



# A Model of Participatory Community-Based Ecotourism and Mangrove Forest Conservation in Ban Hua Thang, Thailand

Patchakul Treephan\*

Faculty of Environmental Management  
Prince of Songkla University, Hat Yai, Songkhla 90112, Thailand  
ORCID ID: <https://orcid.org/0000-0002-7779-2136>  
E-mail: [ptreephan299@gmail.com](mailto:ptreephan299@gmail.com)

Parichart Visuthismajarn

Faculty of Environmental Management  
Prince of Songkla University, Hat Yai, Songkhla 90112, Thailand  
ORCID ID: <https://orcid.org/0000-0002-9933-0944>

Sang-Arun Isaramalai

Faculty of Nursing, Prince of Songkla University, Songkhla, Thailand  
ORCID ID: <https://orcid.org/0000-0001-5614-5952>  
[sagarun.i@psu.ac.th](mailto:sagarun.i@psu.ac.th)

Corresponding author\*

## Abstract

This study aimed to synthesize a model of ecotourism management and mangrove forest conservation with community participation in Ban Hua Thang, Mueang District, Satun Province, Thailand. This was a mixed-methods investigation, employing both qualitative and quantitative approaches. The research tools were a structured interview, field survey, participant observation, and questionnaires. The study revealed that the community of Ban Hua Thang is a system of relatives, using the Muslim scripture in daily life with awareness of natural resources, conservation and culture. The process of community participation in managing mangrove forest and ecotourism comprises mutual goal setting, brainstorming on participatory management, joining actions, gaining benefits, and making assessments to achieve the goals. The model of ecotourism management and mangrove forest conservation through community participation consists of 1) a mutual goal to conserve natural resources and cultural heritage by building community pride, improving learning processes and boosting community income, 2) community-based tourism management by stakeholder administration, including structure, regulations, finance, evaluation, security, destination designation, host-tourist interaction and tourist services, 3) evaluation of feedback to stakeholders, and 4) key success factors, which rely on both internal and external supports such as the community cohesiveness, congruence of management strategy and community capital, especially the abundance of mangrove forest, cultural heritage and local fishery lifestyle. External factors include local government policy on promoting community-based tourism, the expansion of ecotourism, and tourist trends on social and environmental responsibility.

**Keywords:** Community-Based Tourism, conservation, ecotourism, management, mangrove forest

## Introduction

Ecotourism is a growing trend around the world. As people become more conscious of the negative impact humanity is having on the natural environment, tourists are becoming ever more conscious of their own global carbon footprint. There is thus a desire to balance the detrimental impact of international travel with a positive local impact at the destination. This



trend has seen a rise in conservation activities and sustainable tourism experiences, such as reforestation (Sangchumnong, 2018) and coral reef restoration (Hein, Couture and Scott, 2018). Thailand is a firm part of that global trend and its mangrove forests are a particularly big draw for tourists wishing to make an environmental and social impact during their holiday (Auesriwong, Nilnoppakun and Paraweck, 2015).

A mangrove forest is a natural resource that has huge direct and indirect value for people's lives. The forest is home to a wide variety of wild and domesticated animals and plays a large role in balancing the natural ecosystem. The forest counters global warming by absorbing vast quantities of carbon dioxide and producing much of the oxygen needed by humans to survive. Additionally, the forests act as a barrier to the elements and provide natural shelter.

There are approximately 18 million hectares of mangrove forest on the planet, most of which are found on the Asian continent. The widest variety of mangrove forests is found in Southeast Asia, where 268 mangrove species have been documented. The five countries with the greatest mangrove coverage are Indonesia, Malaysia, Myanmar, Papua New Guinea and Thailand, in descending order. However, the forests are under threat and have significantly deteriorated in recent decades. There have been a number of reasons for this decline, including encroachment by human settlements, fishing and aquaculture development. However, the largest cause of mangrove forest disappearance has been infrastructural and industrial development, such as the construction of ports, roads, electrical lines, factories, channel dredging, salt farming and over-logging.

Mangrove forests are found in 24 provinces of Thailand, in the West, Central and Southern regions of the country. In 1961, it was found that there were 367,900 hectares of mangrove forest in the country, equating to 0.72% of land coverage. By 1996, this figure had been reduced to 167,582 hectares. The national government consequently implemented a policy of clearer mangrove forest management, especially the Chalem Thavorn Mangrove Forest Planting Project to honour Her Majesty Queen Sirikit on the occasion of her 72nd birthday. This was led by the Department of Marine and Coastal Resources from 2004 to 2008 and increased the total mangrove area to a total of 467,241 hectares. The majority of coverage is found in six southern provinces: Phang Nga (52,999 hectares), Satun (51,633 hectares), Krabi (48,919 hectares), Ranong (48,919 hectares), Trang (47,117 hectares) and Phuket (3,974 hectares).

Satun Province has a total area of 247,897 hectares, meaning that mangrove forest constitutes 21% of the province. Mangrove deterioration in the province has been caused by shrimp farming and logging. Following the government restoration and reforestation policy, 887 hectares of forest have been fully restored and a further 1,760 hectares have been replanted. 7,099 hectares have been declared as a protected area.

Ban Hua Thang in Mueang District, Satun Province is one of ten communities within the protected forest area. Together with the residents of Ban Kok Phayom and Ban Tha Nai Nao, the people developed a restoration project by dividing the mangrove forest into three distinct areas: a fully protected area, usable forest, and an area protected for wildlife and plant species. These measures caused the forest to fully restore and prompted visits by many interested parties to study and examine the model of Ban Hua Thang. This interest led the community members to develop a community-based tourism sector within the area, encouraging visitors to participate in restoration and leisure activities linked to the mangrove forest.

A study by Ly and Bauer (2017) argued that the success of ecotourism in Thailand has been limited due to poor communication and collaboration between government institutions and tourism businesses. They argue that a more coherent tourism strategy is required for tourism to have any long-lasting and deep restorative impact on both the local economy and natural resources. In fact, rather than promote collaboration on the terms of the government, it is



altogether more sensible to encourage local communities to manage their own surrounding resources. As Pornprasit and Rurkkhum (2019) found during an evaluation of community-based tourism in southern Thailand, “it is necessary to enhance the economic benefits of local stakeholders which would encourage natural conservation and the participation of local communities in community-based ecotourism management.” Community-based tourism is an important government-supported initiative that generates income for local people. It encourages the participation of residents in the management of tourism and their local resources, and promotes a consciousness in the care and maintenance of the area. Tourism is a major motivator in successful restoration projects. Nicolaides (2015a) has said that for any project to succeed it is critical to obtain the all the stakeholders’ buy-in and that any organization that is active in any community has essentially what is considered to be a ‘social contract’ with that community. This resides in the tacit or otherwise permission that they provide it to operate in the community (Nicolaides & de Witt, 2015b). Stakeholder management fundamentally necessitates an integrated approach to strategic decision making in which a wide range of multiple stakeholders must be satisfied and considered as far as possible in all organizational undertakings (Nicolaides, 2015a).

Those communities which maintain and improve the condition of their surrounding natural environment build a reputation that causes external visitors to come to the site and spend time both learning from the community relationship with nature and also admiring the scenery. Three such examples are the communities of Ban Leelet in Surat Thani Province, Ban Salak Kok in Trat Province and Ban Bred Nai in Trat Province which collectively restored thousands of hectares of mangrove forest and consequently experienced a dramatic increase in tourism to the area. Community-based tourism is thus a factor in the development of environmentally-friendly, sustainable communities which take collective responsibility for the conservation of their natural resources.

The community of Ban Hua Thang adopted a similar stance to these other successful communities in Thailand. They successfully restored 320 hectares of mangrove forest, which is home to 22 mangrove plant species and over 30 animal species. However, the tourism industry did not experience the same kind of boom as in other areas. This is largely down to the lack of experience and expertise of local people in providing tourism services. Therefore, the researchers developed this investigation in order to improve the tourism experience and community-based tourism model in Ban Hua Thang by developing an ecotourism model for Ban Hua Thang based on community participation.

### **Research Methodology**

There were three stages of investigation for this research project, according to each of the three aims listed above. For the first stage, investigation into the research context, the research methods used were a structured interview, observation and physical survey of the surrounding environment, including a water quality test (pH, salinity, dissolved oxygen and colour) and a survey of the mangrove forest structure. The investigation was conducted from June to November 2013 and data was gathered from a randomised sample of representatives of 94 households in the Ban Hua Thang community after the requisite ethical clearance was obtained.

Content analysis was conducted with data gathered during this stage of investigation, alongside statistical analysis of plant species in the forest and a SWOT analysis of the society, economy and environment. For the second stage, the investigation into the community participation process, the researchers undertook participatory observation within the community. A total of 18 local volunteers helped to induct and instruct the researchers in community processes. A further 7 representatives of related local institutions also helped during this phase of research. The research population was composed of the members of 114 households within the Ban Hua Thang community, 240 tourists (from September 2015 to January 2016), 6 tour companies and 14 organisations.



Respondents for this stage of research were identified by means of a convenience sampling method and numbered 252 individuals (103 residents, 119 tourists, 6 tour company workers and 24 representatives of local organisations). This phase of the investigation was conducted in four steps: establishing partnership relationships, participatory problem analysis, participatory action planning and participatory experience. Individual satisfaction was evaluated using an evaluation form with a five-point Likert rating scale. The form was also completed by 10 residents, 10 tourists, 3 tour company workers and 7 organisational representatives who were not part of the original research sample in order to test the validity and reliability of the instrument. The statistical data were then analysed to find the frequency, percentage, mean, standard deviation and interpretation of data explanations. For the final stage of the investigation, an ecotourism model was developed based on the results of stages 1 and 2 and was presented to three community and tourism development experts for their recommendations.

## **Results**

This model for participatory ecotourism management and conservation in Ban Hua Thang community was developed as a result of prolonged research within the community and is intended for implementation by the people of Ban Hua Thang and communities with similar contexts. The model is composed of parts: 1) aims; 2) principles of participatory ecotourism management and conservation; 3) evaluation; 4) success criteria and factors.

### ***Aims of participatory community-based ecotourism management and mangrove forest conservation***

There are five important aims of participatory community-based ecotourism management and mangrove forest conservation in terms of society, culture, economy, surrounding environment and natural resources. Firstly, community-based ecotourism is a tool for the conservation and restoration of natural mangrove forest resources and the culture, customs and traditional lifestyle of the community. In Ban Hua Thang, this includes local fishing, Islamic religious traditions and local cuisine. Secondly, ecotourism is a way of generating income for the local people by increasing services and sales. Thirdly, ecotourism creates community pride in local traditions and resources and encourages cultural exchange with visitors. Fourthly, ecotourism encourages the participation of external specialist organisations and promotes the development of community features, especially infrastructure and investment. Finally, ecotourism strengthens community relationships and encourages community members to address local problems and find mutually agreeable solutions.

### ***Principles of participatory community-based ecotourism management and mangrove forest conservation***

There are four areas of management in the community-based ecotourism management model: management structure, tourist attraction development, knowledge exchange and tourist services. Firstly, the management structure is divided into five distinct roles, each with very clear responsibilities. The management team consists of consultants, president, vice-president and secretary. Their role is to manage all departments and delegate duties to appropriate personnel, work teams and external agencies. They must arrange regular meetings and annually present or exhibit the results of their work. The management team sets the organisational regulations that other departments must follow, including internal regulation to ensure maximum efficiency and effectiveness of work processes.

The accountancy team is responsible for the setting of transparent budgets and monitoring organisational income and expenditure. The accountancy team is also responsible for ensuring the fair and equal distribution of community benefits. The public relations and marketing team is responsible for raising awareness of community initiatives, communicating with external agencies and distributing promotional materials about the ecotourism sites. The



evaluation team is responsible for the collection of data concerning the hopes, needs, requests and satisfaction levels of tourists. This data is obtained by means of questionnaires, interviews and guestbook entries left in local homestay accommodations. This data is presented on a monthly basis and is used to inform future projects and improvements carried out by the organisation. The safety and security team is responsible for ensuring tourist health and safety and carrying out risk-assessments of any new projects.

The health and safety team is also responsible for monitoring tourist facility standards. All departments work together to develop tourist facilities, such as toilets, pavements, car parking, seating, signs, waste management and cleaning services. It is the responsibility of all personnel to maintain and demand high levels of cleanliness standards and insist upon the timely upkeep of tourist sites and the surrounding environment. The local community arranges activities for tourists to promote local culture, traditions and the community-based management of the mangrove forest. This encourages knowledge exchange and, importantly, raises awareness of the unique cultural identity of the community and encourages tourist participation in mangrove forest conservation. The community provides a variety of services for tourists and other visitors wishing to study the mangrove forest and its conservation, including the sale of locally-produced goods and the organisation of artistic performances to raise the income levels of community members. For the purpose of providing and managing tourist services, there are six distinct groups: traffic wardens, accommodation managers, local cuisine advisors, guides, conservationists and artists.

### ***Evaluation of participatory community-based ecotourism management and mangrove forest conservation***

The evaluation of participatory community-based ecotourism management and mangrove forest conservation is intended to ensure the implementation of ecotourism principles outlined in the development model is meeting the organisational aims. The evaluation assesses whether tangible benefits of community-based ecotourism are being realised by community members, and whether there are any weaknesses or negative impacts of ecotourism in the area. The evaluation is a five-step process: planning, determination of evaluation points, data collection, data analysis and drawing conclusions.

### ***Success criteria and factors of participatory community-based ecotourism management and mangrove forest conservation***

The success criteria and factors of participatory community-based ecotourism management and mangrove forest conservation can be divided into internal and external factors. Internal factors are the basic factors that ensure the aims of the model are met.

Firstly, the relationship between different groups and individuals must be strong. People involved in the management processes, at all stages, must be striving to meet the same targets and follow the same philosophy. In Ban Hua Thang this is helped by the close familial relationship of all community members.

Secondly, roles and responsibilities must be delegated according to the specific skill set of each community member. Furthermore, each social class, generation and gender group must have a voice and the budget must be managed transparently for the collective benefit of all community members. Thirdly, ecotourism management must suit the local community lifestyle and be a reflection of traditional community practices. The existing cultural capital within the community must be used to maximum effect. This will increase the body of knowledge presented to tourists and raise the added-value of the experience. Fourthly, the conscience of people in the community regarding culture and lifestyle should then be used to inform the management process and continuously increase the level of income generated for the local area. Finally, the fertility of natural resources and the surrounding environment should become an identifying factor of the community.





Externally, the national government and Ministry of Tourism and Sport have stipulated that local community resources should be developed and conserved. They promote the organisation of activities that showcase traditional culture and lifestyle associated with the natural environment and rural identity in Thailand. The tourism market is also expanding, particularly in the areas of ecotourism, sustainable tourism and knowledge-based tourism. Moreover, tourists are increasingly seeking opportunities to travel to rural areas and interact with local people, local culture and local lifestyle. There is a growing trend for new experiences providing educational opportunities.

## **Discussion**

As the community of Ban Hua Thang is an Islamic fishing village, the people have a vested interest to conserve and restore the mangrove forest in order to preserve their everyday lives. The creation of tourism activities is a method for achieving this. By encouraging visitors to study the local lifestyle, the community of Ban Hua Thang will increase investment in the area, improve the economy and do so without harming the environment. This is a situation found in similar communities across Thailand, such as the village of Klongkone in Samut Songkhram Province. A recent investigation found that the procedures of tourism management are enhancing the capacity of tourism in the area.

Promoting the village as a knowledge centre and the development of tourism activities such as mangrove planting and kayaking have seen a dramatic increase in community stability and economic security, whilst having an overwhelmingly positive impact on the environment (Sertsri, 2015). Indeed, tourism provides economic and political incentives for local communities and, provided there is systematic and thoroughly planned conservation and management, tourism brings “additional benefit to local communities and regional economies” (Salam, Ross and Beveridge, 2000). A two-way knowledge exchange takes place during community-based ecotourism. The locals learn about tourism services and practices from external agencies and also pick up sporadic cultural traits from their visitors. Meanwhile, tourists learn about the indigenous identity, the culture, the traditions, the lifestyle and the languages. This raises a consciousness of conservation on two levels. Firstly, the locals become more aware about the benefits of an abundant local environment and seek to preserve it for economic gain.

Secondly, the tourists become more aware of the importance of local ecosystems to the surrounding communities and seek to preserve it to assist those who depend upon its survival (Tsaur, Lin and Lin, 2006). The division of responsibilities and the collective participation in tourism initiatives at Ban Hua Thang has strengthened the community spirit and generated a sense of pride in the local identity. This is a positive byproduct of the economic interests all locals have in the success of the tourism industry (Cole, 2006).

Four areas of management were identified during this investigation into the development of a community-based ecotourism management model: management structure, tourist attraction development, knowledge exchange and tourist services. These are similar to the four areas concluded in other studies, such as location, management, activities and participation (Suksilueang, 2010), or tourism resource management, general management, accommodation management and tourism committee management (Songklin, 2015). The relationships between members of the community are linked by their family ties and there is a generally strong bond between all participants in community-based tourism initiatives in Ban Hua Thang. By ensuring the projects are managed by those who will benefit directly from their success, the development model employs the strongest possible group of stakeholders. As concluded by Garrod (2003: 46), “involving local people also helps to build up the capacity of the intended beneficiaries of ecotourism to take responsibility for ensuring that it develops in a sustainable manner.”



This development model is designed to ensure the sustainability of local society in four important ways: 1) by encouraging the pursuit of new knowledge and experiences among local people, 2) by creating a learning centre about local community culture for visitors to study and promote, 3) by creating a strong participatory work ethos among community members, and 4) by instilling pride in the unique local identity and heritage. This development model is designed to ensure the sustainability of the local economy in four important ways: 1) by generating additional income for the community, 2) by distributing economic benefits evenly and fairly throughout the community, 3) by strengthening the foundations of the local economy, and 4) by creating a finding and investment system that is conducive to the development of the community. This development model is designed to ensure the sustainability of the local environment in three important ways: 1) by conserving and restoring natural resources, 2) by creating awareness of the importance of conserving and restoring natural resources, and 3) by creating benefits from natural resources and the environment without destroying them.

### Conclusion and suggestions

As a result of this investigation, the research team wishes to make a number of practical suggestions for implementation of the development model, as well as potential areas for future research. Firstly, ecotourism groups in Ban Hua Thang Community should focus on attending regular meetings in order to ensure they are fully prepared to cooperate and collaborate with community initiatives. Secondly, there should be an endeavour for community members to improve their understanding of the English and Malay languages. This will enable them to communicate with international visitors more effectively. Local government institutions should invest in the continuous promotion of Ban Hua Thang as an ecotourism destination. Local educational institutions should conduct research on the behaviour of tourists interested in the conservation of natural resources, culture and lifestyle. Agencies responsible for overseeing mangrove forest conservation and rehabilitation should promote the processing of mangrove forest products in order to encourage villagers to add value to the local economy. Agencies responsible for tourism promotion, such as the Ministry of Tourism and Sports and the Tourism Authority of Thailand should conduct projects in accordance with government policies regarding the promotion of Thai tourism. In terms of future research, it is recommended that interested scholars examine community participation in other areas of the management of Ban Hua Thang and evaluate the effectiveness of this model once it has been implemented in mangrove forest communities.

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