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# Opportunities and Challenges of Ecotourism in ASEAN Countries

Seong-il KIM, Mihee KANG, and Dian SUKMAJAYA



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# Opportunities and Challenges of Ecotourism in ASEAN Countries

edited by

**Seong-il Kim, Mihee Kang and Dian Sukmajaya**

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# CONTENTS

|   |     |
|---|-----|
| The 30Th Anniversary Of Ecotourism .....  | 5   |
| Foreword .....  | 7   |
| Introduction .....  | 11  |
| 1. Status of Ecotourism in ASEAN Countries .....  | 16  |
| 2. Ecotourism Dialogue in ASEAN Countries .....   | 37  |
| 3. Ecotourism Development in Brunei Darussalam,<br>Indonesia, Lao PDR, Myanmar, Singapore and Philippines ..... | 52  |
| 4. Ecotourism Development in Viet Nam, Cambodia,<br>Thailand and Malaysia .....                                 | 88  |
| 5. Ecotourism as a Conservation Tool .....  | 128 |
| 6. Small and Medium Ecotourism:<br>The New Rules of Ecotourism in Japan, With a Sense of Luxe .....             | 142 |
| 7. Community Based Tourism and Its Critical Success Factors .....   | 164 |
| 8. Economics of Ecotourism .....  | 192 |
| 9. Ecotourism Planning and Partnership .....  | 214 |
| Conclusion .....  | 240 |
| References .....  | 245 |
| Contributors .....  | 273 |





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# ECONOMICS OF ECOTOURISM

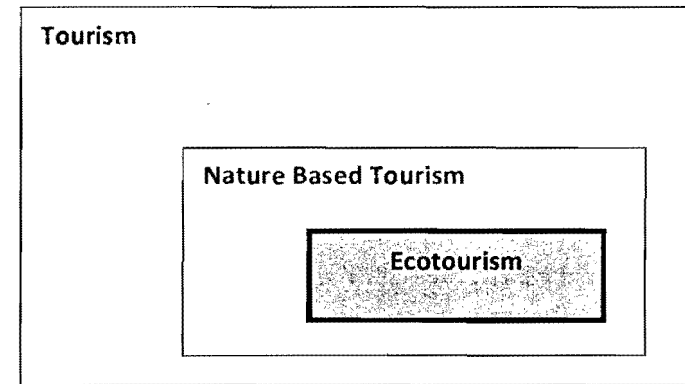
*Meti Ekayani and Nuva*

## Tourism, Nature-Based Tourism and Ecotourism

Development of ecotourism is important for many countries, especially developing countries, for supporting sustainable tourism and sustainable economies for local communities. It is also key to enhancing environmental conservation and people's awareness. Some studies have argued that ecotourism could lead to the protection of natural resources and the environment as well as providing socio-cultural and economic benefits to local communities (Asadi and Kohan, 2011; Vinodan and Manalel, 2011; Wood, 2002). Ecotourism is also widely accepted as a tourism policy that offers environmental, socio-economic, and cultural benefits for society at every level of administration, both local and national, in a country. All activities of "nature based tourism" could be called "ecotourism". A walk through the rainforest is not ecotourism unless that particular walk somehow benefits the environment and the people who live there. A rafting trip is categorized as ecotourism if it raises awareness and provides funds to help protect the watershed. Accordingly, ecotourism is more than visiting nature destinations and traveling to unspoiled natural areas. It has developed to cater for tourists with an interest in the environment, for appreciation, understanding, and conservation. The focus of ecotourism is on the experience rather than the destination, and it could be said that ecotourism itself is a travel experience which helps travelers or "ecotourists" come to a better understanding of unique natural and cultural

environments around the world (TWA, 2006; Wood, 2002). Thus, there is a link between ecotourism and nature tourism since ecotourism is also based on the natural environment, but the activities are certainly followed by a "responsible" and "sustainable" term. Figure 8.1 describes the relation between tourism, nature based tourism and ecotourism.

Figure 8.1 The relation between tourism, nature based tourism, and ecotourism



Source: adapted from TWA (2006)

Multiple stakeholders in the tourism sector should have a better understanding of the importance of ecotourism. Ecotourism that is related to the beauty of natural environments and local cultures in fact directly and/or indirectly improve people's awareness and appreciation of nature, and provide economic incentives to manage and conserve natural resources, the environment, and cultural heritage. UNWTO noted in 2010 that developing countries are popular tourism destinations among visitors, especially for ecotourism. As the trend of tourism demand is largely in developing countries, this certainly will provide outstanding potential to support development goals, and new environmental and cultural attributes can make an important contribution to more sustainable tourism destinations (UNEP, 2011). In line with the high demand for ecotourism, WTO in 1998 claimed that all

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nature tourism including ecotourism, accounts for 20 % of all international travel (Eagles et al., 2001), thus it is important for any developing countries, including Southeast Asian countries to configure their natural resource potential in order to develop well managed ecotourism. UNEP (2011) wrote that traditional mass tourism such as “sun-and-sand” resorts have reached a steady growth stage. In contrast, ecotourism, nature, heritage, cultural and soft adventure tourism, as well as sub-sectors such as rural and community tourism are taking the lead in tourism markets and are predicted to grow most rapidly over the next two decades.

The economics of ecotourism cover a broader aspect than “the economic value of ecotourism”. Therefore, this chapter on the economics of ecotourism discusses not only the economic valuation of ecotourism, but also comprehensive aspects of tourist management, government, and local communities related to the tourism industry. All aspects of ecotourism are connected and benefit each other when the ecotourism is developed sustainably. To understand the economics of tourism, one must study two essential economic concepts, i.e., “economic impact” and “economic value”. The economic impact of ecotourism discusses the contribution of ecotourism to broad economic indicators such GDP and employment at the macro level as well as generating multiplier effects at the micro level.

The economic value of ecotourism refers to the value of natural environment services, while “the economic impact” refers to the impacts of ecotourism activities felt by the host, government, and local community. With a multiplicity of ethnic and cultural richness and uniqueness, biodiversity, a variety of landscapes, and forest/marine resources among Southeast Asian countries, it is important to understand the real value of these aspects to respect and maintain sustainability.

There are two important questions that have to be answered. First, does the ecotourism developed by Southeast Asian countries benefit the local community, and second, how does one figure out the economics of tourism? To answer these questions, this chapter will focus on the economic impacts to the national economy as well as local communities, and on the economic value

of ecotourism.

## The Economic Impacts of Ecotourism in ASEAN

There is some indubitable evidence that well developed and managed ecotourism benefits local people and creates a multiplier effect to the communities. Aside from the economic impact to the country, ecotourism also benefits the local economy through business generating income and employment related to ecotourism. Generally, economic impacts of tourism refer to the tourists’ expenditures into the local tourism businesses, especially small and medium businesses such as homestay and lodging, restaurants, transportation, and guides. Furthermore, ecotourism development as a sustainable tourism can create stronger local economies and break the poverty circle (Sunarminto, 2002; Wijayanti, 2009; UNEP, 2011).

The Southeast Asian region, (ASEAN), is a region rich in historical and cultural resources, biological and landscape features, and is also home to many ethnic groups. For example, there are more than 60 national parks and 32 wildlife sanctuaries in Thailand and 68 minority tribes in Lao PDR where tourists can get involved in many ancient tradition and arts. Indonesia is a vast and beautifully diverse country consisting of more than 17,000 islands, and Malaysia is a veritable treasure trove of diverse cultures, exotic cuisines, fascinating festivals, and quaint villages (ASEAN, 2001). As a “perfect 10 paradise”, ecotourism in ASEAN countries is increasingly being made a flagship project to attract hard currency for economic recovery and to help communities ride out economic crises (Pleumarom 1999). This multiplicity in ethnic and cultural richness, a variety of landscapes, and forest/marine resources are definite ASEAN assets that provide competitive advantages in developing ecotourism.

Marker, et al. (2008) reported that Malaysia is the most popular tourist destination of visitors to ASEAN at 33%, followed by Thailand at 24%, Singapore at 19%, Indonesia at 11%, Vietnam at 6%, the Philippines at

5%, Cambodia at 2%, and other Southeast Asian countries at less than 1%. Considering only ecotourism, Malaysia, Thailand, and Indonesia are the most three important destination countries. Ecotourism in Southeast Asian countries is still growing, not only in the three most popular destination countries, but also in other countries of ASEAN. In Laos, for instance, the visitors can experience the Boat Landing Guest House eco-lodge and spend time in nearby protected forests. Indonesia has developed many ecotourism destinations ranging from the mountains to the coastal areas. For example, coastal ecotourism has become popular at Ujung Genteng. In this area, visitors enjoy homestays with the local community. For activities, visitors can sunbathe on the beach, go fishing, see and learn about turtle conservation, or observe local community activities such making traditional brown sugar. Malaysia offers a trip through the Sukau Rainforest and stay at Sukau Rainforest eco-lodge where every room has an attached bathroom with a solar hot water shower. Oil lamps using recycled cooking oil were used adopted. Electric motors for river safari tours are used to minimize air and noise pollution and reduce stress to wildlife. (Ruiz, 2008; Teo, 2012).

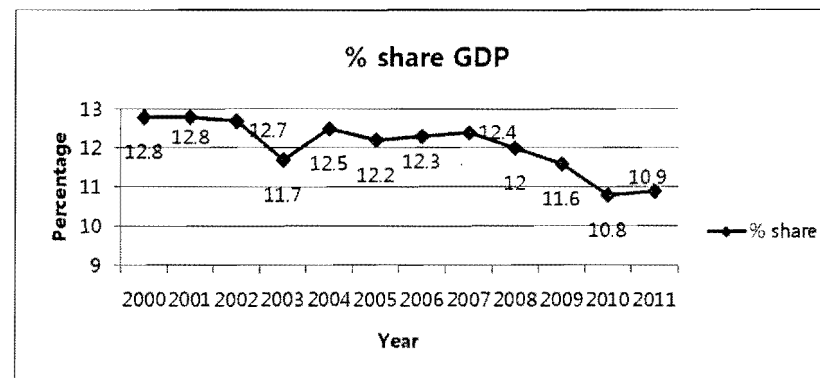
With all of their richness of nature and culture, and in line with the popularity of ecotourism destinations, each country in the ASEAN region gathers a lot of economic benefits for their economic development as whole and also for the local communities. To recognize the impacts of the tourism sector on national economic development, a tourism satellite account (TSA) could be constructed by each country. TSA is a framework linked to the central accounts that enables attention to be focused on a certain field or aspect of economic and social life in the context of national accounts; common examples are satellite accounts for the environment, or tourism, or unpaid household work (OECD, 2003). The primary economic impacts of ecotourism at the macro level are: 1) GDP, 2) employment opportunities, 3) wages and salary, and 4) tax revenues. Tourism industries contribute significantly to Indonesian economic development. The employment impact of tourism is 6.87 percent of total number national employment. Furthermore, tourism industries contribute to 4.73 percent of the national production and 4.06 percent of the GDP. The

data shows the significant impact of tourism on the national labor of Indonesia (7.44 million people).

The World Travel & Tourism Council (WTTC) has also been investing in economic impact research on tourism and its contribution to gross domestic product (GDP) and jobs all around the world (WTTC, 2012). Generally, the impacts or contributions of tourism are divided into direct, indirect, and induced impacts on the economy. The total contribution includes its 'wider impacts' (i.e., the indirect and induced impacts) on the economy.

The percentage share of tourism to the ASEAN region GDP decreased between 2000 and 2011 (Figure 8.2).

Figure 8.2 Percentage of tourism share to the total GDP in ASEAN region



Source: adopted from WTTC (2012)

It is supposed that the decreasing number of visitors is due to global crises as well as local political and safety conditions in some of the ASEAN countries. In 2003 for example (ASEAN, 2009), the severe acute respiratory syndrome (SARS) hit this region. In general, however, the tourism sector is still a significant part of the economy in each ASEAN country (Table 8.1).

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Table 8.1 Total Contribution of Travel and Tourism in Southeast Asian Countries to the Total GDP and Employment in 2011

| ASEAN Countries | Economic Impacts (Total and % Contribution) |                           |
|-----------------|---|---------------------------|
|                 | GDP   | Employment                |
| Brunei          | 6.6%<br>(USD 908 million)                   | 7.6%<br>(14,500 jobs)     |
| Cambodia        | 22.1%<br>(USD 2.75 billion)                 | 19.2%<br>(1,450,000 jobs) |
| Indonesia       | 8.8 %<br>(USD 68.21 billion)                | 7.7%<br>(8,609,500 jobs)  |
| Laos            | 18.2%<br>(USD 1.43 billion)                 | 15.9%<br>(461,500 jobs)   |
| Malaysia        | 14.8%<br>(USD 39.50 billion)                | 12.9%<br>(1,559,000 jobs) |
| Philippines     | 8.5%<br>(USD 19.85 billion)                 | 9.6%<br>(3,547,500 jobs)  |
| Singapore       | 10.6%<br>(USD 27.92 billion)                | 8.6%<br>(266,500 jobs)    |
| Thailand        | 16.3%<br>(USD 54.86 billion)                | 11.4%<br>(4,468,500 jobs) |
| Vietnam         | 10%<br>(USD 11.83 billion)                  | 8.6%<br>(4,296,500 jobs)  |

Source: WTTC (2012)

Table 8.1 indicates that the tourism industry has very important economic impacts in Southeast Asian countries. In 2011, the Cambodia tourism industry contributed to 22.1 percent of the national GDP. This was followed by Laos (18.2%) and Thailand (16.3%). In monetary value Indonesia received the highest amount (USD 68.21 billion), followed by Thailand (USD 54.86 billion), Malaysia (USD 39.50 billion), and Singapore (USD 27.92 billion). The tourism industry also created more than eight million jobs, or 7.7% of the total employment in Indonesia. In percentage of tourism job creation's share of total employment, Cambodia was highest at 19.2%. Overall, Brunei received the lowest amount of tourism impacts on its GDP (6.6%) and employment (7.6%). The director of the Brunei Tourism Board stated that Brunei's tourism sector has "tremendous room" for improvement but that the country should

take careful steps to manage the industry (Too, 2012).

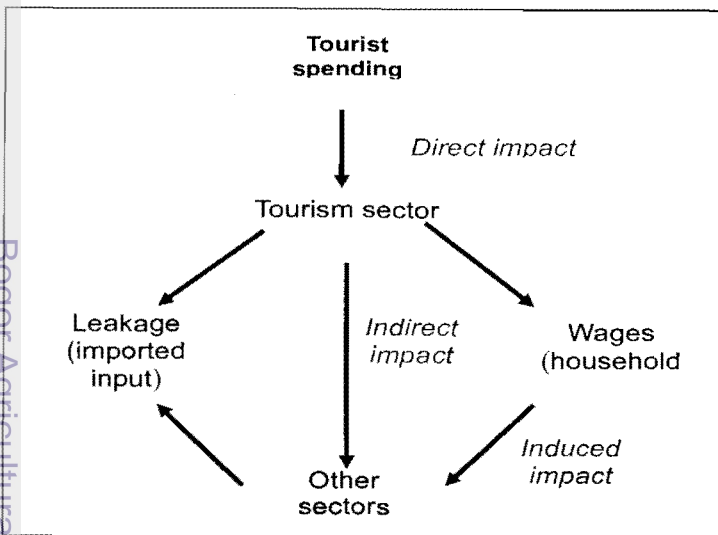
What about the contribution of ecotourism? Two-third of tourists in the U.S., Australia, and Western Europe think that a hotel should be responsible for active protection of the environment and supporting the local communities. In Europe, 10-20% of tourists are demanding green options (TIES 2006, in Marker et al., 2008). Natural wealth greatly contributes to ASEAN's tourism attractiveness. Conservation International noted that most of the ASEAN territory lies within a "biodiversity hotspot", a sign of the region's extraordinary natural richness (WEF, 2012). Marker et al. (2008) reported that according to some studies it is estimated that about 20% of the tourists in Thailand visited nature destinations. If it is assumed that the situation in the other Southeast Asian countries is similar to the situation in Thailand, then the demand for ecotourism could be estimated at about 20% of the total demand for tourism.

Figuring out the economic impacts of ecotourism should happen not only at the macro level, but also at the micro level (local communities). In general, ecotourism activities can affect the economics, society and culture of communities as well as the environment. As mentioned above, economic impacts of ecotourism on local communities can be seen through the increase in livelihood income, availability of employment opportunities, infrastructure improvements, and distribution of other benefits. Socio-cultural impacts may include cultural acculturation, education and knowledge improvement, and women's empowerment. Furthermore, environmental impacts of ecotourism can be seen in the changes to flora and fauna, pollution, littering, and other natural resource degradations. Ecotourism gives an economic incentive to the local communities to enhance natural resource conservation. With respect to economic impacts, TIES in 2006 noted that ecotourism allows for more visitor expenditures to stay in the local economy. Experiences in various locations shows that ecotourism activities put as much as 95% of expenditures into the local economy (Cooper et al., 1998; Wunder, 2000; Pitana and Gayatri, 2005; Marker et al., 2008).

The impacts of ecotourism, especially at the micro level, can be grouped

into three categories: direct, indirect, and induced impact (Lindberg, 1996). The direct impact arises from the initial tourism spending, such as money spent at a restaurant by the tourists. Then, the restaurant buys goods and services (inputs) from other businesses, and in this manner generates indirect impacts. Furthermore, the restaurant employees spend some of their wages to buy various goods and services inside the ecotourism area, thereby generating induced impacts. Hence, it can be concluded that direct impacts or benefits can be traced from the tourists' expenditures to the local business such as restaurants, homestays, guides, and local transportation in the ecotourism area. Indirect impacts occur that are related to the local business' expenditure for their inputs of production in the ecotourism area, and induced impacts occur that are related to the local employees' expenditures ecotourism locations. If the local business spends their money for inputs outside the ecotourism area, it is called as a leakage. Figure 8.3 illustrates these impacts, linkages, and leakages (Lindberg, 1996; Lindberg et al., 1997).

Figure 8.3 Tourism's Economic Impacts



Source : Lindberg (1996)

One of the methods that can be employed to recognize and estimate the effect of ecotourism is “multiplier effect analysis”, which can be divided into two aspects: Keynesian income multipliers (to estimate direct impacts, i.e., the effect of visitors' expenditures in increasing the local communities' income) and Ratio income multipliers (to estimate indirect and induced impacts). Mathematically, this method can be formulated as (META, 2001):

$$\text{Keynesian Income Multiplier} = \frac{D+N+U}{E}$$

$$\text{Ratio Income Multiplier Type 1} = \frac{D+N}{D}$$

$$\text{Ratio income Multiplier Type 2} = \frac{D+N+U}{D}$$

Where:

E = Visitors' expenditure (\$)

D = Direct impacts from visitors' initial spending to the local business (\$)

N = Indirect impacts from spending by local business in the area (\$)

U = Induced Impacts (\$)

Multiplier analysis is often used to capture the secondary effects of ecotourism or tourism in general, and to show the wide range of sectors in the community that may benefit from tourism. The total economic impact of ecotourism development is the sum of direct, indirect and induced effects within the region. The multipliers method measures the amount of money spent that does not leak out of the region due to further spending on products and services not sourced from within the study region. In some ecotourism areas, the amount of money left in the local economy is less than that spent by consumers, which is also well known as leakage (Yacob et al., 2007; Janeczko et al., 2002).

A study of the economic impacts of ecotourism was conducted by Wijayanti in 2009. The main goal of this study was to estimate the economic impact of coastal ecotourism in “Kepulauan Seribu” or the Seribu Islands,

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Indonesia. The Seribu Islands consist of more than 100 small islands. Some of these islands are being developed as ecotourism areas, such as Pramuka and Untung Jawa islands. Multiplier effect analysis was used to estimate the coastal ecotourism impacts in both locations. Ecotourism activities in both areas created positive impacts on small and medium local business and thus have significant implications for local employment. Furthermore, the results of economic impact studies using Keynesian multipliers in Untung Jawa Island indicated that impacts are higher here than in the Pramuka Islands. Economic leakage from ecotourism activities in those areas is about 50%. It means that visitors spend 50% of their money for tourism activities outside the local ecotourism area, and the ecotourism benefits perceived by the local communities - direct, indirect, and induced - are only half of tourist spending.

Yacob et al. (2007) studied the local economic benefits of ecotourism development in Redang Island Marine Park (RIMP), Malaysia. This was an empirical study of the local economic benefits of ecotourism development in one of the marine parks in Malaysia. RIMP is becoming an increasingly important ecotourism destination in Malaysia. In 1990, RIMP was visited by just a few hundred people, which increased on a yearly basis. In 2001 it received more than 73,000 visitors. Referring to this condition, the authors conducted this study with a primary main purpose of estimating the economic benefits of ecotourism development in RIMP and to ecotourism operators and local people in terms of income and employment opportunities. The results showed that the development of ecotourism in RIMP has definitely generated local employment opportunities. A total of 938 jobs were created, which included direct, indirect and induced employment. The output multiplier was very small compared to the employment multipliers, which were 1.104 and 1.223, respectively. The results also show a high percentage of leakage in the expenditures of ecotourism operators, and that their employees had contributed to the low multiplier effects on the entire local community. As an example, only 0.5 percent of their total expenditures, contributed by three ecotourism operators, were made in the local area. Thus, a large proportion of employees' expenditure leaked out of the RIMP area. This occurred because only 19

percent of employees' income and wages was spent locally.

In 2005, Dulnuan studied the impact of tourism on the indigenous communities in Sagada, Philippines. The author noted that in the Philippines, a number of popular tourist destinations are the traditional territories of indigenous peoples. Tourism has become a major revenue earner for local entrepreneurs who are directly engaged in tourism activities, such as operating inns, lodging houses, restaurants, handicraft stores, souvenir shops, and transport vehicles. Local weavers also derive income from selling their products to the inns and handicraft stores, who in turn sell these to tourists. Friendship bands, hand-woven bags, and rattan baskets are sold in souvenir stores. Yet another significant impact of tourism is the shift among farmers from subsistence to market-oriented farming, planting fruits and vegetables that lodging houses, inns, and restaurants desire. In addition, most of tour guides in this area are teenagers and some of them are still students. The tour guides who are still students use some of their earnings to pay for their tuition fees and provide another portion for the support of their families.

### Creative Economies in Ecotourism for Generating Better Impact

Ecotourism is closely linked with creative economies. In Indonesia, the concept of tourism and creative economies was widely introduced and developed by the Indonesia Ministry of Tourism and Creative Economy. Creative economies in tourism activities mean innovating, creating, and offering the uniqueness of a tourism area. It is in line with Indonesia's economic development policy direction, which is based on four aspects of pro growth, pro job, pro poor, and pro environment (Ministry of Tourism and Creative Economy Republic of Indonesia, 2012). Creative economies are inseparable from the creativity of individual local communities without excessively exploiting the natural resources. Ecotourism development corresponds with this concept, which preserves the natural resources and

engages the local community in tourism activities. Ecotourism that employs local resources such as transportation, accommodation and guide services will bring in economic opportunities for the community. Well managed ecotourism should provide sustainable profits to the hosts or managers. The most important thing for improving ecotourism management is to provide the best service and quality of ecotourism products. In addition, local knowledge and skills have to be improved to keep the sustainability of ecotourism as well as to boost the multiplier effects. The continuity of ecotourism development can be realized based on community-based ecotourism by considering local wisdom and through direct involvement of local communities. It is also important to follow the rules and agreements of local communities in developing ecotourism. Thus, stakeholders in the ecotourism industry, especially local communities, must develop products (goods and services) to meet the demands of the ecotourism market and attract increasing number of ecotourists and create more multiplier effects the ecotourism that involve direct, indirect, or induced impacts.

Wally (2003) noted that the advent of ecotourism provides the conservation community with an opportunity to develop connections between the health and preservation of protected ecosystems and the global environment. Directly or indirectly, ecotourism activities can also encourage people to see the value of their natural resource heritage. Furthermore, if communities benefit economically from ecotourism activities, it will encourage them to value and protect the biodiversity of the area and minimize moral hazards such as illegal logging and wildlife hunting.

At present, the Indonesian government through the Ministry of Tourism and Creative Economy develops village-based tourism or rural tourism. As of 2011, 569 villages have been developed into tourism villages. The ministry is also targeting as many as 960 villages to be developed into tourism villages in 2012. This number will be increased up to about 2,000 villages in 2014. The development of tourism villages has been conducted through the National Program for Community Empowerment (PNPM) *Mandiri* Tourism since 2009 (Desa Wisata Semangki, 2012). These conditions certainly provide more opportunities to the local community and for small and medium-sized

entrepreneurs to evolve and to have a positive impact on natural resources and the environment.

Each party involved in the ecotourism industry should be able to capture opportunities to increase the benefits received and to enhance the economy of the local community. One way to do this is by developing creative products (goods and services) in the ecotourism surrounding area. It is important because usually the visitors come to the ecotourism area is not only for sightseeing, but also to feel and have new product experiences through the tourism sector. Like the rest of the tourism industry, ecotourism by small and medium business (SMEs) could be developed creatively without destroying natural resources. The SMEs consist of specific local food and beverages, traditional living experiences or offer homestays, arts and cultures, and provide additional income from tourist guiding and local travel agent services.

Local community participation through the enhancement of their genuine culture is important for developing ecotourism attractions, especially in the case of indigenous territories. This is based on the arguments that direct and indirect human influences critically affect the dynamics of any contemporary ecosystem and form a vital part of the ecosystem's interpretation and understanding. Furthermore, the development of ecotourism should be on a small-scale basis and have locally owned activities. It needs also a higher input of local products, materials and labor, which has greater multiplier effect throughout the local economy with fewer leakages compared to large-scale and foreign-owned operations (Weaver, 1991; Weaver, 2006; Bagul, 2009).

As with other ASEAN countries, Cambodia perceives the significant economic impact of tourism and ecotourism as well. In Siem Reap, ecotourism growth has resulted in positive impacts by raising the well-being of local people through job creation and income-earning opportunities in construction, hotels and restaurants, transportation, handicrafts, and services. Local travel agencies, tour guides, and souvenir shops have multiplied in less than a decade. In 2004, the number of souvenir shops was 181 and registered licensed tour guides were 1,983. These conditions indicated that by improving local creative economies, many aspects directly and/or indirectly could significantly increase

the economic impacts of ecotourism toward regional development (Cambodia Development Resource Institute, 2005; Ballard, 2007; Vutha and Sokphally, 2007).

## Economic Value of Ecotourism

In terms of natural resources and the environment, economic value means not only what is actually paid but also what individuals are willing to pay to receive benefits, whether market prices are available for resources such as clean air and water, timber and non-timber forest products, and also ecotourism. Thus, the economic valuation of natural resources and the environment can be implemented by valuing the environmental goods and services in monetary terms. Using economic valuation of natural resources and the environment, the problem of the underlying value of natural resources and environmental goods and services that are given by people who use the resources could be solved. In ecotourism development, economic valuation can help economists, governments, local hosts, and communities to predict the impacts of ecotourism activities on the environment and resources, and also to identify and estimate the monetary value of all economic benefits that a society derives from environmental resources (Lipton et al., 1995; FAO, 2003; Lambert, 2003; Schuhmann and Casey, 2008).

Economic valuation can be defined as the attempt to assign quantitative values to the goods and services provided by environmental resources, whether or not market prices are available (Barbier et al., 1997). In general, economic valuation, well-known as Total Economic Valuation (TEV) is divided into two categories, namely use values and non-use values. These values can be specifically grouped into direct, indirect, option, bequest, and existence values. There are methods and techniques to value these, which are classified according to the basis of the monetary valuation, either market-based, surrogate market, or non-market based (Turner et al., 2000; NOAA, 2006). Ecotourism as a type of direct value can be estimated using methods

of economic valuation of natural resources and the environment. The methods that can be used are the Travel Cost Method (TCM), the Contingent Valuation Method (CVM), and Contingent Choice Modeling (CCM). Box 1 shows the case study of tourism valuation in Malaysia.

### Box 1. Case study in Malaysia

Yacob et al. (2009), studied "A Contingent Valuation Study of Marine Parks Ecotourism: The Case of Pulau Payar and Pulau Redang in Malaysia". The dichotomous choice survey design-contingent valuation method (CVM) was applied to investigate empirically the willingness to pay (WTP) of the visitors for ecotourism resources in two selected marine parks in Peninsular Malaysia in order to estimate the value of ecotourism resources. The studies randomly sampled 215 respondents in Pulau Redang and 153 respondents in Pulau Payar. The results from Pulau Redang indicated that visitors were willing to pay about RM7.8 and RM10.6 per year for conservation, for local and international visitors, respectively. Meanwhile, in Pulau Payar, the results showed that local and international visitors were willing to pay about RM7.30 and RM8, respectively. These findings may provide guidelines for marine parks and may help to develop management policies that enhance ecotourism contributions to sustainable development and conservation of marine parks in Malaysia.

The travel cost method is one economic valuation method that is used to determine the value of tourism and the natural environment associated with the areas that are used for recreation based on visitors' demand for it. The TCM seeks a value of non-market environmental goods and services by using consumption behavior in related markets (the ecotourism industry). To employ this method, the costs of consuming environmental assets such as travel costs, entry fees, and on-site expenditures are used as a proxy for price. Besides, a value of time is also should be considered as an opportunity cost (Hanley and Spash, 1995). In general, this method is classified into two approaches, namely Individual Travel Cost Method (ITCM) and Zonal Travel Cost Method (ZTCM). A zonal travel cost method mostly uses secondary data for the analysis with some data collected from visitors. The individual travel cost method needs detailed data from visitors which is gathered using surveys



(Batemann et al., 2002).

In general, (Hanley and Spash, 1995) noted that the contingent valuation method (CVM) enables economic values to be estimated for a wide range of goods and services and of natural resources and the environment, which not traded in markets. The contingent valuation method (CVM) could be used to help in determining and assessing the values of the ecotourism resources. This method relies on visitors' willingness to pay (WTP) for an environmental commodity, in this case, ecotourism. First applied by Davis (1963), CVM has been widely used for valuing natural resources, recreation, environmental damage, and environmental protection. A structured hypothetical market or scenario related to the ecotourism resources is needed to apply this method. Lipton et al.(1995) noted that economic value measures the maximum amount an individual is willing to forego in other goods and services in order

**Box 2: Case study in Indonesia**

Hakim, et al., (2011) studied "Economic Valuation of Nature-Based Tourism Object in Rawapening, Indonesia: An Application of Travel Cost and Contingent Valuation Method". Rawapening has various and unique potential tourism products. The main potentials are interesting views, including direct or indirect views of Rawapening, the charm of nature, cultural communities, and attractions that are being built. Other potential areas for tourism in Rawapening include agro tourism, cultural tourism, and antique train tourism. Natural scenery, beautiful lakes or swamps, and a fairly cool climate offers the perfect chance for rest. Coffee plantations and hilly topography provide varied atmospheres Community cultural life in rural communities includes traditional art, traditions, and customs. The purpose of this study was to measure the economic value in Rawapening, which could then be used examine the role of nature tourism as an environmentally sound way to attract tourists. The direct benefits of natural attractions usually involve a variety of natural resources, such as biodiversity, and may be indirectly related to important ecological functions that are not usually considered part of the tourist attractions. To analyze the data, the researcher used the travel cost and contingent valuation methods. The study found significant factors related to the probability of individuals' willingness to pay a certain nominal value for environmental quality improvements. The economic value of ecotourism was estimated at IDR7.41 billion for consumer surplus and IDR1.65 billion for total benefit per year. This implies that the significant economic value of nature based tourism will be lost from any large scale development that degrades the natural environment.

**Box 3. Case study in the Philippines**

Arin and Kramer (2002) used CVM to present the findings of an exploratory study on diver demand for visiting a marine sanctuary in the Philippines. In this study, an exploratory contingent valuation study was carried out among foreign and local tourists in three major dive destinations in the Philippines. The researcher noted that charging an entrance fee is one way to finance marine reserves. This is also a way for local communities to capture the scarcity rent of their resources. Revenues thus collected would help cover maintenance and anti-fishing rule enforcement costs of a marine reserve. Furthermore, the entrance fee may be used as a tool to regulate the number of visitors to minimize diver damage. The maximum WTP for an entrance fee to enter a marine sanctuary was modeled and elicited through a survey through the contingent valuation question. The sampling population for this study was established as local and foreign tourists who dive while in the resort area. The final sample sizes were 37 in Anilao and 46 each on Mactan Island and Alona Beach. The results show that the average WTP is considerably higher on Mactan Island (US\$5.5) than in Anilao (US\$3.7) and Alona Beach (US\$3.4). Based on the survey results, it shows a positive willingness to pay to enter marine sanctuaries where fishing, one of the major threats to coral reefs, is prohibited. Estimated annual potential revenues range from US\$0.85 to US\$1 million on Mactan Island, US\$95 to US\$116,000 in Anilao, and from US\$3,500 to US\$5,300 on Alona Beach. These revenues could be used to support coral reef conservation and possibly the creation of alternative employment opportunities for locals, who would be barred from fishing.

to obtain some good, service, or state of the world. This measure of welfare is formally expressed in a concept called willingness to pay (WTP). Besides WTP, the concept of willingness to accept (WTA) should also be considered in economic valuation methods. If willingness to pay refers to value for welfare improvement or loss avoidance, then willingness to accept refers to the compensation for loss, such as a change in the level of natural resources and environmental services (Hanley and Spash, 1995; Schuhmann and Casey, 2008). Box 2 and 3 describe the case studies of tourism valuation in Indonesia and Philippines.

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wish to experience. There are four basic types of ecotourists:

- **Hard-core nature tourists.** Scientific researchers or members of tours specifically designed for education, removal of litter, or similar purposes.
- **Dedicated nature tourists.** People who take trips specifically to see protected areas and who want to understand local natural and cultural history.
- **Mainstream nature tourists.** People who visit the Amazon, the Rwandan gorilla park, or other destinations, primarily to take an unusual trip.
- **Casual nature tourists.** People who experience nature incidentally as part of a broader trip.

Environmental and economic impacts of ecotourism are therefore important consideration for the government, hosts, management, and especially the local community in the area. The good practices of ecotourism development have the potential to generate income while creating incentives for conservation. In addition, good practices result in lower negative impacts to nature and the community, and also minimize the possibility of exceeding the carrying capacity in tourism areas. The key is to develop a financially successful ecotourism business while protecting or even enhancing the natural environment. There are some advantages in the application of market segmentation to ecotourism, which are: 1) provide customers' needs and requirements (in this case tourist) based on the different segments of tourism attraction and tourist activities, 2) potentially increase the management/host revenues, and 3) expand the opportunities for growth through attracting more tourists to enjoy each tourist segment (Rangkuti, 2002).

Claridge and Nooren (2002), studied the benefits of turtle conservation in Berau district, Indonesia. They noted that there are some potential benefits from conservation of turtle populations deriving from the segment of the ecotourism market with an interest in turtles. There is no doubt that there is a high level of such interest among tourists coming from countries where environmental awareness among the middle and upper classes is high. Developing segmentation in the ecotourism areas is potential way to gather

more income by the management and for local people, to avoid exceeding the carrying capacity of ecotourism areas, and improving conservation of natural resources and the environment.

## Conclusion

Ecotourism has become a main focus of the tourism industry in ASEAN countries. As a part of the tourism industry, ecotourism is considered to be one of the most important ways for sustainable economic development and offers opportunities for optimizing economic benefits for local communities. Through the development of ecotourism with the active participation of local communities in each ASEAN country, this can be an instrument for improving the empowerment of local communities (socio cultural and economic), biodiversity and natural resources conservation, and definitely for the alleviation of local poverty. With a growing interest in spending leisure time in nature and increasing awareness of environmentalism, ecotourism has become one of the fastest-growing segments of the tourism industry. Ecotourists are not homogenous because they do not respond in the same way to nature tourism experiences. Primary motivations of ecotourists include physical activity, family, culture, and the environment. Ecotourism is involved in a broad range of activities such as adventure recreation and visiting unique cultures, and the activities include a range of natural environments. It is important to note that the term ecotourism differs slightly from nature based tourism in its approach. Instead of focusing on the destination, ecotourism focuses on the experiences and consistently includes environment interests and socio-cultural aspects.

There are significant differences among different types of ecotourists and their levels of satisfaction with ecotourism activities, such as conservation, curiosity about the environment visited, and practicing environmentally friendly behavior. Understanding the differences in motivation of the ecotourists is important for marketing ecotourism products and to better organize ecotourism management.