

VALUE OF BIODIVERSITY ON ECOTOURISM: A CASE STUDY ON BAN THUNG SOONG COMMUNITY FOREST IN KRABI

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BACKGROUND INFORMATION

Thailand is located in the proper site of South East Asia where the people have less natural disasters for centuries. In addition, the country is rich in the natural tourism resources (more than 320 units of natural parks, wildlife sanctuary, non hunting areas, nature parks; 14 botanical garden and few hundred sites of tropical gardens) and cultural heritages (more than 1000 historical and cultural sites) which differed remarkably from region to region. It is possible to point out that natural attraction, historical attraction, ethnic attraction, cultural attraction, and vacationing attraction are the major tourist attraction categories in Thailand. This gives Thailand the position of the most attractive country for tourism destination. However, the competition among countries in the region is generally relatively high and this require more integrations among institutions responsible for tourism management and the stability of political systems. That bring uncertainly condition to the country.

Table1 showed how the number of tourists increased with time during the last four decades. In addition, the average length of stay increased accordingly. This indicates that Thailand has reached one of the most stronghold tourist destination. Vietnam, China, India, Japan, Korea, Malaysia and Hong Kong are the strong competitors in tourism industry. Problems in 3 southernmost provinces (Pattani, Narathiwat, and Yala), tsunami (natural disaster), and long time political disorder have some impacts on tourism development. In the year 2000, Thailand ranked the third country in Asia with 8.54 % market share after China and Malaysia. In the year 2004, the market share changed to 8.01 % with the fourth position after China, Malaysia, and Hong Kong (caused by the opening of Disney Land). However, it is expected that the number of tourist is 13.8 million in the year 2006.

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Table 1 Number of foreign tourists, arrivals and their average length of stay

Year	Number of arrivals	Average length of stay (Days)
1960	61,340	3.00
1965	225,025	4.80
1970	628,671	4.80
1975	1,180,075	5.00
1980	1,858,801	4.90
1985	2,438,270	5.58
1990	5,298,860	7.06
1995	5,760,533	6.94
2000	10,000,000	NA

ECOTOURISM

Ecotourism is the nature based tourism which will help in the promotion of the conservation and sustainable use of biodiversity. The program will help in using scientific and technical knowledge of biodiversity in developing tourism strategies and products associate with nature. It also helps in seeking add value to biodiversity in the protected areas or in community forest for ecotourism. Ecotourism will provide benefit to local people economically through community based ecotourism. It also serves as a valuable tool for financing the protection of ecologically sensitive areas.

World Custom Organization (WCO) in cooperation with Convention of International Trade in Endangered Species (CITES) recognized the linkage of tourism and the escalating theft and smuggling in flora and fauna. WCO officials also pointed out that custom authorities as well as the travel and tourism industry need to be fully educated on how much damage the illicit bio-trade can do to the societies, cultures, and the environment.

International Year of Ecotourism 2002 was one of the success activities. The program was coordinated by UNEP (United Nations Environment Program) and WTO (World Tourism Organization) and highlighted the development potential of ecotourism as well as the disturbing environmental trends of increasing tourism., represent 2-4 % of global tourism (15-20% quoted by Ceballos-Lascurain, 2000). It also generates greater awareness among public authorities, private sector, civil society, and consumers regarding ecotourism's capacity to the natural and cultural heritage in natural and rural areas, and the improvement of standard of living in those

areas. Ecotourism helps in developing the disseminate methods and techniques for the planning, management, regulation, and monitoring of ecotourism. It also promotes the exchange of information and experiences.

Quebec Declaration on Ecotourism was drafted in May 2002 when over 3000 participants from 132 countries were participated. The declaration recognized that ecotourism contributed actively to the conservation of natural and cultural heritage. It includes local and indigenous communities in the planning, development, and operation and contributing to their well being. The declaration is also recognized that ecotourism has provided a leadership role in introducing sustainability practices to the tourism sector. It helps in developing the local and municipal capacity to implement growth management tools (zoning). It also works actively with indigenous leadership and local communities to ensure that indigenous cultures and communities are depicted accurately, and with respect.

KRABI, THE EMERALD OF ANDAMAN

Krabi is a small province (4,708.542 sq km) of 370,429 people. Eighty percent of the population is farmers (oil palm, rubber, mixed fruit orchards, coffee, etc). The name of Krabi was originated from Malay word of Kalorbi (Lumpee in local dialect) though most people believed that the name was originated from the folklore indicating the founding of two swords which were presented to the governor while the new city was under construction. The swords were kept in the cave of Kao Kanabnam close to the mouth of Krabi River. The two swords and Panombenja Mountain (the highest peak in the province) became the province emblem.

In the year 2003, Krabi was ranked as the most preferred destination by the Thai tourists as caused by the natural beauty and less polluted area in the Andaman Sea. The number of tourists increased to 2 million with the annual remarkable increasing rate of 300,000 tourists.

Krabi authorities found the ultimate goal to develop ecotourism and control the industry development which will give environmental problems. So far, only agroindustry has been accepted by the public. Together with the infrastructure development, carrying capacity for all stakeholders have been carried out in series. Andamanization was signed by the Governors of Krabi, Phuket, and Phangnga. The follow up program was delayed but the commitment was encouraged and the actual practices have been developed by the private sectors.

I have involved in many direction to help Krabi to become the center of ecotourism in the Andaman area. Andaman Youth Leadership Network was set up and be able to develop 276

youths from 32 schools in 6 provinces in Andaman Sea Coast. Many of them completed their Bachelor Degree by now and some continue their Master Degree Program.

A CASE STUDY AT BAN THUNG SOONG COMMUNITY FOREST FOR ECOTOURISM

Krabi has promoted the establishment of community forest all over the province with the total number of 55 units. Among these community forests, Ban Thung Soong Community Forest in Ao Luk District has been recognized as the best one in six provinces along the Andaman sea coast. The brief history of this community forest is briefed below.

In August 1998, I organized the Workshop on Ecotourism for local leaders and small business sectors in Krabi. There were 150 people participated, including members of Subdistrict Committee, Village Chief and Village Committee, Women Committee, and small private sectors. These local leaders considered the importance of ecotourism. I was asked by 5 representatives from Ban Thung Soong Village to visit their forest and see how the program on ecotourism can be developed. The visit in that evening was impressed and the mutual cooperation has been set up since then.

With the support from Royal Forest Department, KU Alumni Association in Krabi, KU Krabi Campus, the forest area of 7300 Rai was developed into the community forest for ecotourism. Viikki Tropical Resources Institute at the University of Helsinki has joined hands in setting up research and development in the area as well as learning traditional knowledge.

Tourist Association of Thailand in Krabi helped in setting up the People Center on a piece of the private land that Mr. Banterng Patanapichai from Phangnga gave to the village. This is the small multiple use complex to exhibit the research on biodiversity and the livelihood of the people.

Parataxonomist Hub was developed by villager on the land given by Mr. Sakorn Preedapol. This is the place where 5 key Parataxonomists can work together and exchange their idea and experiences.

In the year 2000, representative of BTS village went to Taksinrajanives Palace to receive the White Flag to Protect the Forest for People Lives (Ror-Sor-Tor-Por). This recognized event stimulated the intention of the people to participate more to the forest protection.

The Queen Pavilion was constructed on the old rubber plantation belong to Mr. Sakorn Preedapol. It locates next to the community forest to salute the event that Her Majesty and the Crown Prince have visit their people and the forest in April 2000. Her Majesty released mouse

deer, wild fowls, and upland turtles and they grew in number by now as people completely stopped illegal logging and illegal hunting

BTS Community Forest area consists of two portions connected to each other, including the undisturbed hill area (4300 Rai) and the disturbed lowland forest area (3000 Rai) which have been completely restored. The forest started to store the water in the sixth year and fishes were released by villagers. During the last three years when the annual rainfall was relatively small, people in nearby villages have to rely on water supply from Ban Thung Soong.

Several meetings were organized and the Master Plan of BTS Community Forest for Ecotourism was developed by Associate Professor Surachet Chettamart and Dr. Dachanee Emphandhu and their students. Its vision is to become the center of ecotourism research, development, training and promotion on village based tourism. This is not the intention to show the natural beauty but to see the close link between people and nature. Therefore, the mission is set to develop and promote ecotourism in the Andaman area, based on scientific studies and local knowledge.

PARTNERS, PLANNERS, AND VISITORS

The most important thing is the mutual cooperation of people in the village. BTS village has been recognized in their integration and participation in community activities. The unity of these people stimulates the interest of their allies. I and a number of my students and friends, for instance, become the real friend of the village from the beginning.

Researchers from various academic institutions (KU, MU, RFD, NRCT, retired officials, KU Alumni Association in Krabi) VITRI University of Helsinki (Finland), University of Vienna (Austria) TAT provincial authorities, Forest authorities (Krabi Provincial Forest Officers), GOs and NGOs (Children in the Forest Fund), Companies and Private sectors, Provincial Education Center, Donor Agencies, The number of partners increased with time as the strong intention of villagers on BTS Community Forest remained.

People Resolution was drafted and discussed in length in the village meeting. Details on forest uses, plant collection, hunting, collection of orchids and ferns, and domestic animals were outlined. The resolution was approved by the people and recognized by the district authorities. People participation in forest management indicated the success in the protection of the remained forest and wildlife.

RESEARCHES AND DEVELOPMENT

Researches on biodiversity were conducted in series and on year round.

Dr. Damrong Pipatwattanakul coordinated the group of researchers from various organizations to conduct the intensive survey of biodiversity. With the support from EU. Ecosystem diversity, biodiversity of trees, medicinal plants, edible plants, mammals, birds, reptiles and amphibians, insects and butterflies have been studied at BTS Community Forest. (Pipatwattanakul *et al.* 2003)

Research on plant diversity and structural characteristics of BTS Community Forest was studied by Sawatdee (2002). Results showed 61 tree species in the sample plot with 1638 trees per ha. The potential for ecotourism was moderate (2.33) and nature study was suggested.

Research on ethnobotany by a research team from Mahidol University showed that there are 94 kinds of medicinal plants being used in BTS village, including 67 dicots, 23 monocots, 1 gymnosperm and 3 ferns. These belong to 54 families (Soonthorncharernont, 2002). Additionally, non-wood forest products were suggested to study in details. These information have provided the opportunity to study in deep, for instance how agroforestry can imply the use of biodiversity in the farming system, for instance growing *Gnetum gnemon* in the rubber plantation.

Research on wildlife biodiversity was studied by Prasanai (2004). Results showed great amount of animals found in BTS village and community forest, including mammals (10 orders, 16 families, 32 species) birds (13 orders, 34 families, 135 species) reptiles (2 orders, 13 families, 42 species) and amphibians (2 orders, 5 families, 28 species). Domestication of wildlife was discussed among villagers and this will lead to the help wildlife conservation. In 2007, biodiversity of fisheries in the river system will be conducted and aquaculture is also the target.

Ethics and development communication indicated the top performance of BTS people and the learning process is never end. The potential role of women and youth have been studied to bring more integration and efficient participation. Environmental education have been developed through several workshops of different groups of people, with special emphasizing on youth activities. Socioeconomic research showed the sufficient economy of the village. Poverty eradication will be overcome in the year 2010. The Rice Program in the village showed an excellent cooperation. With the special money (100,000 Baht) given by H.M. the King for rice bank, villager has set up the cooperative system so that they can have cheaper price and good quality rice. The money is now growing by 40 percent and the system was expanded to provide help to people in the nearby villages. Electricity supply is fully developed while water supply will be increased from 30 percent to 50 percent

in the near future. Water system in the forest was improved to increase more water storage. Road system was completed by 70 percent.

CAPACITY BUILDING

Along with the biodiversity studies, training programs have been carried out in numbers so that all stakeholders will be ready for community based ecotourism. Foods, wild fruit juices, medicinal products, massage, brick making, as well as cultural activities of manora, ronggeng , and shadow play were organized in series.

FUTURE ORIENTATION

It was agreed by the BTS villagers to continue the work. Three Green Concepts were suggested, including Green Forest, Green Village, and Green School. Plans to meet these goals require more devotion of people and their allies. It was also suggested to enlarge the program to cover other villages in Khao Yai Subdistrict through the people network and activities. Women Group network has been already on the ground.

More forest restoration work was committed by villagers by planting more wild fruit trees and fodder trees in the BTS Community Forest as the source of foods for wildlife.

More program for youth will be activated through on the job training (collection and planting of edible plants in school, guide tour) and study tour. Local knowledge book will be another joint program which school can use for their teaching materials.

Finally, the Meeting of Boy Scout in 5 villages agreed to develop the Youth Center in BTS Village. The development will be followed the work on Conceptual Design and Facility Development for Ecotourism: A Case Study of Ban Thung Soong Community, Krabi Province prepared by Tansin (2004) of Phra Chomklao Technology Institute at Lad Krabang.

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