TOURISM AND THE ENVIRONMENT: ECOTOURISM AS A SUSTAINABLE TOURISM DEVELOPMENT APPROACH TOWARDS THE ENHANCEMENT OF ENVIRONMENT

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Abstract

As tourism is now one of the world's leading industries, the environment is taking center stage in tourism development. The environment is the core of the tourism product since profitability in tourism depends on maintaining the attractiveness of the destination people want to see and experience. Not only a powerful economic force, tourism is a factor in the physical environment as well. Tourism can generate both positive and negative environmental impacts, depending on how well development is planned and controlled. Tourism has the power to enhance the environment but at the same time it has the power to destroy, too. Realizing of the negative impacts that tourism might bring, efforts have been taken to make sure that tourism can be sustained over a long period of time. In this context, sustainable tourism development is recognized as the most practical approach to be adopted. This paper discusses the concept of tourism by highlighting definition of tourism, background and nature of tourism industry, its components and factors influencing participation in tourism related activities. Then, discussion focuses on tourism and the environment before further discussing the concept of sustainable tourism development by highlighting the importance and significance of 'ecotourism'. The paper concludes by recommending a 'possible allocation of responsibility' for all in the industry as well as several 'ways' that organizations in tourism can do to support sustainable tourism.

Introduction

Billions of dollars are paid to key individuals such as tour operators, lodging and hotel providers, and restaurateurs; in return satisfaction is generated among the millions of tourists who travel each year. This industry, as a result, has maintained its distinction as one of the world's most resilient and important sectors of economic development for developing as well as developed countries. Tourism is now one of the world's leading industries. Globally, there are more people employed in tourism than in any other industry.

Tourism: concept, performance and potential

Many different definitions of tourism exist, and for the purpose of this paper the definition of Mathieson and Wall (1982:1) has been adopted: "Tourism is the temporary movement of people to destinations outside their normal place of work and residence, the activities undertaken during their stay in these destinations and the facilities created to cater to their needs." In other words, tourism is the action and activities of people taking trips to a place outside their home community for any purpose except daily commuting to and from work. Tourism itself, of course, is only one part of the spectrum of travel, which ranges from daily travel to work or for shopping to migration, where the traveller intends to take up permanent or long-term residence in another area. In fact, the term tourism does include business travel as well as travel for pleasure.

Generally, people want to travel and they often look forward to their next trip and talk about previous trips. In this context, reasons for traveling always exist and do lead to actual experience. Epperson (1983) has devised a model that encompasses surface motivators for traveling based on push and pull factors. The pull factors (tangible things such as scenic beauty) that draw people to a destination continue to be an important reason that people travel. Pull factors include people, places, and activities as listed in **Table 1(a)**:
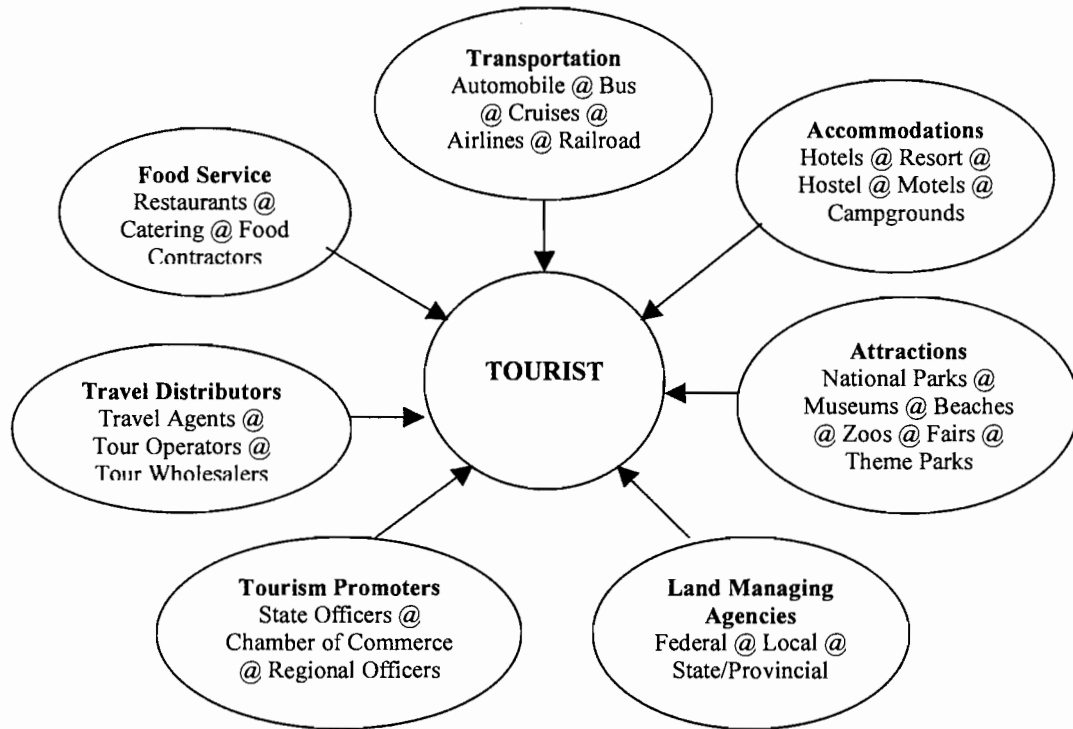
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Table 1(a): Pull factors that trigger people to travel	
Friends	Historic areas
Relatives	Sports events
Celebrities	Cultural events
Public figures	Educational events
Scenic areas	Recreational events

On the other hand, push factors are those intangible forces, motivations, needs and ways of thinking that come from within us. Push factors are generated from our inner selves and include such factors as listed in **Table 1(b)**:

Table 1(b): Push factors that trigger people to travel	
Adventure	Novelty
Challenge	Prestige
Escape	Rest and relaxation
Kinship	Self-discover

In general, the tourism industry is the mix of interdependent businesses that directly or indirectly serves the traveling public. As illustrated by **Figure 1**, many of different businesses and organizations are directly or indirectly related to the business of tourism. **Figure 1** shows the complexity of the tourism business and is not an all-encompassing view of the indirect businesses and jobs. The components of the tourism industry include transportation, accommodations, attractions, food service, travel distributors, tourism promoters, and land managing agencies.

Figure 1: Tourism components (and some examples)

Transportation
Automobile @ Bus
@ Cruises @
Airlines @ Railroad

Accommodations
Hotels @ Resort @
Hostel @ Motels @
Campgrounds

Food Service
Restaurants @
Catering @ Food
Contractors

Attractions
National Parks @
Museums @ Beaches
@ Zoos @ Fairs @
Theme Parks

TOURIST

Travel Distributors
Travel Agents @
Tour Operators @
Tour Wholesalers

Tourism Promoters
State Officers @
Chamber of Commerce
@ Regional Officers

**Land Managing
Agencies**
Federal @ Local @
State/Provincial

Adapted from Nickerson (1996).

Tourism can also be divided into many different forms on the basis of type of transport used, price paid, length of stay, or the interaction of tourists with the destination. From a geographical point of view important distinctions are those between long-haul and short-haul tourism but the most important distinction is between domestic tourism and international tourism. In this context, it can be seen that domestic tourism embraces those travelling within their own country, while international tourism comprises those who travel to a country other than that in which they normally live.

As stated by the World Tourism Organization (1995), the interest in domestic tourism for the purpose of international comparisons has long been overshadowed by the interest in international tourism. In this sense, domestic tourism seemed to have little or no international impact, and statistics on the subject were felt to be a country's responsibility. However, it has become clear that domestic and international tourism do

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relate to each other. It has been noted that domestic tourism can be substituted for international tourism and vice versa under the influence of external factors, for example international political conditions, price differences between countries and relative growth in real income. As many western countries showed, domestic holidays were largely replaced by outbound holidays over the past few decades under the influence of the rise in living standards and other factors; many developing countries, however, have seen sharp increases in domestic tourism.

During the past two years international tourism has been affected by the combination of a weak global economy and high level of uncertainty due to the war on terror and conflict in the Middle East, in particular the looming Iraq conflict. 'Although 2002 was certainly not an easy year, international tourism held up fairly well' (WTO, 2003). Data collected by WTO from vast majority of destination countries reveal that the number of international tourists arrivals grew by 2.7 percent in 2002 after a decrease of 0.5 percent in 2001. As **Table 2** illustrates, the 'resilience' of this industry recorded for the first time 'the 700 million mark was surpassed and compared to the previous record year 2000 almost 16 million more arrivals were counted'.

Table 2: International Tourist Arrivals

	International Tourists Arrivals (million)					Growth Rate (%)	
	1990	1995	2000	2001	2002	00/01	00/02
WORLD	455.9	550.4	687.3	684.1	702.6	-0.5	2.7
Africa	15.0	20.0	27.4	28.3	29.1	3.2	2.8
Americas	93.0	108.8	128.0	120.2	114.9	-6.1	-4.4
Asia/Pacific	57.7	85.6	115.3	121.1	131.3	5.1	8.4
Europe	280.6	322.3	392.7	390.8	399.8	-0.5	2.3
Middle East	9.7	13.6	24.0	23.6	27.6	-1.3	16.7

As for Malaysia, the industry also illustrated its 'great' recovery as tourist arrivals reached a new record high of 13.29 million in the year 2002 compared to the 1997/98 financial crisis period that recorded tourist arrivals at its lowest at only 5.5 million (as in **Table 3**). Tourism is a very important sector to Malaysia's economy. Currently, it is the

second largest foreign exchange earner and employs a significant level of the country's total work force. In term of its domestic tourism, as illustrated by **Table 4(a)** and **Table 4(b)**, the potential market for this segment is considerably 'huge' and the market itself is getting bigger from time to time.

Table 3:   International Tourist Arrivals (1987-2003)

Year	Tourist Arrivals	Change (%)
1987	3,358,983	4.4
1988	3,623,636	7.9
1989	4,846,320	33.7
1990	7,445,908	53.6
1991	5,847,213	-21.5
1992	6,016,209	2.9
1993	6,503,860	8.1
1994	7,197,229	10.7
1995	7,468,749	3.8
1996	7,138,452	-4.4
1997	6,210,921	-13.0
1998	5,550,748	-10.6
1999	7,931,149	42.9
2000	10,221,582	28.9
2001	12,775,073	25.0
2002	13,292,010	4.0
2003	10,576,915	-20.4

Source: http://www.tourism.gov.my

Table 4(a):   Domestic tourist arrival and expenditure: recorded figures (1981 to 1999) and projected figures (2000 to 2010)

YEAR	DOMESTIC TOURIST ARRIVAL (MILLION)	DOMESTIC TOURIST EXPENDITURE (RM BILLION)
1981	7.59	2.3
1982	8.31	2.5
1983	8.79	2.6
1984	8.85	2.7
1985	9.33	2.8
1986	9.66	2.9
1987	10.08	3.0
1988	10.86	3.3
1989	14.55	4.4
1990	22.35	6.7
1991	17.55	5.3
1992	18.06	5.4
1993	19.50	5.9
1994	21.60	6.5
1995	22.41	6.7
1996	21.42	6.4
1997	18.63	5.6
1998	16.65	5.0
1999	23.4	7.0
2000	25.5	7.7
2001	27.0	8.1
2002	27.9	8.4
2003	28.5	8.6
2004	28.8	8.6
2005	29.4	8.8
2006	30.9	9.3
2007	34.5	10.4
2008	35.4	10.6
2009	36.3	10.9
2010	37.5	11.3

Source: MOCAT (2000).

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Table 4(b): Hotel guests by locality: January - December 2000 to 2003

LOCALITY	YEAR			
	2000	2001	2002	2003
KLANG VALLEY	**3,099,074**	**3,464,337**	**4,050,078**	**4,194,537**
Kuala Lumpur	2,336,069	2,507,806	2,847,583	2,850,343
Petaling Jaya	292,244	297,352	435,353	387,800
Subang	90,546	131,936	158,432	201,757
Shah Alam	96,303	184,124	244,288	252,184
Sepang	153,302	151,905	173,693	219,312
Kajang	59,374	116,843	115,896	197,946
Seri Kembangan	71,236	74,371	74,833	85,195
PENANG	**1,232,424**	**1,370,350**	**1,342,354**	**1,424,789**
OTHERS WEST COAST OF MALAYSIA	**3,604,407**	**4,191,454**	**4,499,365**	**4,990,377**
Johor Bahru	949,103	917,912	1,111,571	1,077,876
Malacca	820,644	1,060,467	1,122,550	1,174,155
Lumut	359,456	179,532	255,712	302,678
Ipoh	494,387	575,013	627,967	749,546
Seremban	131,032	168,066	173,486	197,111
Alor Setar	189,183	194,852	267,029	297,568
Sungai Petani	227,130	330,620	243,562	311,028
Kangar	48,403	61,325	82,917	73,841
Port Dickson	385,069	703,667	614,571	806,574
EAST COAST OF MALAYSIA	**1,705,750**	**2,079,417**	**2,079,417**	**2,389,031**
Kuantan	423,216	535,341	535,341	699,087
Cherating	315,301	270,875	270,875	297,551
Taman Negara	16,074	41,916	41,916	27,727
Kuala Lipis	34,021	37,005	37,005	45,243
Dungun	25,965	37,559	37,559	49,059
Marang	16,341	31,820	31,820	54,899
Kuala Terengganu	322,609	439,471	439,471	484,960
Kota Bharu	339,312	357,210	357,210	368,638
Mersing	79,684	151,419	151,419	200,265
Desaru	120,213	155,494	155,494	132,284
Tasek Kenyir	13,014	21,307	21,307	29,318
HIGHLAND RESORTS	**1,097,916**	**1,096,674**	**1,096,674**	**1,250,824**
Cameron Highlands	259,838	360,354	360,354	415,222
Fraser Hills	33,285	56,497	56,497	51,088
Genting Highlands	804,793	679,823	679,823	784,514
ISLAND RESORTS	**815,008**	**1,220,034**	**1,220,034**	**1,635,221**
Langkawi Island	566,692	850,124	850,124	1,191,014
Redang Island	31,435	52,441	52,441	58,464
Tioman Island	89,678	92,971	92,971	150,540
Pangkor Island	127,203	224,498	224,498	235,203
PENINSULAR MALAYSIA	**11,554,579**	**14,287,922**	**14,287,922**	**15,884,779**
SABAH	**893,436**	**924,157**	**878,430**	**1,118,880**
Kota Kinabalu	736,302	805,956	715,665	942,124
Sandakan	157,134	118,201	162,765	176,756
LABUAN	**140,631**	**125,616**	**126,578**	**147,761**
SARAWAK	**1,024,510**	**1,094,167**	**1,165,318**	**1,183,810**
Kuching	565,334	589,131	624,970	629,662
Miri	417,145	455,308	484,911	488,586
Santubong	42,031	49,728	55,437	65,562
MALAYSIA	**13,613,156**	**15,564,242**	**16,458,248**	**18,335,230**

Source: http://www.tourism.gov.my

Tourism and the environment

The world is now facing major environmental degradation. At international level, attention is being given to ozone layer depletion, acid rain and consequent global warming. Although tourism development is not responsible for most of environmental problems, in some countries it has become a major contributor and without a management scheme to control the problems, tourism will suffer.

According to Lickorish and Jenkins (1999), 'environment' refers to the physical environment which is comprised of natural and built components. In this sense, the 'natural environment' is what exists from nature including climate and weather, water features, topography and soils, flora and fauna, etc. while the 'built environment' is the man-made physical features, mainly all types of buildings and other structures. In comprehensive environmental analysis, sociocultural and economics factors of the environment are also included. However, it is often difficult and undesirable to try to separate the socioeconomic and physical components of the environment.

Many features of the environment are attractions for tourists as the relationship between the environment and tourism is very close. Tourist facilities as well as infrastructure comprise one aspect of the built environment. Use of an area for tourism development generates environmental impacts. Therefore, it is really important to fully understand these relationships in order to plan, develop and manage the resources concerned properly.

As tourism is now the world's largest industry, the environment is taking center stage in tourism development. Not only a powerful economic force, tourism is a factor in the physical environment as well. The environment is the core of the tourism product since profitability in tourism depends on maintaining the attractiveness of the destination people want to see and experience. Tourism can generate both positive and negative environmental impacts, depending on how well development is planned and controlled.

The impacts will not all occur in one area as their incidence depends on the type and scale of tourism development and the environmental characteristics of the area.

Tourism has the power to enhance the environment, to preserve culture and history, to provide funds for conservation, to set sustainable use limits, and to protect natural attractions. On the other hand, tourism also has the power to destroy. If tourism is not properly planned and implemented, it can destroy vegetation, litter trekking areas, create overcrowding, result in overbuilding problems, eliminate open space, pollute beaches, cause housing problems, create sewage problems and ignore the needs and structure of the host community. As a consequence of global environmental concerns, tourism planners are now more aware of their responsibilities to future generations for the careful use of the environment (Lickorish and Jenkins, 1999). Therefore, due to the expected continuing growth of tourism, sustainable tourism development is the approach that will be needed.

Sustainable tourism

In the reality of resource deterioration, all industries have to think about their future since most of the available resources used by the industries are not renewable. As stated earlier, the tourism industry is growing very fast. Thus, it can be seen that in countries and regions where tourism is fairly new there is an added risk that tourism development will harm the environment so much that visitors will no longer be attracted to the area. If this happens, the income from tourism in that destination will fall as more and more negative impacts associated with tourism development will become worse.

Realizing of the negative impacts that tourism might bring if the development of the industry is not properly and comprehensively planned, more and more companies, governments and organizations with an interest in preserving the environment, are working together to make sure that tourism can be sustained over a long period of time. In this sense, sustainable tourism development is recognized as the most practical approach to be adopted.

Sustainable tourism attempts to benefit the local economy and the local people, while at the same time protecting the attractiveness of the place they live in. In different view, it is about trying to find a balance between:

- allowing visitors to do and see what they want to;
- making sure this does not damage the place they are visiting; and
- making sure the lives of people who live there are not spoiled.

Sustainable tourism, in the context of tourism development, refers to "all forms of tourism development, management and activity, which maintain the environmental, social and economic integrity and well being of natural, built and cultural resources in perpetuity" (FNNPE, 1993). Sustainable tourism combines conservation principles with tourism development. In this sense, sustainable tourism development is about making tourism more compatible with the resources and needs of a destination area. Moreover, according to Twining-Ward (1999), it offers a broader approach to tourism practices and a built-in ability to control the rate and scale of tourism growth – if stakeholder responsibility is successfully exercised. It is important that tourism development is linked to conservation so that both can be sustained (FNNPE, 1993). Therefore, for any tourism development to be sustainable, principles of sustainable tourism development as outlined in **Figure 2** must be adopted and given the highest priority.

Figure 2: Principles of Sustainable Tourism Development

Principles of sustainable tourism development indicate that sustainable tourism will:

1. Uphold reasonable ethical standards of operation and minimize adverse social impacts

2. Enhance social equity

3. Operate in an environmentally and culturally sensitive manner, aimed at promoting conservation of the site and area

4. Seek to minimize the use of non-renewable resources

5. Recognise the capacities of its environment, utilize that environment sensitively, and monitor it effectively

6. Directly and indirectly change the attitudes of individuals and other businesses toward planning and management of its environment.

(As quoted by Eagles et. al., 2001)

Without proper planning, tourism development can be a threat to protected areas, especially when development occurs rapidly and uncontrolled. In addition, poor planning and management of tourism development in and around protected areas can have long-lasting, devastating and sometimes irreversible effects. Therefore, non-sustainable tourism is negative for conservation goals, for local communities and for society in general. Negative impacts associated with non-sustainable tourism are listed in **Figure 3(a)**.

Figure 3(a): Negative impacts of non-sustainable tourism development

For conservation and protected areas
- Environmental damage (e.g. erosion, disruption of wildlife, destruction of protected species)
- Pollution (e.g. noise, litter and exhaust fumes)
- Excessive visitor pressure
- Consumption of available management resources, diverting attention away from other management priorities

For local people
- Disturbance and damage to ways of life and social structure
- Higher costs, especially for housing and land
- Weakening or loss of traditional cultures

For society
- Pressure on resources

(Adapted from FNNPE, 1993)

On the other hand, with proper and effective planning in advance that addresses potential impacts and implications of tourism on the environment and communities, potential positive impacts can be achieved as summarized in **Figure 3(b)**:

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Figure 3(b): Positive impacts of sustainable tourism development

For conservation and protected areas
- Greater public's and local people's awareness of protected areas and the environment
- Political support which can help to attract funding and support the designation of new protected areas
- Conservation of natural and cultural features through restoration projects and direct practical help
- Additional finance from the tourism sector and from businesses

For the tourism sector
- Government support for businesses and employment
- Development of new, high quality, environmentally-sound products, based on nature and culture with a long-term future
- Reduction in development costs through partnerships with protected areas
- Improvement of company image
- Attraction of customers looking for environmentally-sound holidays
- Increased tourist awareness of the need to protect the environment and cultural and social values

For local people and society
- Improved income and living standards
- Revitalization of local culture and traditional crafts and customs
- Support for rural infrastructure and facilities
- Improved economy
- Avoids or stabilizes emigration of local population
- Makes local populations aware of the need to protect the environment and cultural and social values
- Improved physical and psychological health
- Promotion of harmony between people from different areas, facilitating the exchange of ideas, customs and ways of life

(Adapted from FNNPE, 1993)

Ecotourism: an overview and definition

Introduced in the 1980's as a creative strategy for conservation, ecotourism has evolved into a global, massive enterprise. Nowadays, the nature of tourism has changed as new markets and new types of tourism have emerged. As one of sustainable tourism development approaches, ecotourism has quickly developed as the fastest growing segment within the travel and tourism industry. Ecotourism is rapidly becoming an excellent way particularly for developing countries to bring in foreign revenue by preserving their 'eco' resources that include islands, rivers, rainforest etc. Ecotourists pay to see a country's natural beauty and not for the destruction caused by short-run exploitation.

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In Malaysia, ecotourism is currently the fastest growing form of tourism. It is estimated that about 35 per cent of the tourists from developed countries who visited Malaysia are interested in ecotourism (Opening speech of Minister of Culture, Arts and Tourism on the Official Opening of the WTO Asia Pacific Conference on Sustainable Certification of Tourism Activities, Kuala Lumpur, December 2003). This trend, therefore poses a challenge on how to maintain a balance between growths of ecotourism and to keep the impact on the environment within the limits of acceptable change.

To complement the growth and development of ecotourism, Ministry of Culture, Arts and Tourism (MOCAT) launched the **National Ecotourism Plan** with 21 Plans of Action and 25 guidelines that provide the best approach particularly to the sustainable tourism development, with recommendations on health and safety, conservation inputs, site selection, zoning and carrying capacity. In addition, lists of potential and existing ecotourism sites as well as opportunities for private sector investment were identified. During the Seventh Plan period, several ecotourism projects were implemented such Wang Kelian State Park in Perlis, Tasik Bera in Pahang and *Taman Hidupan Liar* Hilir Kinabatangan in Sabah (8th Malaysia Plan).

As conservation and sustainable development has now become an important agenda in the country's overall development programme, the Government of Malaysia has formulated various national environment-related policies to ensure sustainable development. Among these policies are the **National Environment Policy, Environment Impact Assessment (EIA) Policy, National Forest Policy, National Mineral Policy, National Agricultural Policy, National Wetland Policy, National Biological Diversity Policy**, and the last but not least, **the National Tourism Policy**. The government has also recognized the potential of ecotourism in regenerating the rural economy, consistent with the policy of a wider distribution of the benefits of the tourism industry. In fact, as outlined by Hiok (2003) in **Figure 4**, ecotourism really has great potentials to be developed and promoted particularly to encourage local participation. Hence, more sites with ecotourism potential will be identified for development; and at the

same time, efforts will be intensified to Promote Malaysia as a well-known ecotourism destination (8th Malaysia Plan).

Figure 4: Opportunities for potential growth of ecotourism in Malaysia

- Develop more comprehensive programs directed into research-based programs helping to further preserve and conserve the environment
- Provide inter-related and comparative studies on ecotourism in different countries
- Tailor-made programs catering to traveling to ecotourism places in ASEAN region, developing study on ecotourism in all these countries
- Further identify specific ecotourism areas that can provide more benefits and create more environmental-friendly products to raise more funds for environmental preservation
- Develop and generate more information and its practical application on ecotourism
- More appropriately adapted policies for ecotourism especially in countries which are beginning to develop ecotourism into mainstream tourism
- Further develop collaboration between academic and practitioners in developing the structure, governing principles and regulations enforcement measures, human resources training and management expertise
- Easier access for under-age groups for education and touring purposes
- Develop more community-based ecotourism to generate more income to these communities.
- Educational institutions located away from the urban areas can work closely with local communities to host the students
- Establish closer working ties among the tourism and educational sectors to promote ecotourism programs

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As noted by French (1998), "Ecotourism is a possible vehicle for channeling international investment capital into preservation of threatened ecosystems, if it is pursued in an ecologically sensitive... Since ecotourism is not generally capital-intensive, domestic investment may often be sufficient for underwriting much of the industry. But even ecotourism has its infrastructure: international investment may find a role in upgrading airports and building the kind carefully conceived, small-scale, low-impact hotels that are consistent with the industry's conservation goals" (p.25).

The concept of ecotourism arises from the science called 'ecology' (study of the interrelationships among organisms and their environment), a word based upon the Greek 'oikos' (house) and 'logos' (word). Since homo sapiens is an organism interacting with the environment like any other, ecology entails respect for indigenous human cultures as well as the preservation of natural biological communities. Then, ecotourism ideally refers to visitation methods that minimize disruption of the host local's distinctive attributes.

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Although several definitions of ecotourism exist, most of the definitions embrace a common theme of travel to experience 'natural environments' or 'natural settings'. Arlen (1995) defines ecotourism as "responsible travel which conserves the natural environment and sustains the wellbeing of local people". Similarly, Freeman (1995) defines ecotourism as a segment of travel industry which appeals to the environmentally conscious and has low impact on the surrounding area while contributing to the local economy. Whatever it is, the most commonly accepted definition of ecotourism is provided by the International Union for the Conservation of Nature (IUCN) as "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 for beneficially active socio-economic involvement of local populations" and this definition has been adopted by Malaysia National Ecotourism Plan.

Ecotourism is also referred to a sustainable form of natural resource-based tourism that focuses primarily on experiencing and learning about nature, and which is ethically managed to be low-impact, non-consumptive and locally-oriented (in terms of control, benefits and scale). It typically occurs in natural areas and should contribute to the conservation and preservation of such area. From this definition, the key features of ecotourism may be extracted as:

- involving areas that are in some way 'precious' or 'special', because of their wildlife, scenery, culture and remoteness;
- minimizing the impact on, and damage to, the local environment and local community;
- educating and thereby increasing appreciation as well as understanding; and,
- maximizing local involvement, local control and local benefits.

As notified by Cater and Lowman (1994), there seems to be consensus among scholars and people in the tourism industry as to what ecotourism is and should be. Thus, ecotourism should:

- attract tourists to natural environments which are unique and accessible;
- be used to improve nature conservation through education;
- minimise and/or avoid negative environmental impacts as well as undesirable socio-cultural changes;
- provide funds for natural resource conservation on a national and local scale;
- provide employment and entrepreneurial opportunities for local people;
- lead to changing of attitudes in local people and governments; and
- contribute to dispersal rural development.

Impacts of ecotourism: brief discussion

As one of the methods of sustainable tourism development, most of the impacts of ecotourism are closely related to those impacts that sustainable tourism has had. Although the economic experiences associated with ecotourism are varied, many see this activity as having more positive impacts on the economy. Its effects will be felt throughout the country by providing employment and other benefit. For many countries such as New Zealand and South Africa, the benefits of ecotourism include economic diversification particularly in rural areas, long term stability and an increase in foreign exchange earnings. Ecotourism can provide local people with economic assistance by offering them employment opportunities as wildlife guides and rangers for parks, and as workers in the service force of lodges, hotels or other accommodation establishments. This employment may provide a relatively even flow of income often higher than they would receive from their 'traditional' economic activities such selling their marginal, small scale agricultural crops at market.

With ecotourism, income can be earned from preserving the ecosystem and forest clearing is strictly discouraged as it is detrimental to income. Ecotourism can also reduce the need for poaching and hunting of forest animals for income. In West Africa, for

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example, former poachers are hired as park rangers since they have intimate knowledge of local animal wildlife. Ecotourism also provides the opportunity for wider intellectual development for locals educated as wildlife guides. Through ecotourism, local communities can earn supplementary from the fabrication on handicrafts.

Ecotourism can have positive social social impact on surrounding communities. A study conducted in Fiji villages (one tourism dependent, the other not) found that education and income levels were higher in the village which was impacted by ecotourism. In addition, the villagers were also seen to have higher or changed expectations with regard to their future. For these villagers, increased disposable income had accrued to them and was spent on imported goods including appliances, clothing, food and drink. On the other hand, the villagers experienced a rise in alcohol related disturbances and this phenomenon was not a problem before the tourism effort became part of the community (Focus, 1995). The case study has also illustrated possible negative social impacts of ecotourism that include:

- the increase in activities deemed to be undesirable such as prostitution, crime and gambling;
- the display of prosperity amid poverty;
- the overcrowding of infrastructures accommodations, services, and facilities;
- the employment of non-locals in managerial and professional occupations carrying greater responsibilities and superior salaries to those occupations available to member of the host community; and
- the gradual erosion of indigenous language and culture with increasing numbers of visitors.

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Environmental impacts assessment (EIA)

The best way to avoid negative environmental impacts is to plan tourism properly, using the environmental planning approach, before development (Lickorish and Jenkins, 1999). This planning should be done in a comprehensive manner and be integrated with the overall planning of the area. In addition, the planning must take place at all levels – national, regional and site-specific areas for hotels, resorts and tourist attraction features. It has been noticed that the rise in the concern for, and awareness of, the environment has meant that tourism organisations are becoming more involved in measuring the impacts they have on their environment. This has often been seen as a direct result of a national or local government regulation linked to the planning and development process.

Now, it is very common for the developers of large tourism projects to be asked to carry out an appraisal of the costs and benefits of the development from an environmental point of view. The most common technique for carrying out such evaluation is the 'Environmental Impact Assessment' (EIA), which can be applied to a wide range of planned tourism developments to assess the impacts of the proposed developments. According to Lickorish and Jenkins (1999), the EIA is a very useful technique particularly to ensure that the environmental impacts of the proposed projects have been evaluated and provide the basis for making any necessary adjustments to the project plan. The EIA is a structured process with the aims of:

- identifying the costs and benefits of a particular development;
- establishing who will lose and who will gain if the development goes ahead;
- examining alternative courses of action and their likely impacts; and,
- considering ways of reducing impacts if the project is given the green light.

A basic model for environmental impact by Lickorish and Jenkins (1999) is presented here to provide a guideline. The list, as in the **Figure 5**, does not include economic or sociocultural factors because the main consideration of this paper is on the environmental factors.

Figure 5: Environmental impact checklist

Each factor listed below is evaluated in terms of possible type and extent of impact:
1. Air pollution
2. Surface water pollution, including rivers and streams, lakes and ponds and coastal waters
3. Ground water pollution
4. Pollution of domestic water supply
5. Noise pollution, generally and at peak periods
6. Solid waste disposal problems
7. Water drainage and flooding
8. Ecological disruption and damage, including both land and water areas and plant and animal habitats
9. Land-use and circulation problems within the project area
10. Land-use and circulation problems created in nearby areas by the project
11. Pedestrian and vehicular congestion, generally and at peak periods
12. Landscape aesthetic problems
13. Electric power and telecommunication problems
14. Environmental health problems such as malaria and cholera
15. Damage to historic, archaeological and cultural sites
16. Damage to important and attractive environmental features, such as large tree
17. Generation of erosion and landslide problems
18. Likelihood of damage from environmental hazards such as earthquake, volcanic eruptions and hurricanes

Note: After each impact factor has been individually evaluated, a useful technique is to prepare an evaluation matrix which summarizes and synthesizes the impacts, so that a comprehensive evaluation can be made of all factors.

Adapted from Lickorish and Jenkins (1999).

Conclusion and Recommendations

Undeniably, tourism is considered as the number one industry in the world. Tourism's rapid growth requires that a balance or parity be attained between economic benefits and environmental sustainability. In an attractive environment, whether natural, artificial or a combination, lies the appeal of tourism. In general, tourism industry is founded on the environment including both natural attractions such as sun, sea, sand, mountains, rock, flora, and fauna and artificial attractions such as a brick and mortar historical sites commemorating an event of the Revolutionary War (Nickerson, 1996). Without an attractive environment, tourism will not flourish and remain sustainable in the long term. Tourism is inherently a 'user', and in some ways, an abuser of the environment. For tourism to continue its success, these environments require protection.

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Due to the negative impacts tourism has had on the environment, the trend is now toward sustainable tourism development. Sustainable tourism development is the suggested way to have tourism while maintaining the natural environment; or in other words, sustainable tourism development is meeting the needs of existing tourists and host regions and at the same time protecting and enhancing opportunities for the future. Sustainable tourism development is an agenda for all levels of tourism to address; it is an issue for international, national, regional and local levels and tourists themselves. It is the issue of everybody since 'environment' belongs to everybody. For example, the air we breathe belongs to everybody including residents of other countries. The oceans belong to everyone. Without proper guidelines and legal practices, resources that belong to everyone can easily become the care of no one, which in turn results in exploitation by the few.

As discussed throughout this paper, ecotourism is one 'tool' of sustainable tourism development to help enhance the environment. The main concept of ecotourism is responsible travel to natural areas that conserves the environment and sustains the well-being of local people. From the viewpoint of tourists, 'ecotourism is typically the gratification provided by a unique experience in an undisturbed natural environment, viewing flora and fauna, birds, landforms, scenery and natural beauty. Despite its positive impacts, ecotourism can also contribute negative impacts that may harm the environment. To 'remedy' the potential negative impacts on environment, the Environmental Impact Assessment (EIA) is highly recommended to be undertaken.

As summarized in **Figure 6(a)** and **Figure 6(b)**, to help enhance the environment through tourism is the responsibility of everybody. The host community, region, or nation is responsible for defining the tourism philosophy and vision for the area and responsible for establishing social, physical and cultural carrying capacities in the area concerned. On the other hand, destinations are responsible for implementing the community sustainable development plan including monitoring tourism levels and impacts within the community, region and nation, in their management plans. The individual tourism firm or operator is responsible for observing local regulations and contributing to the

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improvement of the sustainable development plan based on experience with tourists. Finally, residents of the host community or region are responsible for encouraging tourists to accept the 'parameters' of the sustainable development plan, and the tourists themselves are responsible for understanding the concept of sustainable tourism and should accept the terms of the plan. For the tourism industry to be environmentally aware, **"education is the key!"**

Table 6(a):   Sustainable Development (SD) in Tourism – A Possible Allocation of Responsibility

Level/Organization	Responsibilities
Host community/region	Defining the tourism philosophy and vision for the community/region
	Establishing social, physical, and cultural carrying capacity for the host community/region
Destination management/ community organization	Coordination of implementation of community SD plan for tourism
	Monitoring of levels and impact of tourism in the community/region
Individual tourism firms and operators	Fair contribution to implementation of SD plan for tourism
	Observance of regulations, guidelines, and practices for SD
Host community/region	Encouragement/acceptance of tourism within parameters of SD plan
Visitors/tourists	Acceptance of responsibility for minimal self-education with respect to values of host region
	Acceptance and observance of terms and conditions of host community SD plan for tourism

Table 6(b):   Ways Organizations in Tourism Can Do to Support Sustainable Tourism

Tour operators	Hotels	Tourism associations
* Sponsoring research into the impact and management of tourism * Employing local tour guides * Giving advice to travelers in brochures * Giving money to charities in destinations	* Employing local people * Using local produce * Working closely with local and regional government * Developing policies on recycling, waste management and use of power and water supplies	* Giving advice to members * Encouraging support from members to companies which actively support responsible tourism
Transport providers	**Travel agents**	**Government tourism offices**
* Monitoring noise and fuel emissions * Providing advice for travelers cruising in environmentally sensitive areas	* Using recycled paper * Providing specialist knowledge about responsible tourism	* Providing adequate infrastructure * Supporting research on the impact and management of tourism * Diversifying tourist attractions throughout the country

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