Chapter - Four

“Environmental Factors and Tourism in Thailand”
CHAPTER- IV

ENVIRONMENTAL FACTORS AND TOURISM IN THAILAND

Tourism in Thailand has made a place as one of the largest industry and becoming the diverse industry and most important economic, social and cultural activities of today’s world. It is an increasingly important source of income, employment and wealth for the country. It has been now accounted for a larger share of foreign exchange receipts and export earnings than any other industry in the country. It also promoted social and cultural development of the country through increased employment and poverty eradication. From the studies it has been found that tourism depends on the quality of the environment for its success, and good tourist development requires the protection and even the improvement of the environment. The most important tourism resources are the natural beauty of the island, their distinctive or exotic character, their recreation possibilities, and the cultural interest of the people. The hotels, resorts, transportation networks, recreation facilities and other tourism infrastructure can complement but never completely replace the dependence on environmental resources.

But, while tourism provides considerable economic benefits for the country, regions and communities, its rapid expansion has also had unfavorable environmental and socio-cultural impacts. For example: natural resource depletion and environmental degradation associated with tourism are often serious problems in tourism-rich places in Thailand like Chiang Rai, Phuket, Pattaya and most of the province of Northern Thailand. To reverse this trend through the management of natural resources is one of the most difficult challenges for the government at different levels of the country. This appears when most of the tourists choose to maintain their relatively high patterns of consumptions and waste generations when they reach their destinations without the appropriate means for protecting their natural resources and ecosystems, which become a serious problem for the country and region as a whole. The chapter argues that the promotion of sustainable tourism development is essential for maximizing its socio-economic and cultural benefits which minimizes the negative environmental impacts on tourism in Thailand.
Tourism is largely dependent on natural resources. The provision of fresh water for drinking, taking showers, swimming pools or the irrigation of hotel gardens seem self-evident preconditions for tourism all around the world. Beaches and coastlines, mountains, forests, lakes, oceans and the scenery provided by landscapes containing these elements are central to the attraction potential of most destinations. Similarly biodiversity is the magnet in many regions, including a wide variety of bird and fish species, as well as charismatic mammals such as moose or deer, whales, dolphins etc. in national parks in any country. (Gossling Stefan and C. Michael Hall, 2006: 1) Global environmental change (GEC) threatens these very foundations of tourism through climate change, modifications of global biogeochemical cycles, land alteration, the loss of non-renewable resources, unsustainable use renewable resources and gross reductions in biodiversity. Elements of the global environment are always changing although change is never uniform across time and space (Meyer and Turner, 1995: 304). The scale and rate of changes has increased dramatically because of human actions within which tourism is deeply embedded. (Gossling Stefan and C. Michael Hall, 2006: 1)

Areas with high-value natural resources, like oceans, lakes, waterfalls, mountains, unique flora and fauna, and great scenic beauty attract tourists and new residents (immigrants) who seek emotional and spiritual connections with nature. Because these people value nature, selected natural environments are preserved, protected, and kept from further ecological decline. Lands that could be developed can generate income by accommodating the recreational activities of visitors. Tourist income often makes it possible to preserve and restore historic buildings and monuments. Improvements in the area’s appearance through cleanup or repairs and the addition of public art such as murals, water fountains, and monuments (part of making a community ready for tourism) benefit visitors and residents alike. Tourism is generally considered a "clean" industry, one that is based on hotels, restaurants, shops and attractions, instead of factories. (Kreag, Glenn, 2001: 7-8)

It is not that environmental degradation poses a serious threat to tourism but uncontrolled tourism expansion is likely to lead environmental degradation. Tourists generate waste and pollution (air, water, solid waste, noise, and visual), natural resource attractions can be jeopardized through improper uses or overuse and this lead environment to the dreadful conditions.
Providing tourist services can alter the landscape's appearance. For instance, visual pollution may occur from billboard proliferation. As tourism develops, demand for land increases, especially for prime locations like beachfronts, special views, and mountains. Without forethought, natural landscape and open space can be lost. The destruction or loss of flora and fauna can happen when desirable plants and animals are collected for sale or the land is trampled. Tourists or the businesses that cater to them often remove plants, animals, rocks, fossils, coral, and cultural or historical artifacts from an area. Uncontrolled visitation or overuse by visitors can degrade landscapes, historic sites, and monuments. Where water is scarce, tourists can overwhelm the available supply. Travelers can also inadvertently introduce non-indigenous species, as can increases in the trade of animals and plants. A constant stream of visitors and domestic pets may disrupt wildlife by disturbing their breeding cycles and altering natural behaviors. (Kreag, Glenn, 2001: 7-8)

Above arguments clear the facts on both the sides that how tourism harm environment and how environment degradation harm tourism in any country. But tourism will always stand negative for environment it is not true. Because hampering environment means degrading its own stand in the country. So, it is necessary for both to walk together hand in hand in a friendly way. To know more about the relationship between tourism and environment, it is essential to go deal the concepts in detail.

Tourism and Environment

Tourism and the environment are inter-dependent as tourism involves and relies on natural or human resources as part of its product especially in a relatively undeveloped state (Buckley, 1999: 22). The high quality of the environment is frequently the primary attraction for tourists. The natural and built environments provide many of the attractions for tourists as well as supporting tourism by serving other functions (Hunter and Green, 1995: 11). In terms of the relationship between tourism and the physical environment, Budowski (1976) indicates that the relationship can be classified into three types: 1) conflict; 2) coexistence where tourism and environmental conservation can go side-by-side and with little interaction; and 3) symbiosis where tourism and environmental conservation can be mutually supportive and beneficial. Under symbiosis, tourists benefit
from the visitor experience and the environment receives improvements in management practice.

According to WTO (1994: 32-34) because components of the environment are inter-linked, a tourism activity which impacts on one aspect of the environment may produce and indirectly impact on another. Tourism can generate both positive and negative environmental impacts that are not restricted to destination areas, but will spread over a wider area depending on the strength of the linkages (such as economic, social, transport, environment) between the host area and its surroundings (Briassoulis, 1991). Moreover, due to the seasonal nature of tourism, environmental problems often occur only during the peak season when overloading of the infrastructure and overuse of attractions, facilities and services take place.

The relationship between tourism and the environment has been the object of scientific research for more than 30 years. In the 1950s, when tourism started to grow rapidly in the post-World War II era, it was mainly seen as an economic sector with great potential for national economies, opening up opportunities for recreation and leisure for large parts of the population in the industrialized countries. It was not until the rise of the green movement in the 1960s and 1970s that environmental impacts of tourism were realized. During the 1960s and 1970s, the evaluation of environmental impacts was usually based on aesthetic judgments and questionable scientific methods and often forwarded in rather popular assessments with the aim of being thought-provoking and reaching large parts of the population. Environmental problems were assessed by newly developed methods and solutions presented. For example, Butler (1980) presented his famous destinations lifecycle model, suggesting that any destination would inevitably face decline if social, economic or environmental conditions became less favourable. O’Reilly (1986) emphasized the concept of interrelated environment, social, economic and perceptual carrying capacities. Since then, a wide range of tools have been developed to assess and cope with environmental change, including the Level of Acceptable Change concept (LAC) and the Environmental Impact Assessment (EIA). These concepts are used frequently, for example, an EIA is a prerequisite for tourist infrastructure development in many countries. (Gossling Stefan and C. Michael Hall, 2006: 13-15)
The positive view is expressed on several levels, including an openness to acknowledge the environmental consequences of tourism that were earlier denied or disregarded by the tourist industry and its organisations, but also a more self-confident position that tourism is both sustainable and more beneficial than other industries. Scientifically this is challenged by the insight that the global environmental consequences of tourism have been neglected in past assessments and that tourism is an important contributor to land-use changes, loss of biodiversity, emission of greenhouse gases, resource depletion and so on. This insight has recently been acknowledged by the WTO, which notes that tourism and climate change need to be seen as a ‘two-way relationship’ (WTO, 2003: 9-11).

The environment is often referred to as the key component of tourism. According to Allaby (1994: 138) the environment is:

*The complete range of external conditions, physical and biological, in which an organism lives. Environment includes social, cultural and economic and political considerations, as well as the more usually understood features such as soil, climate and food supply.* (Holden, A., 2000: 23)

Similarly, Collin (1995: 83) defines the environment as:

*The environment is anything outside an organism in which the organism lives. It can be a geographical region, a certain climate condition, the pollutants or the noise which surrounds an organism. Man’s environment will include a country or region or town or house or room in which he lives; a parasite’s environment will include a type of soil at a certain altitude.* (Holden, A., 2000: 24)

From these definitions it is evident that the environment of tourism can be viewed as possessing social, cultural, economic and political dimensions, besides a physical one. It specify that the environment as the external conditions in which a organism lives, the demand for tourism can be interpreted as being a consequence of the interaction between the social, cultural and economic environments where tourists originate from. (Holden, A., 2000: 24)

**Impact of Tourism on Environment**

The impact of tourism on the environment is the result of direct, indirect and induced impacts, which are difficult to distinguish one from another (Briassoulis and Straaten,
2000: 4). However, it can be observed in the different levels of degradation of the natural environment depending on the stage of development in a destination, which can be classified as follows:

- Deterioration of the natural environment due to pollution in tourist destinations; sewage and garbage are major problems caused by tourist business entrepreneurs. Additionally, polluted air and water, dust, fumes and noise arising from traffic congestion also degrade the natural quality and beauty of a tourist destination and its surroundings (Williams, 1998: 2).

- When environmental features lose their natural balance, the result is a disturbed ecosystem such as polluted water ways, discolored beaches, stench from dumped garbage and the rapid destruction of flora and fauna;

- Building and structures; poorly designed buildings which do not comply with local building control can cause negative impacts on the picturesque scenery (Williams, 1998: 2). Such violations may include the erection or congestion of buildings and structures that are not harmonious with the delicate and attractive natural landscape and vernacular architecture; and

- Development of tourist infrastructure and facilities regardless of the environment can lead to the destruction of the natural geography and ecosystem. These problems represent a serious form of damage or undue interference with the natural order including the deterioration of traditional tourism resources and the subsequent lowered quality of water and air resources due to pollution, the loss of indigenous flora and fauna, the destruction of the natural geography, and the destruction of historical and archaeological evidence (Mathieson and Wall, 1992).

These impacts are not only on the environment, but can also have consequences in terms of negative impacts on local society at the destination (Beeton, 1998: 47). However, it is argued that tourism can help the environment in many ways, especially by contributing to the costs of conservation of resources that have little other financial value, such as unique animal species, natural areas and cultural monuments. Tourism also has potential role in providing economic opportunities for communities living adjacent to natural heritage (Goodwin, 2003). Thus, tourism may also result in actual or potential benefits to wildlife of an area as well as the creation or continued existence of a wildlife park or reserve.
In addition, the OECD study of tourism impacts indicates that tourism development has actually caused negative impacts on the environment and the local people of the countries. The study identified groups of general impacts which include: effects of pollution (air, water, littering and noise); loss of natural landscape, agricultural and pastoral lands; destruction of flora and fauna; degradation of landscape and of historic sites and monuments; effects of congestion and; effects of competition (Robert, 1983: 13-14).

Inskeep (1991: 342) suggests that to avoid negative impacts of tourism on the natural environment, three types of concerns need to be addressed including:

1) the prevention or control of environmental impacts generated by the tourism development itself;

2) the need for continuous management of the environmental resources for the benefit of tourism; and

3) the maintenance and improvement of the overall environment for the benefit of tourists and residents. Therefore developing and managing tourism in ways that are compatible with the environment and do not degrade it, is a crucial factor in achieving sustainable development.

The quality of the environment, both natural and man-made, is essential to tourism. However, tourism's relationship with the environment is complex. It involves many activities that can have adverse environmental effects. Many of these impacts are linked with the construction of general infrastructure such as roads and airports, and of tourism facilities, including resorts, hotels, restaurants, shops, golf courses and marinas. The negative impacts of tourism development can gradually destroy the environmental resources on which it depends. On the other hand, tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance.

The main environmental impacts of tourism are:

- pressure on natural resources
- pollution and waste generation
- damage to ecosystems.
**Pressure on natural resources**

In addition to pressure on the availability and prices of resources consumed by local residents – such as energy, food and basic raw materials – the main natural resources at risk from tourism development are land, freshwater and marine resources. Without careful land-use planning, for instance, rapid tourism development can intensify competition for land resources with other uses and lead to rising land prices and increased pressure to build on agricultural land. Intensive tourism development can also threaten natural landscapes, notably though deforestation, loss of wetlands and soil erosion. Tourism development in coastal areas – including hotel, airport and road construction – is a matter for increasing concern worldwide as it can lead to sand mining, beach erosion and land degradation. (Neto, F., 2002: 7)

Freshwater availability for competing agricultural, industrial, household and other uses is rapidly becoming one of the most critical natural resource issues in many countries and regions. Rapid expansion of the tourism industry, which tends to be extremely water-intensive, can exacerbate this problem by placing considerable pressure on scarce water supply in many destinations. Water scarcity can pose a serious limitation to future tourism development in many low-lying coastal areas and small islands that have limited possibility for surface water use and storage, and whose groundwater may be contaminated by saltwater intrusion. Over-consumption by many tourist facilities – notably large hotel resorts and golf courses – can limit current supplies available to farmers and local populations in water-scarce regions and thus lead to serious shortages and price rises. In addition, pollution of available freshwater sources, some of which may be associated with tourism-related activities, can exacerbate local shortages. (Neto, F., 2002: 7)

Rapid expansion of coastal and ocean tourism activities, such as snorkeling, scuba diving and sport fishing, can threaten coral reefs and other marine resources. Disturbance to marine aquatic life can also be caused by the intensive use of thrill craft, such as jet skis, frequent boat tours and boat anchors. Anchor damage is now regarded as one of the most serious threats to coral reefs in the Caribbean Sea, in view of the growing number of both small boats and large cruise ships sailing in the region. (Hall, Michael C.;: 601-18) Severe damage to coral reefs and other marine resources may, in turn, not only
discourage further tourism and threaten the future of local tourist industries, but also
damage local fisheries. (Neto, F., 2002: 7)

**Pollution and waste generation**

Besides the consumption of large amounts of natural and other local resources, the
tourism industry also generates considerable waste and pollution. Improper disposal of
liquid and solid waste generated by the tourism industry has become a particular problem
for many developing countries and regions that lack the capacity to treat these waste
materials properly. Disposal of such untreated waste has, in turn, contributed to reducing
availability of the above-mentioned resources at the local level. (Neto, F., 2002: 7)

Apart from the contamination of freshwater from pollution by untreated sewage,
tourist activities can also lead to land contamination from solid waste and the
contamination of marine waters and coastal areas from pollution generated by hotels and
marinas, as well as cruise ships. It is estimated that cruise ships in the Caribbean Sea
alone produced more than 70,000 tons of liquid and solid waste a year during the mid-
1990s. (Report of the Secretary General documents, 1995: 5) The fast growth of the
cruise sector in the region may have exacerbated this problem in recent years.
Furthermore, a particular cause of concern for coastal areas and small islands is the
illegal disposal of sewage, solid waste and cargo residues by merchant ships, which cause
marine and beach pollution. (Neto, F., 2002: 7-8)

In addition, relatively high levels of energy consumption in hotels – including
energy for air conditioning, heating and cooking – as well as fuel used by tourism-related
transportation can also contribute significantly to local air pollution in many host
countries and regions. Local air and noise pollution linked to exhaustive tourism
development or urban congestion can sometimes even discourage tourists from visiting
some destinations. (Neto, F., 2002: 7-8)

**Damage to Ecosystems**

Intensive tourism activity in natural areas can interfere with fragile vegetation and
wildlife and cause irreversible damage to ecosystems, particularly if the infrastructure in
those areas is not adequately prepared to absorb mass tourism. Uncontrolled tourism
activities can lead to the severe disruption of wildlife habitats and increased pressure on
endangered species. As it has been widely documented, it can also disrupt wildlife behaviour, such as, tourist vehicles in Africa's national parks that approach wild cats and thus distract them from hunting and breeding; tour boat operators in the Caribbean Sea that feed sharks to ensure that they remain in tourist areas; and whale-watching boat crews around the world that pursue whales and dolphins and even encourage petting, which tends to alter the animals' feeding and behaviour. (Neto, F., 2002: 7-8)

Tourism can also lead to the indiscriminate clearance of native vegetation for the development of new facilities, increased demand for fuel wood and even forest fires. Ecologically fragile areas, such as rain forests, wetlands and mangroves, are also threatened by intensive or irresponsible tourist activity. Moreover, as will be discussed below, it is increasingly recognized that, the rapid expansion of nature tourism (or 'ecotourism') may also pose a threat to ecologically fragile areas, including natural world heritage sites, if not properly managed and monitored. In many countries, coastlines are becoming overbuilt due to tourism development until the damage caused by environmental degradation – and the eventual loss of revenues arising from a collapse in tourism arrivals – becomes irreversible. As mentioned above, intensive tourism development and recreational activities in coastal areas can not only lead to beach destruction and coastal degradation, but can also threaten coral reefs and other marine ecosystems. The delicate ecosystems of most small islands, together with their increasing reliance on tourism as a main tool of socio-economic development, means that these environmental impacts can be particularly damaging since the success of the sector in these islands often depends on the quality of their natural environment. In addition, pollution of coastal waters – in particular by sewage, solid waste, sediments and untreated chemicals – often leads to the deterioration of coastal ecosystems, notably coral reefs, and thus harms their value for tourism. (Neto, F., 2002: 8-9)

The equally fragile ecosystems of mountain regions are also threatened by increasing popular tourist activities such as skiing, snowboarding and trekking. One of the most serious environmental problems in mountainous developing countries without appropriate energy supply is deforestation arising from increasing consumption of fuel wood by the tourism industry. This often results not only in the destruction of local habitats and ecosystems, but also in accelerating processes of erosion and landslides.
Other major problems arising from tourist activities in mountain regions include disruption of animal migration by road and tourist facilities, sewage pollution of rivers, excessive water withdrawals from streams to supply resorts and accumulation of solid waste on trails. (Neto, F., 2002: 9)

Thus, from the above description of tourism impacts on environment shows that tourism is closely linked with environment. It has negative impact most of the time. If not handled carefully then it can harm the environment and tourist with this effect can avoid visiting the destinations.

**Threats to Environment from Tourism**

In many mountain regions, small islands, coastal areas and other ecologically fragile places visited by tourists, there is an increasing concern that the negative impacts of tourism on the natural environment can ultimately hurt the tourism industry itself. There is now plenty of evidence of the 'life-cycle' of a tourist destination, that is, "its evolution from discovery, to development, to eventual decline, attributed to a site's overuse and the subsequent deterioration of key attractions or facilities. In other words, the negative impacts of intensive tourism activities on the environmental quality of beaches, mountains, rivers, forests and other ecosystems also compromise the viability of the tourism industry in these places.

In addition, tourism in many destinations could be particularly threatened by global environmental problems, notably the potential threat of 'global warming'. There is increasing scientific evidence that human activity has begun to change the average temperature on the Earth's surface. According to the authoritative United Nations Intergovernmental Panel on Climate Change (IPCC), this process of global warming has been caused by several factors associated with the intensification of economic activities, including the emissions of 'greenhouse gases', such as carbon dioxide produced by burning fossil fuels and forests. (The Third Assessment Report of IPCC, 2001)

According to the Third Assessment Report of IPCC, it is expected that the globally averaged surface air temperature will have warmed between 1.4 and 5.8 degrees Celsius by 2100 relative to 1990. One of the main consequences of global warming will be sea-level rise: according to IPCC, it is projected that the globally averaged sea level will have risen between 9 and almost 90 centimeters by 2100. Global warming is also
expected to increase climate variability and to provoke changes in the frequency and intensity of extreme climate events, such as tropical windstorms and associated storm surges and coastal flooding. (World Economic and Social Survey, 2001)

Significant rises in sea level could cause serious problems to tourism activities, particularly in low-lying coastal areas and small islands. According to IPCC, because of their high degree of environmental vulnerability, small Island States are likely to be among the countries most seriously affected by global warming. The likely impacts of sea-level rise and coastal flooding on small islands and in some coastal areas would include:

(a) increased coastal erosion,
(b) loss of land and property, including tourist facilities,
(c) dislocation of people,
(d) increased risk from storm surges,
(e) saltwater intrusion into scarce freshwater resources and
(f) high financial costs associated with attempts to respond and adapt to these changes.

Severe negative impacts on coastal ecosystems, such as bleaching of coral reefs and deterioration of mangroves, are also expected to threaten tourism in many destinations around the world. In fact, global warming is expected to severely disrupt tourism activities not only in coastal areas and small islands, but also in mountain regions because snow conditions in ski resorts are likely to become less reliable.

Tourism development usually starts with the construction of hotels, resorts and other places for tourists to stay. In addition there may be restaurants, night clubs, and recreation facilities such as golf courses, tennis courts, swimming pools, and marinas. These facilities require a lot of space, and land is usually scarce on an island. Land and resources used for tourism are not available for other uses; developers may even want to keep local people away from beaches, reefs and lagoon areas reserved for tourists only. Whenever possible, tourism developers prefer to build on the coast, where the hotel will front on a beach and perhaps a coral reef, yet the coast is the most fragile and vulnerable area on an island, with the greatest conflicts between uses.
The construction of these facilities can have the same kinds of impacts as any other construction projects, such as soil erosion, changes in water runoff, and damage to natural environments. If the resort is on the coast, the plans frequently call for changes in the coastline, such as the creation or improvement of a beach, the construction of an artificial island, or the dredging of a harbour or building of a dock for tour boats to use to pick up and leave off the tourists. These changes may upset normal coastal processes and be very difficult to maintain. Coastal hotel sites themselves are often vulnerable to storm damage, erosion and other problems because of their exposed location.

Tourist developments also require resources that may be scarce on an island. Water may be in short supply, yet tourist use of water is usually much greater per person than among the local population. Tourists require large quantities of high quality food; if it cannot be produced locally, it will have to be imported.

The sewage from large hotels can be a source of pollution if it is not treated and disposed of carefully. Most hotel projects include waste water treatment plants, but these can be difficult to maintain in the islands and need to be monitored regularly. Tourist facilities also produce large amounts of solid waste which can add to the existing solid waste disposal problems on many islands.

**Infrastructure requirements**

Any major tourist development requires a good airport where large jets can bring tourists from overseas countries. Visits by tour ships may require improved docking facilities. Roads may have to be built to resort sites, or improved for tour buses. Water and electricity supplies may have to be increased. All these kinds of infrastructure require investments which must be added on to the direct cost of a tourism project.

Building roads, airports and docks can have major environmental impacts which are beyond the scope of this unit. Their overall effects, however, may be positive as well as negative. Such facilities benefit local people as well as tourists, reducing the isolation of remote areas and increasing the convenience of travel within the country and overseas. Tourism development can thus support useful expenditures that could not be justified for the local people alone.
Damage from tourist use

Tourists are often unaware of how fragile some island environments are. They may trample vegetation and thus cause erosion, or disturb birds and wildlife. They may leave their rubbish behind, littering the environment. They are apt to break corals as they walk or swim over the reef. Even anchoring in a fragile reef area can result in significant damage to corals. Tourists love to collect corals, shells and other pretty objects as souvenirs, but too much collecting can damage a reef or other site. Fishing is sport for a tourist, but it may take away resources needed as food in nearby villages.

Where a few tourists may do little damage, thousands of them can be a disaster. Think of the difference between one tourist breaking off a piece of coral, and hundreds of tourists each taking a piece of coral; a reef could quickly be stripped of its corals and shells. Areas subject to heavy tourist pressure should be protected from damaging activities. Laws may be needed to protect wildlife and to control collecting.

The increasing demand for curios such as stuffed turtles, turtle shell jewelry, mounted butterflies, and traditional objects made with rare bird feathers or animal skins can threaten rare species with extinction. The manufacture and sale of such objects should be prohibited or strictly controlled. Coral, shells for handicrafts or collectors, and local trees used for carving can also be wiped out locally or reduced to low levels when too much is used to supply the tourist trade.

The basic problem with tourism development is that tourism facilities and the tourists themselves have impacts on the environment. If care is not taken, the tourism development itself can gradually destroy the environmental resources on which it depends. This problem can be particularly serious on tropical islands where the environment is fragile and easily degraded, and where the small scale of the island means that even moderate tourism development can have a proportionately large impact.

Environmental Impacts of Tourism in Thailand

Thailand is blessed with a magnificent and beautiful coastline, both on the mainland and the thousands of islands, tall but climbable mountains, lakes, lush rain forests, romantic canals and an exotic culture. Swaying palm trees, a tropical climate, balmy night air, the timelessness of the rice paddies, affordable prices and an extremely friendly and hospitable people all act together to attract people of all age groups from around the
world. Not surprisingly then, Thailand, like other developing countries, is keen to promote a tourist industry that brings them investment, foreign currency and economic growth. In 2002, 10.8 million overseas visitors arrived in Thailand, spending 320 billion baht and contributing about 6 percent to Thailand's GDP. (Ross, W., 2003: 1-2)

However, the consequence of rapid and unchecked growth has been wide scale environmental degradation, and in this regard, the tourism industry is in danger of losing its major asset. The effect is particularly noticeable at the waters edge. The loss of coral reefs, sea grass beds and mangrove forests resulted partly from the inappropriate development of tourist facilities, as well as from mainland pollution and dynamite bombing. The loss of fragile island ecosystems: Samui Island, Tao Island, and parts of Phuket Island have resulted from rampant over-development. Famous and historical beach resorts including Pattaya and Hua Hin have basically lost their beaches either to pollution or to ocean currents altered by extensive coastal developments. Tourism in Thailand is big business and the industry enjoys a healthy growth rate, in spite of recent terrorist attacks in the region and the impact of SARS earlier this year (2003). Domestic travel in 2002 was worth more than 300 billion baht, 37.5 percent more than in the previous year. The government's 2002 tourism budget was 3.3 billion baht for marketing and 3.5 billion for development including spending on the upkeep of tourist destinations and services. (Nondhanada Intarakomalyasut, 2002) The Tourism Authority of Thailand (TAT) is the government body overseeing tourist development and tourism marketing. As such, it collects basic data on overseas arrivals to Thailand. They report that 10.8 million overseas visitors came to Thailand in 2002 as compared to 10.1 million in 2001, representing an increase of 7.3 percent. The average length of stay was eight days. In 2002, 58 percent of arrivals came from East Asia and a further 25 percent from Europe (Table 4.1). Nearly 90 percent of arrivals came for the purpose of 'holiday', and nearly 8 percent for 'businesses.' Men made up 60 percent of the total number, and 70 percent of visitors were in the age group 25 to 54 years. In 2002, 46 percent of tourists came on a group tour (up 16 percent over the previous year), the remainder traveled as individuals (less than 1 percent increase). TAT also reports that around 51 percent of visitors had already visited Thailand in the past (13 percent increase over the previous year). (Tourism Authority of Thailand (TAT), accessed 2003) The kind of information collected suggests that the TAT is mostly interested in the number of arrivals and their
demographic data, and indeed, the main tasks of TAT seems to be to promote tourism in the country and to increase tourist numbers. (Ross, W., 2003: 2)

Table 4.1: Tourist Arrivals to Thailand in 2002

<table>
<thead>
<tr>
<th>Tourist Arrivals (Persons)</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia</td>
<td>6,236,246</td>
</tr>
<tr>
<td>Europe</td>
<td>2,650,992</td>
</tr>
<tr>
<td>The Americas</td>
<td>730,402</td>
</tr>
<tr>
<td>South Asia</td>
<td>410,206</td>
</tr>
<tr>
<td>Oceania</td>
<td>427,109</td>
</tr>
<tr>
<td>Middle East</td>
<td>245,822</td>
</tr>
<tr>
<td>Africa</td>
<td>98,290</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,799,067</strong></td>
</tr>
</tbody>
</table>


However, with a growing population, increasing industrialization, globalization and greater tourist mobility, Thailand is losing its precious heritage. Past governments recognized the importance of protecting the country’s native flora and fauna and set up a network of national parks, marine parks and nature reserves to address the situation. As forests and wetlands continue to be lost outside the parks, these protected areas are now becoming tourist sites in themselves. In effect, national parks are victims of their own success, and the latest victim could be Koh Chang (Elephant Island) in the Gulf of Thailand. (Ross, W., 2003: 2)

The rapid growth in demand for tourism has resulted in the raising of ethical concerns over how the cultural and physical environments of destinations are used for tourism. The reliance of tourism upon the natural and cultural resources of the environment means that its development induces change which can either be positive or negative. Tourism remained largely immune from environmental criticism, the image of tourism being predominantly one of an environmentally friendly activity, the smokeless industry. This perception was enhanced by the imagery of tourism, embracing virtues of beauty and virginity, as portrayed in landscapes of exotic beaches and mountain areas framed in sunshine. (Holden, Andrew, 2000: 64-65)
Tourism and Environment Ethics

The field of environment ethics to tourism is an area that is currently underdeveloped, but is likely to become increasingly important as tourism continues to spread to encompass new environments. Given that tourism is dependent upon the use of physical and cultural resources, a central ethical question associated with its development is who will be the benefactors? There are lots of stakeholders who have different interests in tourism this raises the potential for a clash of interests over tourism’s development between stakeholders, for instance between private developers and non-governmental organisations, or between governments and local communities. Such conflict will not be equal, reflecting existing power structures and political hegemony and sometimes involving the denial of democratic rights to certain groups. (Holden, Andrew, 2000: 58)

Another type of tourism, which raises ethical questions about the rights of women and children in particular, is sex tourism. There are some destinations, such as Pattaya in Thailand, have become known as places to go to have sex with prostitutes. Such tourism raises ethical questions over the power relationships that exist within the indigenous society and also over the power relationships that exist between local people and foreign tourists. For instance, in Thailand many girls from the hill villages in the north of the country are sold by their fathers into the sex trade to help repay debts to money lenders. Perhaps even more ethically questionable, sometimes sex tourism may be developed as part of government policy. (Holden, Andrew, 2000: 59)

Given that tourism affects fauna and flora, the ethical question of the use of the environment for tourism extends beyond the power relationships that exist between different groups in society, to include our relationship with the wider non-human environment of animals and other plant life. In the case of animals and their habitats, tourism has both the potential to protect habitats from other forms of development and human activities, such as poaching and also the potential to destroy them. At the beginning of the twenty first century it would seem that ethical concerns over the interrelationship between humans and the environment are beginning to manifest themselves in the tourism sector. The extent to which these ethical concerns will influence the processes of development decision making is at moment largely unknown and will only become evident with the passage of time. However, the development of
ethical codes of conduct by internationally recognized organisations, such as the World
Tourism Organisation, does suggest that ethics will have a more prominent role in
tourism decision making in the twenty-first century than they had in the last century.
(Holden, Andrew, 2000: 60-62)

Tourism, Biodiversity and Global Environmental Change in Thailand

The web of life is a complex system of living organisms involving all the plants, animals
and microorganisms. The sum of all these interdependent living things is biological
diversity, now called biodiversity. Human beings are just one part of this web, but we
play a dominating role. Our ability to adapt to many different environments and to
modify these environments to suit our perceived or real needs has resulted in much
destruction of biological resources. (Ross, W., 2003: 4)

As a consequence of the growing losses, the United Nations Environment
Program (UNEP) established the Convention on Biological Diversity (CBD) in 1992. The
CBD broadens the definition of biodiversity to include ‘ecological complexes’,
ecosystem structure, functions and processes:

_Biological diversity means the variability among living organisms from all
sources including, inter alia, terrestrial, marine and other aquatic ecosystems and
the ecological complexes of which they are part; this includes diversity within
species, between species and of ecosystems._

An important component of CBD is its call for the sustainable use of biological
resources, and an equally important aspect is that it gives weight to the sustainability
argument of conserving biodiversity for the well being of all people alive today and for
future generations. At the time of its signing, the convention represented a milestone in
the global efforts towards conservation and sustainable use of biological diversity.
However, although Thailand joined other countries in signing the Convention, along with
the USA, the Vatican, Andorra and a small number of other states it has not yet been
ratified. Nevertheless, the country is among those that have carried out many activities in
support of the conservation and sustained use of biological resources. (Ross, W., 2003: 4)

It is believed that the reason Thailand has not ratified the agreement is due to
uncertainties in intellectual property rights. Intellectual property and ownership rights of
biological materials have a significant impact on the development, implementation and
investment in conservation and utilization of biological diversity. Biological material now called “bioproperty” has led to the development of intellectual property (patents, plant variety protection system, copyrights and trade secrets) with the addition of technologies such as biotechnology. Thailand believes that it is crucial that it should have the policy on the access and benefit sharing of biological resources before signing the convention. (Ross, W., 2003: 5)

Flora

Thailand’s indigenous vegetation is associated with two basic types of forest: monsoon forest and rain forest. Today, about a quarter of the country is forested, and about one quarter of that is monsoon forest marked by deciduous forest that sheds its leaves in the dry season to conserve water. About one half of the remaining forest is evergreen rain forest mostly found in the southern region, although these two forest types can overlap. The remaining quarter consists of fresh water swamp forests in the lower catchment areas and pine forests in the mountainous north. The country has a huge variety of fruit trees, as a visit to any market will testify, a wide variety of bamboo, tropical hardwoods such as teak (largely cleared now), and over 27,000 flowering species. While Thailand has had policies to conserve and to use its biological resources in a sustainable way since early 1900s, these policies have not been able to protect vast areas of forest from destruction or species from near, if not total, extinction. In 1950, 75 percent if the country was forested, today less than 25 percent of the country is covered in forest, mostly in the mountainous, less accessible, regions of the north, west and south. Between 1961 and 1985, Thailand lost nearly half its forest, and it is estimated that 165,000 people illegally reside within the country’s high -order protected areas. (Weaver, 2001: 45) In response to the huge loss of forest and habitat, all logging was banned in Thailand in 1989, and efforts are now underway to increase forest cover to 40 percent by 2050. The logging ban has had the unfortunate effect of increasing the (legal and illegal) logging and import of wood from Burma and Laos. (Ross, W., 2003: 5)

The Ministry of Science, Technology and Environment was the agency overseeing the management of Thailand’s biodiversity. Several laws and regulations were established to address the growing loss including the Forestry Act of B.E. 2484 (A.D. 1941), amended in 2532 (A.D. 1989). More recently, in 1999, two laws recognizing the importance of
 protects biodiversity, the *Plant Variety Protection Act* and the *Protection and Promotion of Intellectual Thai Traditional Medicine Act* were enacted. And on 12 January 2000, the *Prime Minister's Office's regulation on the Conservation and Utilization of Biodiversity* was signed to serve as a link between related laws to effectively conserve and ensure the sustainable use of the country's biological resources. (Ross, W., 2003: 5)

**Fauna**

The indigenous fauna of the northern regions are mostly of Indochinese origin, while those of the south are typical of Malaysia, Sumatra, Java and Borneo. At around 1000 recordings, approximately 10 percent of the world's species of birds have been spotted in Thailand. The coastal areas and inland waterways of the southern region are important habitats, but threatened by land use changes such as in the growth of shrimp farms, rubber plantations and tourist resorts. Around 300 indigenous mammals including tigers, leopards, elephants, Asiatic black bears, Malayan sun bears, Indian bison, sambar deer, barking deer, gibbons, macaques, tapir as well as dolphins and dugongs are now restricted to zoos, national parks and wildlife sanctuaries. (Ross, W., 2003: 5)

The IUCN has listed 40 of the 300 as endangered. A number of extinctions have occurred, notably the kouprey (wild cattle), Schomburgk's deer, the Javan rhino as well as a number of smaller species. In response, Thailand has now signed the UN Convention on International Trade in Endangered Species (CITES). Currently, about 200 to 300 wild tigers are thought to exist in a small number of national parks, but the trade in tiger parts to overseas Chinese pharmacies, particularly in Taiwan, is lucrative and a small number of poachers hunt the animals. Park rangers, who receive a very small wage of around US$2 a day, or sometimes only food and lodging but no wage, can sometimes be encouraged to 'look the other way' for a small 'gift'. In addition, 107 species of amphibians, including four sea-turtle species, and 313 species of reptiles including the cobra, king cobra (six meters in length), vipers and the reticulated python (up to 15 meters in length), have been documented. It has been estimated that at least 6000 species of insects and tens of thousands of marine species exist. Once the most fertile marine waters in the world, the upper part of the Gulf of Thailand is now virtually dead due to over fishing and pollution from the mainland. The trend can be reversed only if
immediate and concerted action is taken to limit fishing effort and stop pollution entering the Gulf, however this is not happening to the extent necessary to save the situation. (Ross, W., 2003: 6)

Tourism’s three Main Impact areas in Thailand
Negative impacts from tourism occur when the level of visitor use is greater than the environment's ability to cope with this use within the acceptable limits of change. Uncontrolled conventional tourism poses potential threats to many natural areas around the world. It can put enormous pressure on an area and lead to impacts such as soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires. It often puts a strain on water resources, and it can force local populations to compete for the use of critical resources.

(1) Depletion of Natural Resources
Tourism development can put pressure on natural resources when it increases consumption in areas where resources are already scarce.

Water resources
Water, and especially fresh water, is one of the most critical natural resources. The tourism industry generally overuses water resources for hotels, swimming pools, golf courses and personal use of water by tourists. This can result in water shortages and degradation of water supplies, as well as generating a greater volume of waste water.

Golf course maintenance can also deplete fresh water resources. In recent years golf tourism has increased in popularity and the number of golf courses has grown rapidly. Golf courses require an enormous amount of water every day and, as with other causes of excessive extraction of water, this can result in water scarcity. If the water comes from wells, over pumping can cause saline intrusion into groundwater. Golf resorts are more and more often situated in or near protected areas or areas where resources are limited, exacerbating their impacts. Ex: An average golf course in a tropical country such as Thailand needs 1500kg of chemical fertilizers, pesticides and
herbicides per year and uses as much water as 60,000 rural villagers. (World Tourism Organisation (WTO) and United Nations Environment Program (UNEP), 1992)

**Local resources**

Tourism can create great pressure on local resources like energy, food, and other raw materials that may already be in short supply. Greater extraction and transport of these resources exacerbates the physical impacts associated with their exploitation. Because of the seasonal character of the industry, many destinations have ten times more inhabitants in the high season as in the low season. A high demand is placed upon these resources to meet the high expectations tourists often have (proper heating, hot water, etc.).

**Land degradation**

Important land resources include minerals, fossil fuels, fertile soil, forests, wetland and wildlife. Increased construction of tourism and recreational facilities has increased the pressure on these resources and on scenic landscapes. Direct impact on natural resources, both renewable and nonrenewable, in the provision of tourist facilities can be caused by the use of land for accommodation and other infrastructure provision, and the use of building materials. Forests often suffer negative impacts of tourism in the form of deforestation caused by fuel wood collection and land clearing. (www.asiarooms.com)

**(2) Pollution**

Tourism can cause the same forms of pollution as any other industry: air emissions, noise, solid waste and littering, releases of sewage, oil and chemicals, even architectural/visual pollution.

**Air pollution and noise**

Transport by air, road, and rail is continuously increasing in response to the rising number reported that the number of international air passengers worldwide rose from 88 million in 1972 to 344 million in 1994. One consequence of this increase in air transport is that tourism now accounts for more than 60 percent of air travel and is therefore responsible for an important share of air emissions. One study estimated that a single transatlantic return flight emits almost half the CO2 emissions produced by all other
sources (lighting, heating, car use, etc.) consumed by an average person yearly. (World Tourism Organisation (WTO) and United Nations Environment Program (UNEP), 1992)

Transport emissions and emissions from energy production and use are linked to acid rain, global warming and photochemical pollution. Air pollution from tourist transportation has impacts on the global level, especially from carbon dioxide (CO2) emissions related to transportation energy use. And it can contribute to severe local air pollution. Some of these impacts are quite specific to tourist activities. For example, especially in very hot or cold countries, tour buses often leave their motors running for hours while the tourists go out for an excursion because they want to return to a comfortably air-conditioned bus. (www.asiarooms.com)

Noise pollution from airplanes, cars, and buses, as well as recreational vehicles such as snowmobiles and jet skis, is an ever-growing problem of modern life. In addition to causing annoyance, stress, and even hearing loss for it humans, it causes distress to wildlife, especially in sensitive areas. For instance, noise generated by snowmobiles can cause animals to alter their natural activity patterns.

**Solid waste and littering**

In areas with high concentrations of tourist activities and appealing natural attractions, waste disposal is a serious problem and improper disposal can be a major despoiler of the natural environment - rivers, scenic areas, and roadsides. For example, cruise ships in the area are estimated to produce more than 70,000 tons of waste each year. Today some cruise lines are actively working to reduce waste-related impacts. Solid waste and littering can degrade the physical appearance of the water and shoreline and cause the death of marine animals. (World Tourism Organisation (WTO) and United Nations Environment Program (UNEP), 1992)

In mountain areas, trekking tourists generate a great deal of waste. Tourists on expedition leave behind their garbage, oxygen cylinders and even camping equipment. Such practices degrade the environment with all the detritus typical of the developed world, in remote areas that have few garbage collection or disposal facilities.
Sewage

Construction of hotels, recreation and other facilities often leads to increased sewage pollution. Wastewater has polluted seas and lakes surrounding tourist attractions, damaging the flora and fauna. Sewage runoff causes serious damage to coral reefs because it stimulates the growth of algae, which cover the filter-feeding corals, hindering their ability to survive. Changes in salinity and situation can have wide-ranging impacts on coastal environments. And sewage pollution can threaten the health of humans and animals. (www.asiarooms.com)

Aesthetic Pollution

Often tourism fails to integrate its structures with the natural features and indigenous architectural of the destination. Large, dominating resorts of disparate design can look out of place in any natural environment and may clash with the indigenous structural design. A lack of land-use planning and building regulations in many destinations has facilitated sprawling developments along coastlines, valleys and scenic routes. The sprawl includes tourism facilities themselves and supporting infrastructure such as roads, employee housing, parking, service areas, and waste disposal.

(3) Physical Impacts

Attractive landscape sites, such as sandy beaches, lakes, riversides, and mountain tops and slopes, are often transitional zones, characterized by species-rich ecosystems. Typical physical impacts include the degradation of such ecosystems.

An ecosystem is a geographic area including all the living organisms (people, plants, animals, and microorganisms), their physical surroundings (such as soil, water, and air), and the natural cycles that sustain them. The ecosystems most threatened with degradation are ecologically fragile areas such as alpine regions, rain forests, wetlands, mangroves, coral reefs and sea grass beds. The threats to and pressures on these ecosystems are often severe because such places are very attractive to both tourists and developers. (www.asiarooms.com)

Physical impacts are caused not only by tourism-related land clearing and construction, but by continuing tourist activities and long-term changes in local economies and ecologies.
Physical impacts of tourism development

- **Construction activities and infrastructure development**
  The development of tourism facilities such as accommodation, water supplies, restaurants and recreation facilities can involve sand mining, beach and sand dune erosion, soil erosion and extensive paving. In addition, road and airport construction can lead to land degradation and loss of wildlife habitats and deterioration of scenery. (www.asiarooms.com)

- **Deforestation and intensified or sustainable use of land**
  Construction of ski resort accommodation and facilities frequently requires clearing forested land. Coastal wetlands are often drained and filled due to lack of more suitable sites for construction of tourism facilities and infrastructure. These activities can cause severe disturbance and erosion of the local ecosystem, even destruction in the long term. (www.asiarooms.com)

- **Marina Development**
  Development of marinas and breakwaters can cause changes in currents and coastlines. Furthermore, extraction of building materials such as sand affects coral reefs, mangroves, and hinterland forests, leading to erosion and destruction of habitats. Overbuilding and extensive paving of shorelines can result in destruction of habitats and disruption of land-sea connections (such as sea-turtle nesting spots). Coral reefs are especially fragile marine ecosystems and are suffering worldwide from reef-based tourism developments. Evidence suggests a variety of impacts to coral result from shoreline development, increased sediments in the water, trampling by tourists and divers, ship groundings, pollution from sewage, over fishing, and fishing with poisons and explosives that destroy coral habitat. (www.asiarooms.com)

Physical impacts from tourist activities

- **Trampling** Tourists using the same trail over and over again trample the vegetation and soil, eventually causing damage that can lead to loss of biodiversity and other impacts. Such damage can be even more extensive when visitors frequently stray off established trails.
• **Anchoring and other marine activities** In marine areas (around coastal waters, reefs, beach and shoreline, offshore waters, uplands and lagoons) many tourist activities occur in or around fragile ecosystems. Anchoring, snorkeling, sport fishing and scuba diving, yachting, and cruising are some of the activities that can cause direct degradation of marine ecosystems such as coral reefs, and subsequent impacts on coastal protection and fisheries. (www.asiarooms.com)

• **Alteration of ecosystems by tourist activities** Habitat can be degraded by tourism leisure activities. For example, wildlife viewing can bring about stress for the animals and alter their natural behavior when tourists come too close. Safaris and wildlife watching activities have a degrading effect on habitat as they often are accompanied by the noise and commotion created by tourists as they chase wild animals in their trucks and aircraft. This puts high pressure on animal habits and behaviors and tends to bring about behavioral changes. In some cases, as in Kenya, it has led to animals becoming so disturbed that at times they neglect their young or fail to mate. (www.asiarooms.com)

**Tourism and National Parks in Thailand**

National parks serve a variety of functions. They protect watersheds and soils, provide habitat protection for local fauna and flora, they provide sites for scientific research and education, and they can help maintain cultural values. The World Tourism Organisation (WTO) adds that they also play a role in promoting tourism in developing countries, predominantly domestic, but increasingly international. (World Tourism Organisation (WTO) and United Nations Environment Program (UNEP), 1992) Thailand’s first national park was set up at Khao Yai in 1961. Today, around 13 percent of the country's land and sea area is protected in 79 national and marine parks (numbering 18), 89 wildlife sanctuaries and 35 forest reserves. Poaching, illegal logging, encroachment and shifting cultivation are some of the problems the Royal Forestry Department (RFD) faces in protecting these areas. In more recent times, tourism has begun to threaten the natural environment, particularly of marine parks. One palpable example is at Phi Phi Island in the Andaman Sea where the film ‘The Beach’ starring Leonardo Di Caprio was made. The film makers were given permission to ‘resculpture’ the beach (removing sand dunes and replacing vegetation) of this protected marine park to suit the film’s script. Tens of
thousands of tourists now visit Phi Phi Island each year, snorkeling, scuba diving and cruising around this magnificent group of islands in all kinds of speed boats, ferries and jet skis, with no controls. Other examples include Samui Island and Samet Island where sewerage and pollutants are killing coral reefs. (Ross, W., 2003: 6)

Khao Yai National Park, covering an area of 2,168 km and ranging in elevation from 246 masl to 1,351 masl, is probably the best known of Thailand’s national parks. In 2002, it had 4.8 million visitors, 700,000 of whom were foreigners. Khao Yai is the site for several conservation projects. Such projects are often run by NGOs together with the Royal Forest Department (RFD) and local people. The Khao Yai Conservation Project for example, was launched in 2000 as a joint collaboration project between WildAid and the RFD. The project aims to improve the capacity of rangers to preserve Khao Yai’s biodiversity through training and long term support for a biological inventory, wild life protection, patrolling, law enforcement and community outreach. Local people are increasingly being given an ‘ownership’ role of enforcing laws while at the same time being allowed to benefit from the use of non-timber forest products. (Ross, W., 2003: 6)

There are a range of socio-economic benefits of tourism in national parks including the generation of local employment, both directly in the tourism sector and indirectly in supporting areas; it stimulates domestic growth in hotels, restaurants, handicrafts etc; it brings foreign exchange; it provides an alternative source of income to local communities; it can result in improved infrastructure, roads, communications etc in more remote regions; and it can improve cross-cultural understanding. (World Tourism Organisation (WTO) and United Nations Environment Program (UNEP), 1992)

However, the TAT’s policy of increasing visitor numbers to national parks is fraught with danger. Without an effective management plan, the more successful the policy, the more likely the carrying capacity of visitors will be exceeded leading to degradation of the forests. In addition, the current government’s policy of "asset capitalization" also aims to promote tourism in protected forests, and while this may prove to be a commercial success it is sure to lead to the destruction of the natural resources. Opponents of the government’s proposal claim that it is tantamount to "selling our resources, especially national parks and wildlife sanctuaries, for tourism purposes", 205
and point to previous negative experiences such as the over-construction of roads and buildings at Khao Yai National Park. (Ross, W., 2003: 7)

The government’s scheme to convert assets into capital allows people to use land, inventions and other rights as collateral for loans, and a pilot phase includes registering vendors at several national parks so they can use their vending rights to seek loans from state banks, but Vanchai Tantiwittayapitak, a director of the environmental group Seub Nakhasathien Foundation, said the pilot project was only a first step toward full exploitation of national parks and wildlife sanctuaries for tourism. (Wasant Techawongtham and Ranjana Wangvipula, 2003: 22) As usual, what discussions there are revolve around economic benefits, with little talk taking place of how the nation’s natural resources can be protected in light of rapidly increasing visitor numbers in the national parks. WTO notes that if decision-makers are led to believe that parks exist primarily for economic gain, and these expectations are not met, they may begin to look for more profitable uses for the land (World Tourism Organisation (WTO) and United Nations Environment Program (UNEP), 1992).

WTO also warns that governments must not be seduced into inappropriate developments such as large hotels, highways and golf courses – just the kind of developments that were already under construction at Khao Yai before being successfully stopped by conservationists.

Tourism Contribution to Environmental Conservation
The tourism industry can contribute to conservation through:

Financial Contributions

- Direct financial contributions
  Tourism can contribute directly to the conservation of sensitive areas and habitat. Revenue from park-entrance fees and similar sources can be allocated specifically to pay for the protection and management of environmentally sensitive areas. Special fees for park operations or conservation activities can be collected from tourists or tour operators. (www.asiarooms.com)

- Contribution to the Government revenues
  Some governments collect money in more far-reaching and indirect ways that are not linked to specific parks or conservation areas. User fees, income taxes, taxes
on sales or rental of recreation equipment, and license fees for activities such as hunting and fishing can provide governments with the funds needed to manage natural resources. Such funds can be used for overall conservation programs and activities, such as park ranger salaries and park maintenance.

(www.asiarooms.com)

Environmental management and planning

Sound environmental management of tourism facilities and especially hotels can increase the benefits to natural areas. But this requires careful planning for controlled development, based on analysis of the environmental resources of the area. Planning helps to make choices between conflicting uses, or to find ways to make them compatible. By planning early for tourism development, damaging and expensive mistakes can be prevented, avoiding the gradual deterioration of environmental assets significant to tourism.

Cleaner production techniques can be important tools for planning and operating tourism facilities in a way that minimizes their environmental impacts. For example, green building (using energy-efficient and non-polluting construction materials, sewage systems and energy sources) is an increasingly important way for the tourism industry to decrease its impact on the environment. And because waste treatment and disposal are often major, long-term environmental problems in the tourism industry, pollution prevention and waste minimization techniques are especially important for the tourism industry. (www.asiarooms.com)

Raising Environmental awareness

Tourism has the potential to increase public appreciation of the environment and to spread awareness of environmental problems when it brings people into closer contact with nature and the environment. This confrontation may heighten awareness of the value of nature and lead to environmentally conscious behavior and activities to preserve the environment. If it is to be sustainable in the long run, tourism must incorporate the principles and practices of sustainable consumption. Sustainable consumption includes building consumer demand for products that have been made using cleaner production techniques, and for services - including tourism services - that are provided in a way that
minimizes environmental impacts. The tourism industry can play a key role in providing environmental information and raising awareness among tourists of the environmental consequences of their actions. Tourists and tourism-related businesses consume an enormous quantity of goods and services; moving them toward using those that are produced and provided in an environmentally sustainable way, from cradle to grave, could have an enormous positive impact on the planet's environment. (www.asiarooms.com)

Protection and preservation
Tourism can significantly contribute to environmental protection, conservation and restoration of biological diversity and sustainable use of natural resources. Because of their attractiveness, pristine sites and natural areas are identified as valuable and the need to keep the attraction alive can lead to creation of national parks and wildlife parks. Tourism has had a positive effect on wildlife preservation and protection efforts, notably in Africa but also in South America, Asia, Australia, and the South Pacific. Numerous animal and plant species have already become extinct or may become extinct soon. Many countries have therefore established wildlife reserves and enacted strict laws protecting the animals that draw nature-loving tourists. As a result of these measures, several endangered species have begun to thrive again. (www.asiarooms.com)

Regulatory measures
Regulatory measures help offset negative impacts; for instance, controls on the number of tourist activities and movement of visitors within protected areas can limit impacts on the ecosystem and help maintain the integrity and vitality of the site. Such limits can also reduce the negative impacts on resources. Limits should be established after an in-depth analysis of the maximum sustainable visitor capacity. (www.asiarooms.com)

Global Environmental Change in Thailand
The key elements of environmental change connected with tourism development in Thailand and rest part of the world, primarily focus on aspects of land and landscape in the built and natural environment. These physical impacts tend to be the most visually apparent, because the development of tourism, like any other development activity, will
change the physical location to some extent, wherever it exists. These physical impacts also tend to be the most emotive, as tourism can both protect and destroy the environment of a destination area. (Godfrey, Kerry and Jackie Clarke, 2000: 28)

(1) The Built Environment

Tourism has many places provided both the means and justification for the conservation of our built or man-made heritage. Tourist interesting different aspect of culture has helped:

- to stimulate funds for and the practice of conservation and rehabilitation of historic buildings, sites and monuments all over the world;
- re-establish and present individual buildings and places of important events to reflect their former significance;
- encourage the regeneration, redevelopment and landscaping of town and city districts which no longer serve their original functions, having become derelict or rundown;
- the creation of development control policies and legislation, designed to provide a more active approach to maintaining environment quality when new tourism development takes place. (Godfrey, Kerry and Jackie Clarke, 2000: 28-29)

Unfortunately these have generally followed significant damage caused by unplanned development of the industry and the significant influx of visitors. Although tourism has served to enhance our appreciation of nature and heritage, it has also led to increased pressure on these resources. The lack of planning or a strategic approach to the development of tourism has caused:

- problems of architectural pollution, where new buildings are somewhat at odds with the original character of an area;
- the creation of strip or ribbon development and urban sprawl particularly on the approach or access to destination areas;
- the straining of local service infrastructure, causing breakdowns in the supply of fresh water, sewerage systems and electricity;
- traffic congestion and parking problems leading to local aggravation, noise and environmental damage. (Godfrey, Kerry and Jackie Clarke, 2000: 29)
All of these issues need to be considered in the planning of tourism in heritage destinations. Without greater care and attention paid to these longer-term impacts, irreplaceable elements of cultural heritage may be damaged beyond reasonable repair. (Godfrey, Kerry and Jackie Clarke, 2000: 28-29)

(2) The Natural Environment

The key feature of the latter part of the twentieth century has been the move towards an urban culture. This shift in living patterns, coupled with better mobility and greater leisure time has placed a renewed interest on the natural environment outside the urban form, both nationally and internationally, as a place for recreation and leisure, increased demand and the consequent flow of visitor traffic to the rural hinterland, mountains and coast in many countries has increased pressure on these resources. (Godfrey, Kerry and Jackie Clarke, 2000: 30)

Some of the more positive physical impacts of tourism in natural settings have been:

- the creation of park areas and renewed attention on the importance of wildlife and biological preservation;
- the sun, sand and sea factors of tourism have highlighted concerns over ozone depletion and global warming and what this could mean for the place as well as the visitor;
- the depletion and contamination of water resources at sea and inland has also helped draw further attention to the need for better environmental stewardship and planning for all types of development activity, not just tourism. (Godfrey, Kerry and Jackie Clarke, 2000: 30)

However, while problems with tourism’s impact has endangered greater concern for the environment, it has also created a new demand for these natural places, which might not otherwise exist, particularly for those areas most readily accessible. To meet growing demand, new road are built or access improved, hotels are developed, with even more areas opened up to absorb the growing numbers. The affect has been:

- the loss of vegetation for car-parks and other visitor facilities;
- trampling of plants and reduction in local biodiversity;
• the compaction and erosion of the soil;
• the general spread of garbage and litter. (Godfrey, Kerry and Jackie Clarke, 2000: 31)

Water quality has also been affected by:
• the reduction in water tables for consumption;
• pollution from increased run-off;
• the dumping of untreated sewage in lakes, rivers and the sea.

Finally wildlife has also been affected by:
• disruption of predator-prey relationships and breeding patterns;
• loss of natural habitat to development;
• direct loss of wildlife populations through trophy and souvenir hunting and the trade in exotic species. (Godfrey, Kerry and Jackie Clarke, 2000: 32)

However, one positive outcome of these negative physical impacts has been the growth of interest in more environmentally sensitive and responsible forms of travel and tourist activity. As with any kind of development, tourism will create change which may be inappropriate, obstructive and cause problems if it does not reflect the sensitivities of the site or destination area. Careful planning and management of the industry are fundamental to mitigating tourism’s environmental concerns. (Godfrey, Kerry and Jackie Clarke, 2000: 32)

**Environment and Sustainable Development in Thailand**

Without environmental protection, development can not sustain. Environmental security is a part of sustainable development without which development can not be a holistic thing. The environment supports our life system. It includes everything that we rely on during our lifetime such as air, water, metals, soil, rock and other living organisms. It is important to remember that the state of our environment is influenced by our behaviour and that we have the opportunity to either nurture or mistreat it. The idea of sustainable development came at a time when the exploitation of the earth was at its peak. In spite of the fact that natural resources (both renewable and non renewable) are limited, human beings continued to exploit it to the maximum extent. (Swain, Gyanaranjan, 2006: 375-376)
The objectives of the United Nations Conference on Environment and Development (UNCED) which held in June 1992 at Rio de Janeiro in Brazil, were to build upon the hopes and achievements of the Brundtland Report, in order to respond to pressing global environmental problems and to agree major treaties on biodiversity, climate change and forest management. Perhaps for the first time, a major environmental conference adopted a more nature centered approach towards environmental problems. Despite its environmental focus, the biggest arguments at the Earth Summit concerned finance, consumption rates and population growth. The developed nations were calling for environmental sustainability, but the less industrialized developing nations were demanding a chance to allow their economies to catch up with the developed world. (Swain, Gyanaranjan, 2006: 376)

**The Rio Earth Summit: Outcomes**

The Earth Summit produced a number of outcomes including:

- The conventional on Biological Diversity
- The framework Convention on Climate Change
- Principles of Forest Management
- The Rio Declaration on Environment and Development and

These outcomes covered every aspect of sustainable development. Legislation was passed and many agreements where made, committing nations (Swain, Gyanaranjan, 2006: 376) including Thailand, to become more sustainable. These agreements and guidelines are still adhered today and are influencing many political and business decisions. (Swain, Gyanaranjan, 2006: 376)

**The Convention on Biological Diversity**

The biological diversity of the world – the variability among living organisms—is valuable for ecological, genetic, social, economic, scientific, educational, cultural, recreational and aesthetic reasons. Biodiversity plays an important role in evolution and for maintaining the condition of life support systems within the biosphere. (Swain, Gyanaranjan, 2006: 376- 377)
The Convention states that participating nations have rights over their biological resources, allowing responsible and sustainable exploitation, but ensuring that biological diversity is conserved. The Convention commits participating nations to a number of guiding principles:

- Identify the components of biodiversity that are useful in conservation. These components must then be used sustainably and activities that may harm the diversity must be monitored.
- Develop nation strategies for the conservation and sustainable use of biodiversity.
- Restore degraded ecosystems and promote the recovery of threatened species.
- Establish laws to protect and conserve threatened species and protected areas. Around these areas, environmentally sound development must be used.
- Integrate conservation and sustainable use of biodiversity into planning and policy making.

Developed countries were given a responsibility to pass on their environmentally sound technologies for the purpose of conserving and sustainably using biodiversity. The developed nations must also provide financial aid to developing nations to help them implement the terms of the Convention. (Swain, Gyanaranjan, 2006: 377)

**Climate Change**

At the Rio Earth Summit in 1992, with 26 Articles, consisting of objectives, principles, commitments and recommendations, the Framework Convention on Climate Change (FCCC) became a blueprint for precautionary action against the threat of global climate change. The convention highlighted the fact that human activities, like the burning of fossil fuels are releasing large quantities of gases into the Earth’s atmosphere. These gases, including carbon dioxide are enhancing the natural greenhouse effect. There are many concerns that the increase of such greenhouse gases in the atmosphere is causing “global warming”, which is threatening humans and natural ecosystems. (Swain, Gyanaranjan, 2006: 378)

The aim of the convention was to provide an international framework within which future actions could be taken to reduce the threat of global warming. The Convention indicates that participating nations have the right to exploit their own resources but they have a
responsibility to ensure that their activities do not cause any environmental harm to other nations. (Swain, Gyanaranjan, 2006: 378)

The Framework Convention o Climate Change commits participating nations to a number of actions, stating that they must:

- Provide information on quantities of greenhouse gases emitted.
- Promote sound management, preserving greenhouse sinks such as plants and forests.
- Plan for the impacts of climate change on coastal zones, water resources and agriculture.

The ultimate goal of the Convention is to stabilize greenhouse gases in the atmosphere at a level that will not pose undue risk to the global climate system. Since, most of the world’s greenhouse emissions come from the developed nations, the Convention challenges the developed nations to take the lead in combating climate change and its negative effects. It therefore recognized that developed nations will need to offer technological and financial assistance to the developing nations to encourage their transition towards a more sustainable form of economic development. (Swain, Gyanaranjan, 2006: 378)

**Forest management**

The Principles of Forest Management stated that forests, with their complex ecology, are essential to economic development and the maintenance of all forms of life. Forests provide wood, food and medicine and contain a biological diversity. They also act as reservoirs for carbon dioxide, a greenhouse gas released into the atmosphere by human processes, which may be contributing towards global warming. As well as the scientific benefits of forests, they also provide a home to wildlife and fulfill our cultural and spiritual needs. (Swain, Gyanaranjan, 2006: 379)

The Principles of Forest Management assert the right of nations to profit from their own forest resources, but recommend that this should occur within a framework of forest protection, management and conservation. The Principles of Forest Management include a number of points:
• All nations should take part in "the greening of the world" through planting and conserving forests.
• Forests should be managed in order to meet the social, economic, ecological, cultural and spiritual needs of present and future generations.
• Pollutants that harm forests should be controlled.
• Unique examples of forest should be protected, for example ancient forests and forests with cultural, historical, spiritual and religious importance.

The principles are not legally binding but provide recommendations on sustainable practice. (Swain, Gyanaranjan, 2006: 379)

**The Rio Declaration on Environment and Development**

The 1992 Rio Declaration on Environment and Development defines the rights of the people to be involved in the development of their economies and the responsibilities of human beings to safeguard the common environment. The declaration builds upon the basic ideas concerning the attitudes of individuals and nations towards the environment and development. It also states that long term economic progress is only ensured if it is linked with the protection of the environment. If this is to be achieved, then nations must establish a new global partnership involving governments, their people and the key sectors of society. (Swain, Gyanaranjan, 2006: 380)

There are number of principles to the Rio Declaration.

• People are entitled to a healthy and productive life in harmony with nature.
• Development today must not threaten the needs of present and future generations
• Nations have the right to exploit their own resources, but without causing environmental damage beyond their borders.
• Eradicating poverty and reducing disparities in living standards in different parts of the world are essential if we are to achieve sustainable development whilst meeting the needs of the majority of the people.
• The polluter should, in principle, bear the cost of pollution.
• Sustainable development requires better scientific understanding of the problems. Nations should share knowledge and technologies to achieve the goal of sustainability. (Swain, Gyanaranjan, 2006: 380)
Agenda 21

Agenda 21, established at the 1992 United Nations Conference on Environment and Development, or “Earth Summit”, in Rio de Janeiro, Brazil, is the blueprint for sustainability in the 21st century. It addresses the development of societies and economies by focusing on the conservation and preservation of our environments and natural resources. The Convention, Principles and Declarations of the Earth Summit, provide guidelines to deal with the problems of poverty, hunger, resource consumption and the deterioration of ecosystems. Agenda 21 provides a format for this to happen, detailing an action plan development and environmental protection. (Swain, Gyanaranjan, 2006: 381)

Agenda 21:

- Is the blueprint for sustainability in the 21st century.
- Provides options for combating the deterioration of land, air and water, whilst conserving habitats and their diversity.
- Deals with poverty, over consumption, health and education.
- Encourages the reduction of environmentally and socially detrimental processes, but with a framework, which allows economic success.

Agenda 21 asks governments to integrate Sustainable Development into their national strategies and highlights the importance of involving Non-Governmental Organisations (NGOs) and the public in the process. (Swain, Gyanaranjan, 2006: 381-382)

Programme of Action for Tourism Resources

Tourism has contributed much to the development and will continue to be very important for their future growth. However, if not properly planned and managed, tourism could significantly degrade the environment on which it so dependent. The fragility and interdependence of coastal zones and the unspoilt areas on which ecotourism depends calls for careful management. The diversity of fragility of their environments is reflected in the diversity and fragility of their cultures. The protection of the former is an important condition for the protection of the latter. (Chandra, P. 2003: 370)

Capital investment in tourism particularly for the necessary infrastructure is costly. There is usually great competition for land resources among tourism, agriculture and other land uses. Large increases in tourism and the overdevelopment of tourism in particular areas or in whole islands could be environmentally and culturally disruptive and detrimental to
other valuable sectors, such as agriculture. So, therefore, the development of tourism should be carefully planned, particularly in relation to compatible land uses, water management, coastal zone management and the development of parks and protected areas. Ecotourism, linking areas of high ecological value to low impact tourism, may present important and environmentally sustainable opportunities for tourism development in most of the countries. (Chandra, P. 2003: 370)

A. National Action, Policies and Measures

- Ensure that tourism development and environmental management are mutually supportive.
- Adopt integrated planning and policies to ensure sustainable tourism development, with particular attention to land-use planning and coastal zone management, the proper management and protection of eco-tourism attractions and carrying capacity of areas for tourism.
- Identify and develop facilities to meet specific niche markets, particularly in eco-tourism, nature and cultural tourism. (Chandra, P. 2003: 370-371)

B. Regional Actions

- Ensure that tourism and the environment are mutually supportive in cooperation schemes at the regional level including, where appropriate, through harmonizing standards and regulations.
- Establish or strengthen regional mechanisms for the exchange of information on the development of a safe and sustainable tourism sector, using, as appropriate, the capacities of regional tourism organisations. (Chandra, P. 2003: 371)

C. International Action

- Promote the recognition by the international community of both the value of tourism and of the resources on which it depends and of the resulting need for international support to encourage its sustainable development.
- Facilitate efforts, at the national and regional levels, to assess the overall impact of the economic, social and ecological aspects of tourism, plan sustainable tourism and to develop eco and cultural tourism. (Chandra, P. 2003: 372-373)
Developing Ecotourism activities in Thailand

Many regional managers and planners are beginning to seek the way to establish the regional management system which can realize environment conservation, tourism development, and local community development at all once. The good example of the regional management system is "Ecotourism". Ecotourism is compounded of many interrelated processes which influence the potential and success of ecotourism within a protected area and links between natural areas, the local people and tourism. (Ross & Wall. 1999: 673-682) In the process of development of ecotourism, local perceptions will be an important factor influencing how its development proceeds. (Campbell, L. M., 1999: 534-553) Furthermore, if planning and decision-making do not involve local populations, then ecotourism will not succeed, and may even be detrimental to local communities. (Ziffer, K., 1989) Therefore, the local perception is important key to consider the possibility of ecotourism success. Additionally, to date, although many studies have been performed about areas which are developing as an ecotourism spot, just a few have assessed how the sustainable ecotourism is realized in the place where the ecotourism is introduced in the future. (Okuyama, J.; Boonhai, K.; Boonmee, P.; Mananusap, S.; Charuchinda, M. and Arai, N., 2005: 104)

Ecotourism fits in with the idea of sustainable tourism and the TAT encourages local authorities to develop this form of tourism as a means of maintaining the social, cultural and natural environment of the community. It also aims to increase the awareness and understanding of local cultures and local environments through the participation of local people. The expectation is that by focusing on local participation, the management of ecotourism ventures will be in the best interests of local people, providing them with an alternative source of income, and that these sources will be sustainable. Travel to areas of natural attraction that may or may not be unique is also a form of ecotourism. It can include special ecosystems sites and sites of cultural interest. (Ross, W., 2003: 8)

Ecotourism is currently gaining a lot of momentum in the Thai tourism scenario. It is constantly gaining in popularity especially in the recent years as the entire world is stressing on the preservation of the natural environment. The concept of eco-tourism in Thailand is yet to be properly defined. Thailand has abundant natural resources and so it has become the favorite destination for most eco-tourists and adventure seekers alike.
The Tourism Authority of Thailand along with the private sector has taken various steps to promote eco tourism in Thailand. In the last ten years activities like whitewater rafting, mountain biking, scuba diving, camping, trekking, rock climbing and bird watching have become increasingly popular in many areas. These are becoming all the more famous as most travelers are paying more attention to those places that are off the beaten track. Such activities are prevalent in all parts of Thailand especially in the mountainous regions of the South, North and West. But the most popular ones are scuba diving, trekking, mountain biking, and bird watching. (www.asiarooms.com)

Ecotourism is often defined as an activity-oriented or nature-based tourism and this seems to be an appropriate definition in Thailand because it usually refers to activities such as trekking, canoeing, elephant riding, rock climbing and scuba diving. Ecotourism encompasses a learning component and often includes an element of cultural exchange and understanding of other people. In Thailand, ecotourists can visit and even stay overnight at elephant camps or in the homes of hill-tribe people. Through this kind of education and understanding, ecotourism can generate an interest in the protection and conservation of natural environments and local cultures. (Ross, W., 2003: 8)

In general, it seems that ecotourism is small-scale and village oriented, and it thus provides local people with jobs and it can provide the necessary finances to maintain sites and promote environmental awareness. The participation of local communities is thus an essential component of every aspect of the management of ecotourism. A number of criteria that can be used to assess potential sites for ecotourism suitability have been suggested: opportunity for wildlife sightings especially of rare or new species; flora and fauna richness and diversity; ecosystem uniqueness; landscape or seascape uniqueness; marine resources and environment; and cultural and historical uniqueness. However, these criteria raise a number of questions: for example how to protect the ‘rare or new species’ from an increased number of people; how important is, and how do you measure ‘uniqueness’. (Ross, W., 2003: 8)

It is clear that ecotourism differs strongly from mass tourism in many ways, and in fact they can really be seen as two extremes of the tourism market In general, Thais have strong business skills and are very talented at seeking out attractive business opportunities. They are independent-minded, like to work for themselves and are willing
to take business risks. They are flexible and mobile; they can adapt to new situations and will move to where work can be found. Such characteristics have resulted in a very strong small to medium sized business sector – just the sector that will be involved in small-scale, locally-oriented ecotourism businesses. In addition, Thais are renowned for their friendliness, and their generous and hospitable nature – again, assets in the tourism industry. An example of these talents can be seen in what is offered to comparatively wealthy Japanese and South Korean golfers. These visitors can enjoy 5-star games of golf while staying at 5-star resort hotels at much lower costs than they could in their own country. And as a bonus, golfers are increasingly combining their golfing holiday with an ‘executive’ medical checkup or operation at one of Thailand’s well-priced and world-class private hospitals. It’s seen as a win-win situation, but the environment is not considered:

- the tourist receives a medical checkup and treatment for an ailment, and the money saved on the medical treatment basically gives the visitor a free golfing holiday;
- Thailand gains foreign reserves and job opportunities. Some jobs, such as golf caddies and hotel staff are quite low skilled, while others such as in the hospitals are very highly skilled, and many skills are required in the construction industry. The ripple effect of economic development spreads throughout the economy. (Ross, W., 2003: 9)

This is an example of the market finding a niche and developing it into a profitable industry, and the Thais do this very well. Thailand has hundreds of golf courses, many of a luxury standard. Mangrove and other forests have been removed to provide golfers with ocean views and access to beaches, and rivers and canals are polluted by the fertilizers and pesticides (including widespread use of DDT to kill malarial mosquitoes) that are used to keep the greens green. Weaver (2001) classifies ecotourism as soft and hard. In Thailand, he notes two models. The ‘southern’ soft ecotourism model includes Khao Yai National Park near Bangkok and Had Nai Yang National Park near Phuket where visitors can drive on well-made roads and stay in three star resorts. This model generates markets for local marine and terrestrial protected areas. The ‘northern’ model, a mix of his hard
and soft classifications, is centered on Chiang Mai and involves trekking, climbing, rafting and visiting tribal villages. (Ross, W., 2003: 9)

**Ecotourism Benefits**

Birding is a popular form of "ecotourism", an activity that may ultimately help governments improve their management of natural resources. Ideally, ecotourists visit sites such as Doi Inthanon National Park to observe wildlife and spend money in the area. As a result, governments and locals have economic incentives to maintain these areas in a natural condition to ensure continued visits by ecotourists. Ecotourism is therefore promoted as a tool for biodiversity conservation and rural development. To achieve these twin goals, however, careful management and planning is required. Before promoting ecotourism activities, park managers should assess and mitigate the potential impacts from ecotourism. (www.asiarooms.com)

**Low Budgets**

Today, 13 percent of the land base of Thailand is environmentally protected. However, efficient management of the protected areas is constrained by low budgets. Park entrance fees have the potential to contribute directly to management expenses, but are currently channelled into the Thai government's general revenues. Doi Inthanon now has a two-tiered fee system, where foreigners pay a higher amount (CA$1.25 compared to $0.25) per person. To increase revenues from ecotourism, some governments may be tempted to create additional parks. However, this approach could backfire if popular sites receive more funding for conservation purposes than less popular but more ecologically important sites. Another strategy is to request donations from park visitors. More than 80 percent of the tourists we surveyed said they would be willing to contribute to conservation efforts at Doi Inthanon -- one respondent said she would have made a donation "if only she knew where to give." However, other tourists were skeptical that their donations would be used efficiently and expressed concerns about the potential for corruption. (www.asiarooms.com)

**Social Impacts**

Besides its economic and environmental impacts, ecotourism can have social effects. At Doi Inthanon, more than 4,000 people, including Thais, Karen, and Hmong, inhabit some
600 villages located in the park. Hill tribe villagers earn a living by growing rice and cash crops, such as ornamental flowers and strawberries, which are often sold in nearby cities. About 80 percent of villagers also collect plants and fuel wood for personal use or to sell. Villagers raise additional revenue by selling garden produce and handicrafts to tourists. If hill tribes can benefit economically from ecotourism, they may support habitat-protection initiatives and depend less on unsustainable uses of park resources. (www.asiarooms.com)

Currently, around one-third of all tourists stop at the hill tribe villages, where their contact with residents is mostly restricted to the souvenir trade. The exceptions are trekkers whose goal is to experience village life and interact with the locals. For hill tribe villages, the impacts of tourism include increased commercialization, altered food habits, and the substitution of traditional dress for Western clothing such as t-shirts. More than 60 percent of the trekkers we surveyed felt that their contact with village residents had negative economic and social impacts. (www.asiarooms.com)

In summary, ecotourism can be seen as being dependant on an intact social and natural environment, and as a form of tourism that encourages the study and preservation of cultural and natural environments. As such, ecotourism fits in well with the idea of sustainable tourism. There follows a look at the activities ecotourists undertake in Thailand and some of the problems associated with ecotourism. (Ross, W., 2003: 10)

Ecotourism problems
Thailand has made some efforts over the last 30 years to preserve its lush flora and fauna with mixed success. Though visitors come from all over the world to enjoy the country’s huge national parks, but with that illegal encroachment continues. While the theories and philosophies behind ecotourism may be sound, as it is practiced in Thailand (and elsewhere) there are a number of problems associated with this form of tourism. Such as, lack of coordination between related organisations, and degradation, pollution and disorder at the attraction. Local people at Lam Nam Kok suggested that it is important for all related organisations to act in a coordinated manner in assessing the site and it’s potential as a tourist development site and in improving and maintaining the environment of the site’s attractions. (Ross, W., 2003: 12)

Thailand’s northern provinces of Chiang Mai and Chiang Rai have been on the tourist map for several decades. Cooler temperatures and traditional hill tribe cultures as
well as forested mountains, lakes and rivers have attracted tourists keen to experience the region’s natural beauty. More recently, ecotourism has become popular in the northern province of Mae Hong Son also, and is closely linked with trekking and visits to the local hill tribes including the Paduang (Karen) longnecked women. As usual, the government sees tourism in the area as an alternative and additional source of income for local people. (Ross, W., 2003: 13)

However, the tourist development in these provinces has not been without its problems:

- tour organizers and guides often have little understanding of the environmental impacts of their activities;
- tourist safety is put at risk by trekking tours that operate with ad hoc itineraries, and health issues are not always explained such as the prevalence of malaria and dengue fever especially in the rainy season;
- tourist numbers often exceed the carrying capacity of the site, and tourists usually lack knowledge of the resources and understanding on how to protect the environment;
- cut throat price cutting resulting from competition can reduce the quality of the accommodation, transport and food and leave the tourist with the feeling of having been ‘ripped off’;
- marihuana and opium consumption is part of the traditional life style of some hill tribes people, and tour operators may operate illegal tours to these sites and encourage tourists to take drugs. (Ross, W., 2003: 13)

Finally, the idea of ecotourism also encompasses ‘cultural exchange’. Generally that implies a two-way swap of ideas with knowledge and understanding passing in both directions. But while the visited culture may be more or less authentic and may actively impart some knowledge of their ways to the visitors, they are not receiving the same in return. The visitors are tourists, travelers usually on a two to four week holiday, sometimes longer, but for sure they will only stay a few days with their hosts. They are in holiday-mode, relaxed, care-free, spending money, pleasure-seeking and so on. This is what the visited experience from their visitors, but it gives quite a false impression of the hard working and diligent German, the frustrated US social worker, the drought worried
Australian farmer, or the stressed out student. This so-called exchange is one of the myths of ecotourism and is probably quite damaging to the psyche of the visited that see rich, relaxed, strong, healthy, funny, generous visitors. (Ross, W., 2003: 13)

As the body promoting tourism and tourism standards in Thailand, the TAT is in a position to provide the necessary integration and training in tourism and the environment. The TAT has already established local tourist information offices in many provinces and districts, and these could be used as training centers for guides and other people involved in the tourism industry. Training should include courses on the local environment and culture, encompassing local indigenous knowledge. It should be aimed at protecting these and promoting understanding between all stakeholders. In addition, TAT could be proactive in raising standards by overseeing a system of certification for guides and others in the industry. (Ross, W., 2003: 13)

Harassment of Wildlife
Ecotourism has the potential to cause harmful environmental impacts. One issue is the harassment of wildlife. For example, some birders attract birds by whistling or playing a tape-recorded song, which brings them out into the open to confront the "intruder". When used too often, however, this strategy may cause birds' undue stress. Another issue is trampling. Birders often venture off the trail in pursuit of birds, damaging the underlying vegetation and soil in the process. To reduce this problem, park managers have constructed a raised boardwalk around a heavily-used bog at the summit of Doi Inthanon. Litter is also a concern. Most of the birders we surveyed were conscientious about keeping the park clean. But Phil Round, an ornithologist and conservationist in Thailand, says that even when litter is placed in garbage bins, it may end up being thrown into the woods and burned. Similarly, air pollution can be a problem on busy weekends when up to 5,000 vehicles travel to the summit each day. Fortunately, some tourists use public transport, especially trekkers and birders. (www.asiarooms.com)

So, from the above discussion on ecotourism, it is clear that some see ecotourism as being able to provide a measure of environmental protection and as an alternative source of income for people in remote and disadvantaged regions of the country. However, others see ecotourism as another market opportunity that is ripe for exploitation, and it must be said that in Thailand, it seems that the market is selling
activity-based and nature-oriented holiday experiences as ecotourism, with little emphasis on the environmental protection aspect. Where ecotourism might encompass the learning and understanding about other, maybe somewhat exotic cultures, this turns out to be more an exploitation of minority cultures which must then confront the challenge of maintaining their culture in the face of strong outside influences. Without doubt, Thailand is rich in natural beauty, and as a tropical paradise it has much to offer the overseas tourist. Couple this with an exotic culture, spicy food and a tolerant, fun-loving, smiling population whose generosity knows no bounds and whose willingness to provide everything the tourist may conceivably want and you have a tourism market with mass appeal. And this is part of the problem: to borrow Schumacher’s famous title, small is beautiful and there can be no sustainability where the scale of the success degrades the assets. (Ross, W., 2003: 13)

Tourism in Thailand has a history of exploitation of its natural beauty, its resources and its people. The beaches of Pattaya, Hua Hin and Samui Island are polluted and over-developed, similarly endangered are Phuket Island, Krabi and Turtle Island (Koh Tao), and the protected parks of Khao Yai, Phi Phi Island and Elephant Island are threatened by commercial developments. While governments accept the importance of tourism to the country’s economy, local people are concerned about losing their local environment and lifestyle, and see that in the long term, the success of the tourism industry, both domestic and foreign, depends on a healthy environment and ecosystems. As a result of efforts on the part of the civil society pushing governments, a number of successes can be acknowledged:

- Lobbying by environmental groups has resulted in the abandonment of the golf course and resort under construction in Khao Yai National Park;
- Government and private initiatives have resulted in fishermen in the Similan and Surin islands ceasing their practice of dynamite fishing on the coral reef;
- Local communities are being educated in the value of their forests and the need to protect them. As an alternative to the earlier destructive encroachment and poaching habits, NGOs are working with foresters to show villagers how they can gain long term benefits by harvesting non-timber forest products, and by providing guiding and other tourist services.
• At Thaleh Noi Wildlife Preserve, local fishermen are earning extra income by taking tourists on bird-watching excursions and are thus less dependent on diminishing fish stocks. (Ross, W., 2003: 14)

While conservationists want to protect the nation’s biodiversity by locking it up in national parks, hill tribe communities, who have been living in the forest for hundreds of years, are being forcibly resettled. However, it was not these people who cleared one-half of Thailand’s forested area in the second part of the twentieth century causing immense loss of habitat and bringing many indigenous flora and fauna species to the brink of extinction. Many people now question why these communities must be removed from the forest, especially when their communities have sometimes been protecting these forests and their inhabitants for hundreds of years. While some claim that ecotourism can act as a kind of watchdog and thus protector of the environment, the reality is that currently it is not fulfilling this role. Ecotourism has become another of the tourism industry’s niche markets. On the positive side it provides jobs and income to remote villagers but like the industry in general, ecotourism businesses strive to increase tourist numbers and their profits. They are thus in danger of destroying the cultural and natural environments upon which they depend. For ecotourism to meet its promise, amongst other things there is a need for:

• TAT to review its charter and adopt policies that will ensure environmental sustainability (and thus economic sustainability) and protection for the country’s biodiversity and its unique ecosystems;
• Tour organizers with strong commitment to sustainable development, environmental conservation, cultural integrity plus honesty and ethical business practices;
• Tour guides trained in local ecology and cultural history, as well as in the environmental and social impacts of their activities;
• Cultural do’s and don’ts advice for tourists, plus some understanding of the specific environments (social and ecological) and their fragility;
• Best practice management plans that set standards and consider the carrying capacity of the particular environments (social and ecological); and
• Strong enforcement of regulations and management plans. (Ross, W., 2003: 15)
The Southeast Asian region is home to a significant proportion of the world's rare and endemic plants and animals, and as the number of tourists and travel businesses drawn to the region increases, concern grows for the sustainability of the natural environment and the local communities, biologically, culturally, and economically. Much work needs to be done on the role that ecotourism can play in biodiversity and cultural conservation. (Ross, W., 2003: 15)

**Findings**

Environment and sustainable tourism are the two important concepts, which should be given more emphasis while explaining tourism as an industry. For Thailand too, environment has an important stand. It has been observed that, tourism is successful only when environment keep supporting it. Once, environment is spoiled tourism growth will also slow down. The concept of sustainability is generally one in which a new development does not damage natural, social, economic or cultural well-being now or in the future. But according to some findings it can be said that all these definitions are fixed till books. To apply all this practically is not that easy task. Because after providing so many measures to protect environment, it was found that environment has been dislocated and many laws were violated too. The tourists who come to the islands have been attracted by their image of the island environment: sun and sea, white sandy beaches and waving palm trees, lush vegetation and friendly natives. The reality is never quite the same as the tourist image. People do not come several thousand kilometers to see the same dirt, pollution, industry and degraded environments that they have at home.

One area where tourism interest coincides with the long-term interest of a country is in the conservation of nature and traditional culture. Tourists are particularly attracted by unusual vegetation, birds and wildlife, by coral reefs and lagoons, and by distinctive cultures, customs and life styles. Very little has been done to develop these resources for better tourism, and ways need to be found to make them available without putting them at risk or degrading them.

Overall, tourism tends to be a mixed blessing in its benefits and impacts on the island environment. If it is allowed to grow unplanned, it can have serious social and environmental impacts while providing little real economic benefit. If developed with care, it can bring many advantages to small island communities with few other resources.
While summing up it can be said that Thailand is rich in natural beauty and it has much to offer the tourists. It has willingness to provide everything the tourists want like: exotic culture, smiling population, spicy food etc. But Thailand has a history of being exploited in the name of tourism. Its natural beauty, its resources and its people everything was exploited time to time. The relationship between tourism and environment faces many challenges. Economic development and the social conditions of postmodern societies are a fertile breeding ground for tourism demand. With the development process, urbanisation, commercial developments most of the beaches of Thailand are now polluted and are over-developed and are threatened. Government has accepted the importance of tourism in the country because it enhances country's economy, lifestyle of the local people that is why there is a concern about losing their environment, economy and lifestyle. Therefore, the success of tourism industry depends heavily on a healthy environment and ecosystems.

Unlike most development projects that only involve a specific site or area, tourism frequently depends to some extent on an entire country or island. It is therefore in the interest of the tourist industry to see that the overall planning of the country's development includes the requirements of tourism. As more governments begin environmental planning and make physical plans (including town plans, master plans and coastal zone plans), it is essential that these plans include the sites of particular scenic or recreational potential. The coastlines, vistas, swimming beaches, waterfalls, mountains and lagoons that tourists visit and photograph are capital assets just like hotels, but they are generally not owned by the tourism interests that benefit from them. Only careful comprehensive planning, and often the understanding and support of the traditional owners, can protect these resources from degradation and destruction. Planning helps in making choices between conflicting uses, or in finding ways to make them compatible. It should aim to locate unsightly or polluting activities, like industrial areas, fuel storage depots, rubbish dumps, etc., where they will not destroy the beauty of a town or coastline or conflict with tourist sites. In many island towns, there are already too many cases where urban pollution is making tourist beaches unsightly or unsafe. Planning early for tourism development can help to avoid damaging and expensive errors and also to prevent the gradual erosion of environmental values significant to tourism.
Improvements that help tourism, like better transportation, tree planting, restoration of historic sites, urban beautification and cleanliness, also improve the environment for the local population. Tourism development can help to stimulate general community improvement.

The development of protected areas such as national parks and reserves can be one way to protect a country's heritage and to make it available for local education and tourism. The investment in facilities such as trails, signs, picnic shelters and visitors' centers is usually repaid through tourists who come in larger numbers and stay longer because there are more things to see and do.

The relationship between tourism and environment in future thus, lies as much within the holistic philosophy of society and environmental attitudes as it does with a reductionist approach of finding technical solutions to environmental problems caused by tourism. (Holden, Andrew: 2000: 207) The primary goal of Thai tourism is to conserve the land in a natural state, while providing opportunities for education and recreation. Compared with other types of tourism, ecotourism has the most potential to meet these goals. It is clear from the research that ecotourists are distinct from conventional tourists and have different -- and often more beneficial -- environmental, social, and economic impacts on protected areas.

Many adverse environmental effects are the consequences of human actions, such as ozone depletion, global warming, pollution of rivers and acid rain etc. so it is necessary to be aware of the problems (Holden, Andrew: 2000: 207). If these problems are not checked than it will be the symbol of the crisis of human beings. What is going to happen in future no body knows but people’s participation in saving environment at any cost must be foremost for them. However, for the majority in the next twenty years, tourism is probably going to be increasingly viewed as an essential component of having a better quality of life.