

Ecotourism

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BACKGROUND

Ecotourism, which typically involves nature-based tourism, plays an increasing role in today's environmental management. As environmental conservation has, in many cases, suffered from a limited budget, funding ecotourism is perceived as a way to provide additional resources to finance environmental conservation efforts. In some cases, revenue generated from ecotourism can be substantial and can be used to provide alternative employment/income to local residents. This alternative employment also helps to reduce the pressure on encroachment and environmental destruction by the local people. Ecotourism is, thus, seen here as a vehicle for sustainable development.

As ecotourism involves human interaction with nature, it inevitably asserts a pressure on the environment. Overcrowding, waste and littering, pollution or commercialization resulting from ecotourism can also accelerate environment destruction. For this reason, there is a need to carefully promote ecotourism so that it will not become an additional threat to the environment. For ecotourism to benefit society but not damage natural heritage, it has to recognize the carrying capacity of the environment and not expand beyond that threshold.

Controlling ecotourism within the limit of the carrying capacity of the environment can be accomplished via sound management techniques (park management) or the use of economic instruments such as user charges (or entrance fees), various kinds of taxes, and imposing a limit on the number of visitors or tradable permits. These economic instruments aim to control ecotour activities so that the marginal benefit (revenue) equals the marginal social and private cost (environmental damage plus opportunity cost of all inputs) and, hence, maximize the net social welfare to society.

DEFINITION

The term ecotourism has been used widely as well as interchangeably to refer to sustainable tourism, alternative tourism, ethical tourism, green tourism, special interest tourism, appropriate tourism, and responsible tourism. Despite the many definitions used today, ecotourism is more appropriately defined by the Commonwealth Department of Tourism of Australia as "nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable. This definition recognizes that *natural environment* includes cultural components and that *ecologically sustainable* involves an appropriate return to the local community and long-term conservation of the resource."

With this definition, ecotourism involves the following four components:

- nature-based;
- education;
- environmental friendly; and
- local participation.

The nature-based component refers to the use of the natural environment by focusing on biological and physical features of the resource. This aspect of ecotourism relates to visitations to natural sites or locations, namely, national parks, forests, beaches, lakes, waterfalls, etc. It also includes observation of wild animals, plant species, natural phenomenon (e.g., geyser, and boiling mud at Rotorua, New Zealand),

as well as local culture.

The education component refers to learning about species or being informed of the features of the environment. The degree of education varies from simple observation to intense learning. Simple observation is considered educational as it involves some form of interaction with nature, for instance, observing animal movement, establishing eye contact with animals, smell of the surrounding area or listening to the sounds of nature. The next step in the education component concerns how information is provided to the visitor through booklets, brochures, signs, short videos or briefings. Visitors can also absorb this information according to their own interests by asking deeper questions or spending a longer time observing the mannerism of the species. In-depth learning involves greater interaction with the environment or even conducting scientific research.

The environmentally friendly component, in some ways, relates to the concept of sustainable development, which in itself needs to be defined. The World Commission of Environment and Development defines sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p.43). Hence, the environmentally friendly component ensures that ecotourism will not degrade the environment or adversely affect the local community—hence, affect future uses. Establishing the threshold of the environment and determining its carrying capacity is also important in assuring that ecotourism will not damage natural assets.

Local participation is an important feature of ecotourism as it serves two purposes: to elevate the negative pressure on the environment by local communities, by providing them with an alternative source of income; and to fairly distribute the revenue back to the local community. As is often observed, to some extent, environmental degradation is caused by local people who encroach on forest areas for timber or clear land for agriculture. Others hunt wild animals for skins or ivory. If employment opportunities are extended to local villagers, it is possible that they will no longer need to damage nature as a source of income.

Local participation is also important because it helps to channel part of the revenue back to local villagers and the community. This mechanism shows that ecotourism recognizes that nature not only belongs (and benefits) to urban tour businesses and visitors but also to the local villagers. Benefits to local participants provide incentives for protecting tourism resources for sustainable use.

The term ecotourism is sometimes used in a very broad sense to refer to the philosophy of "greening" every type of tourism, whether tourist activities involve nature or not. In this paper, the term ecotourism refers to a specific type of tourism, one that has the four components indicated earlier.

CHARACTERISTICS OF ECOTOURISM MARKET

Ecotourism is growing rapidly and is becoming an important income earner for many developing countries. When well-managed, this revenue can be channeled back to the park and local community. This revenue will help to finance the maintenance and improvement of national parks, which, in many cases, are facing limited budgets provided by central governments. Through local participation, the revenue from ecotourism will be distributed to local residents. As noted, this will help to reduce the need of the local community to encroach on forests in the search for agricultural land or timber; and endanger wildlife for additional income.

Data on the size and the growth rate of ecotourism are mostly available at the site level and national level. Information on the size of the ecotour market at the international level is less accurate.

Size of Market and Growth Rates

The World Tourism Organization estimates that approximately 500 million tourist trips are made worldwide each year (WTO 1994). The World Tourism and Travel Council (WTTC) 1995 states that travel and tourism was the world's largest industry producing output in 1995, worth US\$ 3.4 trillion, which accounts for 11.4

percent of world GDP, 11.4 percent of investment and created 212 million jobs worldwide.

The Stanford Research Institute (Vickland 1989) conducted a poll of retail travel agencies and found that special interest tourism is growing at a rate of 10 to 15 percent per year worldwide, compared with 7 to 8 percent for tourism overall. The World Resources Institute reports that nature traveling is growing at the rate of between 10 to 30 percent each year, compared with tourism overall of about 4 percent. The World Tourism Organization estimated that in 1989 nature-based tourism accounted for 7 percent of all international travel expenditures. According to the World Tourism and Travel Council, this amounts to US\$ 238 billion per year.

There are many reasons that explain the high growth rate of ecotourism, including, for instance, increasing environmental awareness, the desire to get outside the urban atmosphere and the desire to avoid the crowd or mass tourism.

As for developing countries, tourism of all kinds generated a revenue of US\$ 55 billion in 1988 (Lindberg 1991). From this total, the revenue from ecotourism or nature-based tourism is estimated to be between US\$ 2 billion and US\$ 12 billion (unofficial sources). In many countries, namely, Kenya, Rwanda, Costa Rica, Ecuador and Nepal, income from ecotours are major foreign exchange earners.

Scuba diving in the Caribbean earns close to US\$ 1 billion each year. Lindberg describes that, according to unofficial sources, protected areas in Kenya earn as much as US\$ 500 million in direct and indirect revenue each year. This earning accounts for as much as 30 percent of Kenya's foreign exchange income. Gorilla tours in Rwanda Parc National des Volcans earn about US\$ 1 million each year from entrance fees, and as much as US\$ 9 million indirectly. As for Nepal, visits to the Himalayan geography and culture generated an income of about US\$ 45 million in 1983.

In Kenya, the World Bank investment in tourism at Amboseli National Park expected an internal rate of return of 20 to 29 percent. The total revenue from park tourism was US\$ 40 per hectare, compared to US\$ 0.80 per hectare for agriculture use. The estimated value of a lion as a visitor attraction is US\$ 27,000 per year, while each elephant herd is valued at US\$ 610,000 per year.

Expenditure

1993 data collected from nature-based visitors to Australia shows that the average expenditure (in Australian Dollars) for each visitor per trip is \$2,824 for bushwalking, \$2,533 for scuba diving and snorkeling, \$3,137 for rock climbing and mountaineering, \$3,698 for horse riding and trail riding, \$3,603 for outback safari tours, \$2,668 for wildflower viewing and \$2,132 for national park visits.

These figures are high in relation to the overall average expenditure of a visitor to Australia which is only \$1,788 per trip. High nature-based tour expenditures are generated from European visitors (Swiss, German, Scandinavian, etc.), followed by Canadians and Americans. Expenditure from Asian visitors is the lowest.

Impact and Characteristics of Ecotourism

Impacts of ecotourism on the environment, economy, and social and cultural communities are important to policy makers in assuring that the positive benefits are maximized while negative impacts are minimized within the carrying capacity. Following are some positive and negative impacts of ecotourism.

Environmentally, ecotourism is expected to provide incentives for conservation of natural areas. It will also provide resources, both financial and physical, for natural conservation, maintenance against environmental degradation, improvement in biodiversity through breeding programs or gene banks, etc. Ecotourism will help to promote environmental awareness and ethics to the visitors.

The negative impact of ecotourism includes damage to plants, forest clearance, disturbing animal habitats,

creating soil compaction, and marine resource destruction (coral damage and overfishing). Overcrowding or unmanaged ecotours can also increase pollution in the form of garbage, air pollution and water pollution. It is also possible that ecotours can introduce new species to an ecosystem; and they can increase the frequency of fire.

Economically, ecotourism is expected to generate foreign exchange income. Revenue from visitors can be used for various development projects, infrastructure and ensuring long-term sustainability of local areas. When well-managed, ecotourism can help to redistribute income to local residents and create other indirect benefits within local areas. Ecotourism has a high potential for expansion, as expenditures by ecotourists are generally greater than that of the average tourist. It will also create employment opportunities within the overall economy as well as within local economies. In addition to the above, other indirect economic benefits include watershed protection and control of soil erosion, which will ensure water supply to the agricultural sector and absorb air pollution from industrialization.

The social and cultural impact of ecotourism has been much debated, particularly as regards whether ecotours will enhance or damage the social and cultural values of local communities. Social and cultural benefits of ecotourism include creation of special jobs which need the expertise of local people, and offering resources and means to rehabilitate local arts, traditions and cultural activities. It will also encourage the local community to value its natural and cultural assets. Ecotourism can, on the other hand, become a threat to the local community due to overcrowding leading to resentment among the local community, introducing new (Western) values and practices to the local people and creating conflicts in the use of natural resources.

It is, however, important to note that the negative impacts, generally, result from inadequate planning and mismanagement of ecotours. With well-designed ecotour activities, a control of the volume or frequency of visits, proper pricing techniques and careful environmental assessments, the negative impact can be much reduced.

CHARACTERISTICS OF ECOTOURISTS

Ecotourists can be categorized into four groups, according to the depth of their interest in taking ecotrips. Lindberg classifies ecotourists as:

Type 1 Hard-Core Nature Tourists. Scientific researchers or members of tours specifically designed for education, removal of litter, or similar purposes.

Type 2 Dedicated Nature Tourists. People who take trips specifically to see protected areas and who want to understand local natural and cultural history.

Type 3 Mainstream Nature Tourists. People who visit the Amazon, the Rwandan gorilla park, or other destinations primarily to take an unusual trip.

Type 4 Casual Nature Tourists. People who partake of nature incidentally as part of a broader trip. (Lindberg 1991, p. 3)

This classification is useful for studying the market segments of ecotourism. Understanding how tourists are classified into various types can help tour agents as well as park managers prepare adequate/appropriate services to meet the various demands. For instance, hard-core or dedicated nature tourists probably demand less amenities (e.g., simple accommodation) from the tour but will hope to avoid crowded areas. Mainstream and casual nature tourists, on the other hand, may not need to be intensely involved with nature but, instead, they could demand more luxurious services during the tour, such as convenient transportation, clean food and comfortable accommodation. Recognizing these differences in demand, tour operators can tailor their services accordingly.

Also, different types of ecotourists will impact on nature and the local community differently. For instance,

visitations by hard-core tourists will probably enhance natural and cultural conservation, while those of mainstream or casual nature tourists can possibly create adverse effects to the environment, so that their visitations need to be carefully monitored or controlled. Hence, this classification will aid policy formulation in managing ecotourism so as to promote sustainable development.

ISSUES ASSOCIATED WITH ECOTOURISM

Many developing countries now recognize the importance of ecotourism and have conducted ecotours for a period of time. Some common issues have become a concern for policy makers and require attention. Harris and Leiper (1995) examined the issues associated with ecotourism, which can be summarized as follows.

First, as many ecotours are business-oriented, it is often found that profit motivation is placed before environmental conservation. Examples include the Australian Phillip Island Penguin Reserve and Seal Bay Conservation Park where frequent visitation has negatively affected the ecotour resource base (i.e., penguins and sea lions). Having recognized the problem of over-visitation, management authorities of both organizations have altered their priorities to ensure that preservation of the ecosystem is the primary concern. Placing environmental preservation before the short-term business objective will ensure that the resource base will be sustainable and will continue to provide ecotour services for future generations.

Second, it has been observed that larger ecotour companies tend to be more environmentally conscious than smaller ecotour companies. This can be explained by what is known as economies of scale. Smaller companies tend to lack knowledge, expertise or resources in dealing with environmental issues and, therefore, have the potential to conduct poor environmental practices. Further, when tour operators of smaller companies have numerous responsibilities, such will eventually limit their ability to carry out proper environmental practices. Larger companies, on the other hand, have the advantage of employing modern technology and management techniques which are more environmentally friendly. They are also in the position to employ environmental experts for proper ecotour management.

Third, conflict in resource utilization is common between ecotourism and the operation of other industries, such as logging or mining. When conflicts occur, the ecotourism authority and representatives from other associations often must enter into dialogue to solve the problems.

Fourth, as natural resources are usually accessible free of charge, which can lead to over-visitation and exploitation, one should consider employing economic instruments, such as user fees, to control the visitation rate so as to be within the carrying capacity of the resource. Many ecotour destinations, such as Great Barrier Reef Marine Park, now set user fees to reflect the opportunity cost of the environment. When the user fee is appropriately adjusted, it will increase the revenue to the Park as well as reduce the visitation rate and, hence, environmental damage.

Fifth, many ecotour operators take advantage of the "ecotourism" label for their advertisement when the actual tour operation may be environmentally damaging or lacks knowledge about the ecosystem. Examples includes cases where tour operators themselves pollute the environment during the trips, namely, improper waste disposal. Other tour operators may lack even simple knowledge about the ecology and could not answer even simple questions. This kind of misconduct on the part of ecotour companies can jeopardize the reputation of the ecotour industry in the long run. A solution may lie in establishing an accreditation system whereby standards and proper practices are regulated by the ecotour authority. Ecotour companies who violate these environmental regulations will lose the privilege of using the "ecotourism" label.

Last, it seems inevitable that in order to ensure success in ecotourism the government must become involved in setting the environmental code of practices and regulations. These rules need to be enforceable, and violations must be subject to penalty. The government must also be involved in overall policy formulation and planning. Development projects will also be subject to environmental impact assessments. Such government regulations will not only ensure that resources are sustainable but will also

provide a level playing field for ecotour companies.

ECONOMIC INSTRUMENTS

Natural scenery and attractions can be classified as limited nonrival goods, where visitor enjoyment of the environment will not reduce enjoyment by others. However, this nonrival characteristic is valid only if the level of visitation is less than the carrying capacity of the environment. Beyond this level, overcrowding by visitors will damage the environment and, hence, will reduce the enjoyment of others. For this reason, there is a need to control the level of environmental utilization so that the current consumption will not cause destruction to the natural heritage.

One way to reduce the number of visitors to a level which is socially optimal is via the use of economic instruments, such as user fees, limits on the level of visitation and tradable permits. A user fee or entrance fee can be adjusted (raised) to regulate the number of visitors to the level where the marginal revenue equals the marginal social costs of each visit. A higher user fee (entrance fee) will, generally, result in higher revenue (but not always, as the change in revenue depends on the price elasticity of demand) and lower the social and private cost (both total and marginal). When the user charge is set at its optimal level, it will ensure that the net social benefit of ecotourism is maximized.

In addition to a user charge or entrance fee, one may employ a multipart pricing technique (or price discriminatory practice) to further increase the revenue to ecotour industry. Multipart pricing is an attempt to charge each type of visitor a different price according to their willingness-to-pay. Visitors with higher demand for the visit, hence higher willingness-to-pay, can be charged a higher price compared with those with lower demand. This technique will increase the revenue accrued to the park and can be used for park conservation or to provide employment for local residents.

Multipart pricing is usually used in cases where a site attracts both foreign and local visitors. As foreign visitors have traveled a longer distance to visit the site, they tend to have higher willingness-to-pay and can be charged a higher entrance fee, while the local visitors are charged a lower fee. This practice does not always constitute an unfair treatment, as foreign visitors do not pay (income) taxes to support the park and they do not suffer from the opportunity cost of not using the resource for agriculture, logging or other activities as do local residents.

Besides imposing a user charge, optimum level of visitation can also be limited by imposing a limit on the number of visitation (e.g., maximum allowable number of visits per day). This can be achieved through the use of waiting lists or a first-come first-serve basis. However, this method of controlling the volume of visitation will not generate the revenue needed for environmental conservation.

Establishing a market of tradable permits is also a promising economic instrument that can be used to control the volume of resource utilization. Tradable permits are, generally, in the form of hunting permits that regulate the number of hunters and, hence, the total allowable harvest for each season. Hunters can offer a bid (willingness-to-pay) for a permit at the beginning of the hunting season, and these permits can be traded during the season. This way, the total revenue generated will be maximized as all the consumer surplus will be extracted from the hunters. The use of the tradable permit system is usually limited to hunting recreation. It is nevertheless worth exploring the possibility of using this method for managing other types of ecotourism such as sightseeing, fishing or exploring the wilderness.

ECOTOURISM IN THAILAND

Tourism Authority of Thailand (TAT)

Ecotourism has made its presence felt in Thailand. The Tourism Authority of Thailand (TAT) has adopted the concept that ecotourism is a way to sustainable development. TAT defines ecotourism as "a visit to any particular tourism area with purpose to study, enjoy, and appreciate the scenery—natural and social—as well as the life style of the local people, based on the knowledge about and responsibility for the ecological

system of the area." (TAT 1996)

According to TAT, ecotourism is a concept that entails three important factors: the promotion of public awareness in natural and environmental conservation, tourist satisfaction, and the participation of local communities, as well as income distribution. TAT policies cover eight important issues, three of which concern ecotourism: 1) Expansion of tourism sites to local areas to create income distribution to the people of all regions; 2) Conservation and renovation of cultural heritage, natural resources and environment so as to maintain the Thai identity; and 3) Support public participation in activities related to the development of tourism.

TAT work plans and directions in promoting ecotourism have also been outlined.

1. To establish a committee responsible for policy formulation. This committee will be responsible for making plans, establishing guidelines for development of ecotourism, preparing media and publicity, solving problems and organizing training programs in ecotourism for personnel of various agencies.
2. To conduct research on the implementation project for establishing policies in ecotourism in Thailand.
3. To organize activities related to ecotourism, such as The Youth Conservation of Thai Tourism Project, tours under the concept of ecotourism, and producing media and campaigns to instill awareness in ecotourism.

Northern Trekking in Thailand

Northern Thailand is an area, where it is believed, that ecotourism may have begun more than 20 years ago. The hilly, forested area of northern Thailand is inhabited mainly by hilltribes comprising of as many as 23 different ethnic groups (Bhruksasri 1989). Major tribes are Karen, Yao, Hmong, Akha, Lahu and Lisu. Although the hilltribe community has demanded special attention from the Thai government, their authentic culture has been an attraction to foreign travelers.

Each year, about 100,000 trekkers travel to the north of Thailand to visit the hilltribe villages and observe their culture and life style. Walking through the wilderness of the northern forests, elephant rides and rafting are usually part of the trekking package. These trekking tours generate about 53 million baht in income each year. This income is derived from accommodation, handicrafts, transportation (elephant riding and rafting) and miscellaneous services, such as food and drinks, opium sale, posing and marijuana sale (Dearden 1991). Although this type ecotourism has been an important foreign exchange earner, it has also damaged the environment and destroyed hilltribe culture.

While trekking may provide an alternative income to the hilltribe villages, it has also disrupted their culture in many ways. Resulting from over-visitation, many hilltribes villages have become commercialized. In some villages, permanent huts are built for the travelers, soft drinks and beer are made available, tribal dancing is performed at a price, traditional costumes are worn for commercial photographing and begging is not uncommon.

This cultural destruction has eventually become a cost to the trekking business as the trekkers are unsatisfied with the lack of authenticity due to over-visitation and commercialization. Tour companies operating trekking businesses responded to this change by searching for remote hilltribe villages. Geographically, trekking activities originated around the Kok river area and moved to Chiang Dao and Wieng Papao. When these areas became over-visited, the business moved again to Doi Inthanon, Mae Taeng, Pai, and Om Koi.

It can be surmised here that the trekking business which explores the hilltribe culture in northern Thailand is an example of ecotourism and has earned substantial income for the local people. However, income generated from this business was not used to foster or maintain the hilltribe culture. Mismanagement and over-visitation further damage the trekking business as well as the sustainability of the hilltribe culture.

CONCLUSION

Ecotourism is a concept that deserves careful consideration. While ecotourism promises to generate additional resources for environmental conservation, it can also result in further exploitation of environmental resources through over-visitation. The trekking business in northern Thailand is an example of uncontrolled ecotourism, which has led to a destruction of the hilltribe culture.

In many countries, ecotourism has been successful, namely, Australia, Kenya, Belize and Costa Rica. Learning from the experiences of these countries will ensure that ecotourism in Thailand will promote both the tourism industry and environmental conservation.

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