operators. Most are capitalizing on the usual diving, snorkelling, swimming and sea sports. In the evening when sea sports are not possible, tourists are very bored as there is little night life. As they cannot go anywhere (the islands being secluded), the authorities can capitalise on this by introducing the rich Malaysian culture to them. Various dances, drama, cultural shows, etc can be performed. Tourists will be willing to pay if they are good.

Table 6. Tourists ranking of attractions in the three islands of Perhentian, Redang and Tioman

	Ranking						Total
	Lowest	Low	Average	High	Highest	Don't know	
Night Life	63	28	40	5	13	6	155
Nature (beach, sand, sea etc)	11	9	42	32	57	4	155
Good Climate	6	11	29	26	82	1	155
Hiking and Camping	45	26	44	19	10	11	155
Rich Culture	13	4	67	29	39	3	155
Shopping	46	21	55	10	18	5	155
Good Hotels	28	10	71	19	23	4	155
Other Services	49	4	23	1	5	73	155

Tourists' perceived that the main disadvantages of the three islands were over-commercialisation, poor service, poor quality and expensive food, expensive hotels and environmental degradation. A small minority did mention that the lack of liquor and beer as a disadvantage as many operators of chalets and small resorts were Muslims who are bound by religion not to sell them. Only non-Muslim operators (very few in the three islands) and the large hotels sell liquor and beer. This may perhaps be a blessing in disguise as alcohol indulgence may bring about undesirable effects, both on the tourism industry and local cultures (Chan 2004). Many commented that corals are being destroyed by ignorant tourists (especially local tourists), unscrupulous tour operators, hotels and others. In terms of improvement needed, tourists perceive that environmental conservation was top of the list followed by control of pollution, building of more facilities, and promotion of ecotourism. Many feel that ecotourism was not promoted enough as the authorities are mainly focused on mass tourism and not conservation. The reason for this

perception is that tourists see the environmental impact, feel it when they were there, and are disturbed by it. Furthermore, they feel it is such a pity that such pristine beauty in these islands paradise should be destroyed by rapid development, poor environmental management, and poor enforcement.

Almost all tourists say that they will recommend their friends and relatives to visit the islands citing natural beauty, pristine sea and affordability as the three top reasons. However, more than half the tourists say that the environment in the islands was worse than before, the indicators being polluted water, garbage and poor air quality. The majority also indicated that there were environmental problems in the islands. In terms of perception of the islands' environment, tourists rated the quality of climate, forests, beaches, sea, air and general cleanliness as good, but river and coral quality was rated only average. However, a significant number of tourists are aware and mentioned that rainfall during the Northeast monsoon season (November to March) is a disadvantage in the three islands. This is because many resorts and boat operators are closed during this period and the islands are difficult (even dangerous) to get to. Heavy and long duration rains often render one's vacation miserable as it rains almost all the time (Chan 1989). Surprisingly, a significant percentage of tourists were willing to do volunteer work to improve the environment of the islands. Half the number of tourists was willing to pay towards environmental conservation, though the amount they were willing to pay was small.

A significant number of tourists were keen on homestay programme, most citing culture as the main attraction. However, the majority was not keen on homestay citing privacy as the reason. The majority perceived that the pace of development in the islands was just perfect. However, most were of the opinion that ecotourism products were limited and not well developed. These results indicate that tourists visiting island resorts are highly aware about the environment, they care about the environment and would volunteer and pay towards environmental conservation. They also indicated that the current pace of development was just right, disagreeing strongly that there should be more development. On the contrary, the majority of tourists actually agree strongly that the islands should be conserved.

Despite the poor ecotourism products mentioned by tourists in the three islands, there is no doubt that ecotourism can aid conservation (Clifton 2004). To develop ecotourism in the islands, the authorities should focus on consultation and participation between all stakeholders involved in ecotourism to ensure the economic and socio-cultural benefits

are shared between government, private sector, tourists and local communities. More importantly, environmental protection and biodiversity conservation are imperative if the islands are to be sustainable in the long run. This study has already shown that it is unrealistic to expect local tourists and local communities with low awareness to support and implement conservation-oriented activities. Hence it is up to the political masters to develop and implement policies that strike a balance between economic gains and environmental conservation (Chan 2003; Jamaluddin 1999). Policies must favour and encourage local involvement in decision-making under a collaborative approach to management activities.

Clifton (2004) suggests that local participation in conservation activities will not result in environmental benefits if the activities do not reflect the needs of both local communities and the environment. An appropriately designed and implemented management plan for ecotourism and conservation is therefore essential. There are many components to such a plan, but some of key interest to the present discussion include: (i) Documentation of field data and quantitative information relating to the natural environment, especially natural heritage areas and attributes that are attractions; (ii) Master plans on conservation goals and strategies and a road map on how to achieve them; and (iii) Monitoring and evaluation of achievement status of plans and objectives whereby any shortcomings can be used to alter and adapt existing plans. In terms of ecotourism, feedback and consultation with local communities should be a fundamental part of this process.

CONCLUSION

In conclusion, this study indicates that the environment of the three islands of Perhentian, Redang and Tioman are still attractive as tourists keep increasing. The islands are perceived (by tourists) to still rank amongst some of the most beautiful tropical islands in the region. However, the authorities and the people should not rest on their laurels. Increasingly, rapid development on mass tourism and shortcomings in environmental conservation are threatening and degrading these pristine islands. In recent decades, due to government promotion and the opening of more resorts, infrastructure and improved accessibility, the number of tourist arrivals has probably overshoot the carrying capacity of these islands and seriously impacted upon natural resources on the islands. Natural resources such as energy, water and food are inadequate to meet the increasing demands. With all these threatening the islands, the

authorities must act fast to conserve the natural attractions and come up with an effective management plan for these islands. More importantly, the attractions need to be protected in order to ensure sustainable tourism in the long run. It is unlikely that tourism numbers would be controlled as this is against the tourism development policy. What needs to be done is greater control of development and enforcement. Attractions such as coral reefs are facing not only degradation and threats from tourists but are dying due to global warming. The government must address both the human/tourism issue as well as the global warming issue. Tourist arrivals should not be the main concern of the government. Rather, it is the goose that lays the golden egg that should be protected. If no significant steps are taken to conserve and protect these three islands, they may end up like other islands that have degraded over time into forgotten memories. This paper also showed that despite their natural attractions, ecotourism is not promoted adequately. In addition, local communities (with the exception of tour operators) actually benefit little from ecotourism. The dilemma is that the private sector realises the benefits but are exploiting it the wrong way (without proper regulations) and locals hardly have a clue as to how to get involved. Unless politicians and government officials start to educate the locals and inject interests, local people's willingness to participate in ecotourism will be limited. As ecotourism will inevitably entail impacts on the socio-cultural aspects of local communities as well as their access to and usage of natural resources, it is imperative that some economic benefits are realised in order that local individuals can see the long term economic benefits of supporting ecotourism. However, the extent to which these benefits are realised varies greatly from site to site reflecting place specific economic and political factors (Clifton 2004). The authorities must also change their obsession with arrivals and receipts numbers and start focussing on protecting the natural attractions before they are all destroyed. There are many small islands whereby the environment has been totally destroyed for policy makers to see. These islands do not promote environmental attractions anymore (as they have lost it) but have to resort to other sorts of tourism such as cultural, sport, medical, shopping etc. Perhentian, Redang and Tioman will follow in the footsteps of these degraded islands if nothing drastic to protect and conserve the environment and their attractions is quickly out in place and implemented. More importantly, government must not do it alone but involve all stakeholders, including the hotels and resorts, tour operators, boat operators, tourist guides, tourists and most of all the locals. Finally, the federal, state and local governments should look ahead and be far sighted enough to forgo short term gains of rapid/mass tourism

development in exchange for ecotourism for long term sustainable tourism.

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