

ECOTOURISM ROUTE ARRAGEMENT IN PAI DISTRICT, MAE HONG SON PROVINCE, THAILAND

Tommanee Sooksai*, Anchalee Hiranphaet & Karnnapat Chumkad*****

, **, * Suan Sunandha Rajabhat University, 1-U-Thong Nok, Dusit, Bangkok, Thailand,
E-Mail: *tommanee.so@ssru.ac.th, **Anchalee.hi@ssru.ac.th, ***Karnnapat.ch@ssru.ac.th*

ABSTRACT

Abstract— The objectives of this research are to 1) create a geographic information database for ecotourism routes, 2) study the shortest paths for ecotourism, and 3) make maps showing ecotourism routes in Pai District, Mae Hong Son Province by applying geographic information technology to manage community tourist routes in Pai District, Mae Hong Son Province. The research found that there were 8 ecotourism places, comprising Yunnan Chinese Cultural Center, Tha Pai Historical Bridge, Klang Temple, Mor Paeng Waterfall, Phra That Mae Yen Temple, Nam Hoo Temple, Muang Paeng Hot Spring, and Mae Yen waterfall. The information was used to create a map using the Geographic Information System, Google Maps, and then ecotourism routes were created. The route analysis found that tourists could organize 3 types of tourism routes: 1) arranging tourism routes according to the popularity or reputation of tourist attractions, 2) arranging tourist routes according to the suitability of the tourism period, and 3) arranging shortest eco-tourism route, which has a total distance of 723 kilometers and a total travel time of 15 hours and 34 minutes. This shortest one-way-route tourism allows visitors to enjoy the nature along the route without returning to the original. From collecting tourism route information, the community can create a map for visitors' tourism planning and for ecotourism development in Pai District, Mae Hong Son province further.

Keywords— Tourism route arrangement, Ecotourism, Pai, Mae hong son, Thailand

INTRODUCTION

According to statistics, both Thai and foreign tourists travelling in Thailand tend to increase every year (Ministry of Tourism and Sports, 2019) and incomes from tourism have continuously increased. Therefore, it can be considered that tourism is a major income for Thailand. In the near future, Thailand will step into MICE city (Chaigasem T., 2019), so the meetings of multinational companies, supporting tourism as a reward, international conferences, and exhibitions need to be held. MICE city is part of the tourism industry but it is different from general tourists or tourism industry. MICE tourists will have a specifically primary purpose in traveling related to travel for a company meeting, tourism from awards received, attending the international conferences, or attending an international trade shows or exhibitions. Therefore, this group of foreign tourists has a level of expenditures 3-4 times higher than those of general tourists (Tunming P., Chaigasem T. & Siriwong P., 2019). Thailand must accelerate the infrastructure development to be able to support the competition that will take place in all areas, especially the economy and tourism (Sermkarndee and Suppian, 2015). Ecotourism has therefore been offered to foreign tourists interested in local traditions and cultures so as to suggest a new option for tourists interested in unique and interesting sites. In addition, ecotourism is considered as a tool for preserving the traditional community way of life and improving quality of life from tourism resources allocated fairly and properly, resulting in participation of people in the community. Furthermore, it is considered as an income distribution and brings income from both domestic and foreign tourists into the community by maintaining the community identity. Ecotourism is another mechanism to drive the economy of the country that is in line with Thailand's competitiveness development strategy.

Pai, Mae Hong Son province, is a small town surrounded by mountains and covered with fog (Sooksai T, 2019). The town is in the north of Thailand. There are 7 sub-districts, including Wiang Tai, Wiang Nuea, Mae Na Toeng, Mae Hi, Thung Yao, Mueang Paeng, and Pong Sa. Most people are agricultural professionals. Pai has a

beautiful geographical feature which is a charm that attracts a lot of tourists. The town is suitable for resting in every season, especially during the winter season in which many tourists come to Pai to experience the cold weather. Pai can be considered as the most visited district of Mae Hong Son province. In the past, Pai was known only to foreign tourists. Later it became popular with Thai tourists. The charm of Pai is that there are many beautiful landmarks, such as the Tha Pai Historical Bridge, Tha Pai Hot Spring, Kong Lan Canyon, Phra That Mae Yen Temple, Huay Kaai Khiri Buddhist Park, and Yun Lai viewpoint. There are various coffee shops offering aromatic coffee along the route. For the tourists wanting the excitement, adventure tourism activities - Pai River Rafting, Elephant Camp, and cycling for sightseeing around the city - are popular. Experiencing the Yunnan Chinese lifestyle at Santichon Village and leisure walk in the evening at Pai Walking Street are impressive. Tourism activities, however, have contributed to the expansion of the community. There has been an increase in the use of land for housing and commerce. People in the community have more incomes, more career opportunities, and higher education from tourism activities, as well as increased living costs. Apart from physical and economic changes, the tourism activities in Pai District, Mae Hong Son province, still have restrictions on traveling which is quite difficult due to the complex mountainous terrain, resulting in longer travel times and higher transportation costs than other routes at the same distance. As a result, most tourists choose to travel by private car or rent a car rather than traveling by bus.

Enhancing ecotourism efficiency applying geo-informatics technology to connect spatial data with descriptive data makes tourists able to search, display, and analyze data in the form of map and table quickly and able to be utilized in making ecotourism planning decisions in Pai District. Exposed location and information of tourist spots, grouped tourist attractions, and tourism network routes will help guide tourists to make a decision plan to maximize the benefits of each tourism trip as well as using data as guidelines for creating a tourism development plan in Pai District, Mae Hong Son province, further.

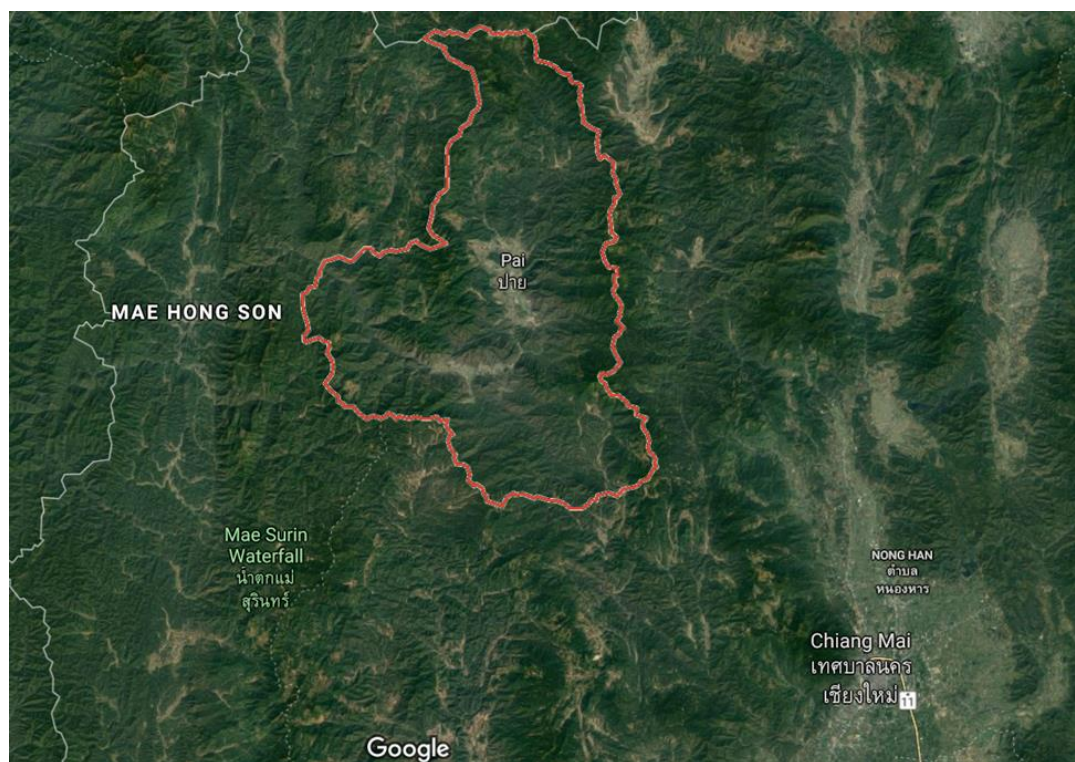


Figure 1. Map showing the boundary of Pai District, Mae Hong Son Province
Source: Google Map Website

RESEARCH CONCEPTUAL FRAMEWORK

The research conceptual framework on ecotourism route arrangement in Pai District, Mae Hong Son Province, Thailand was based on ecotourism data from the study of Inthasothti (2009) - the research project: An analysis of Eco-Tourism demand in Pai District, Mae Hong Son Province - and various documents. In addition,

the sites were surveyed in the real area, collected the coordinates using GPS from Google Maps program to further research by creating a spatial database of community tourist sites obtained from fieldwork data collection and from related documents. Then, the quality of community tourist attractions was assessed using the Tourism Standards Assessment Manual of the Department of Tourism (2015). Finally, map showing ecotourism routes in Pai District, Mae Hong Son Province, were made, as shown in Figure 2.

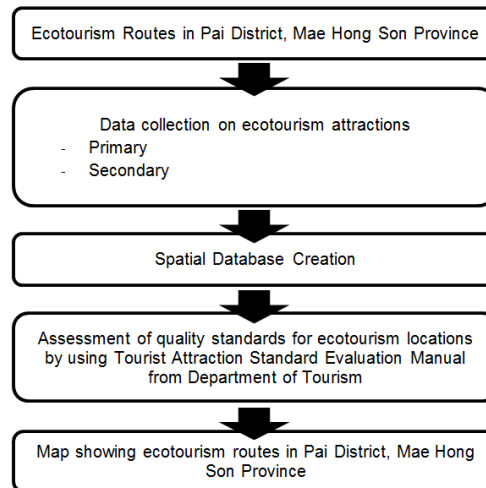


Figure 2. Research Conceptual Framework

METHODS

In this research, the methodology was divided into 7 steps as follows:

Step 1 – Data collection on ecotourism from primary and secondary sources.

Primary data was data or facts obtained from data collection from the source of information directly (Driscoll and Brizee, 2017). It was the data from the survey to explore ecotourism routes in Pai District, Mae Hong Son Province.

Secondary data was data or facts that have been recorded before (Byu Fhss Research Support Center, 2018). It was the data obtained from various reports arisen from the systematic surveys and records by government agencies or private organizations. Such data has been released in the form of a provincial development plan, Thailand tourism development plan, and various websites.

Step 2 - Data collection for coordinates of ecotourism locations by using the global positioning system (GPS) and the characteristic information of communities (John K, 2017), including ecotourism service information.

Step 3 - Assessment of quality standards for ecotourism locations by using Tourism Attraction Standard Evaluation Manual from Department of Tourism.

Step 4 - Spatial database creation of the ecotourism routes in Pai District, Mae Hong Son Province, obtained from the fieldwork data collection in the form of digital map along with creating an attribute database, comprising names, locations, and tourism services, by using Google Maps geographic information system program.

Step 5 - Ecotourism route arrangement by applying a list of 8 ecotourism sites obtained from the research on An Analysis of Eco-Tourism Demand in Pai District, Mae Hong Son Province to the survey of ecotourism routes in Pai District by analyzing the routes from the Google Maps program with the time calculations between tourist sites to find the distance and time in each route, as shown in Figure 3.

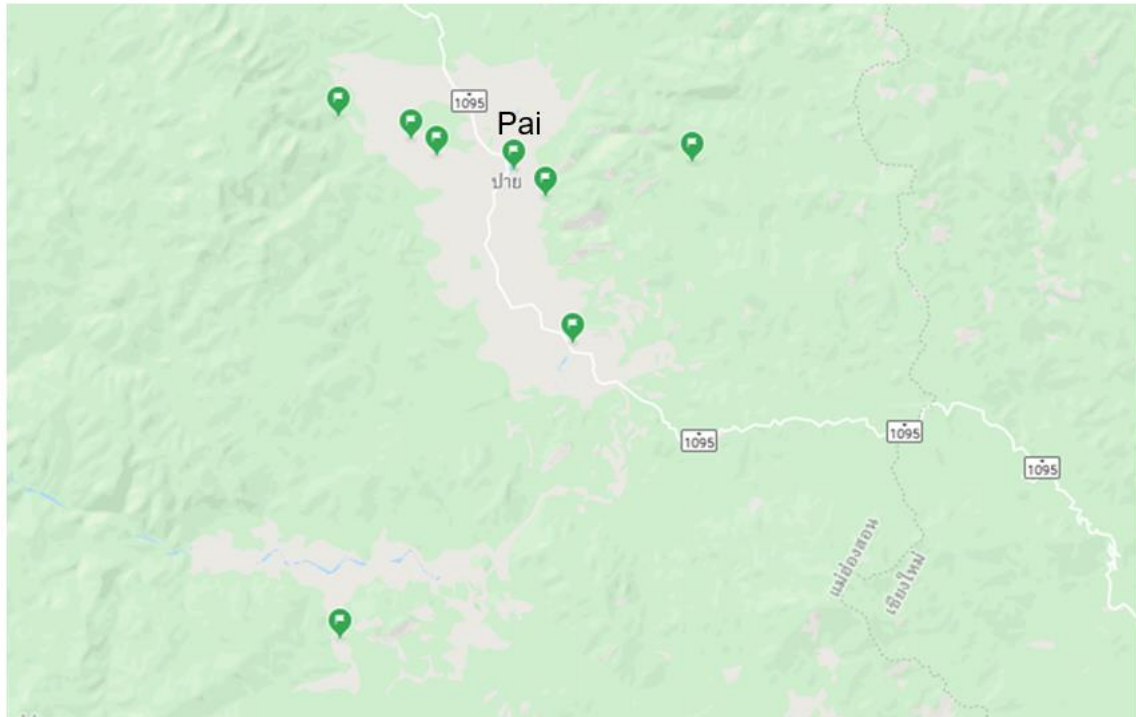


Figure 3. Overview of ecotourism points in Pai District, Mae Hong Son Province
Source: <https://www.google.com/maps>

Step 6 - Shortest route analysis using Google Maps Program which offers the route automatically analyzed, together with distance and travel time, as shown in Figure 4.

The factor used in the analysis of the ecotourism routes in Pai District was shortest distance route. Route analysis began with determining the location of the tourist attractions in the community from the first tourist attraction to the final tourist attraction by determining distance as the factor of analysis. The program analyzed the route simulation network to provide the route alternatives according to the existing road networks in the study area of the specified tourist attractions.

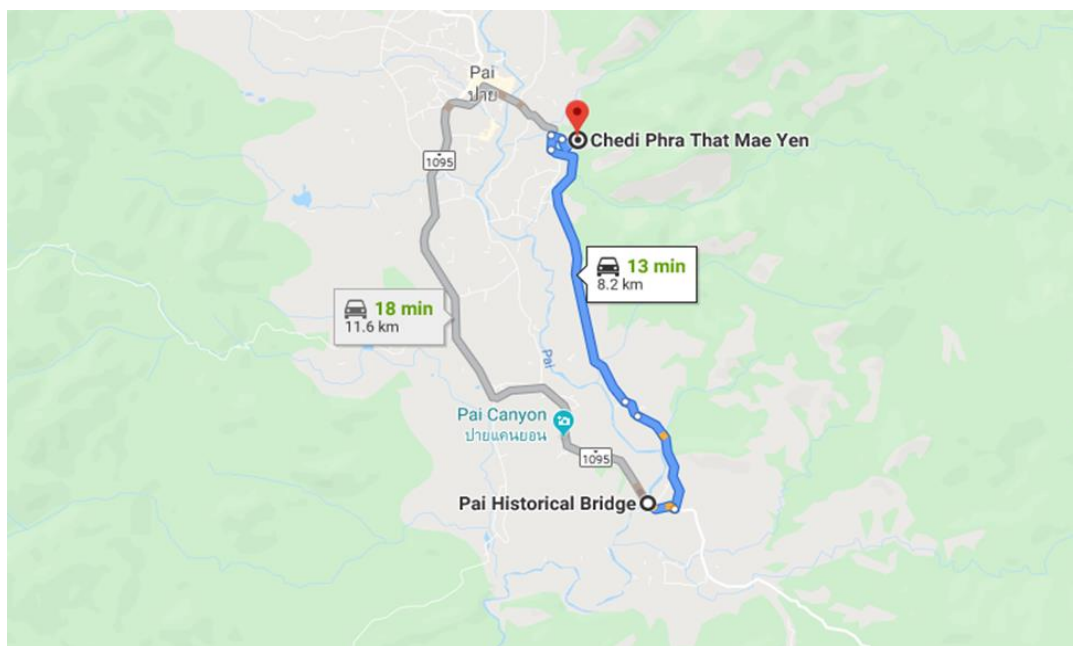


Figure 4. Route analysis illustration of Google Maps Program
Source: <https://www.google.com/maps>

Step 7 – Creation of maps which show the ecotourism routes in Pai District, Mae Hong Son Province, including displaying the details of routes and tourist attractions in each map and applying the points of tourist attractions with Google Map program for tourists’ travel planning application, as shown in Figure 5.

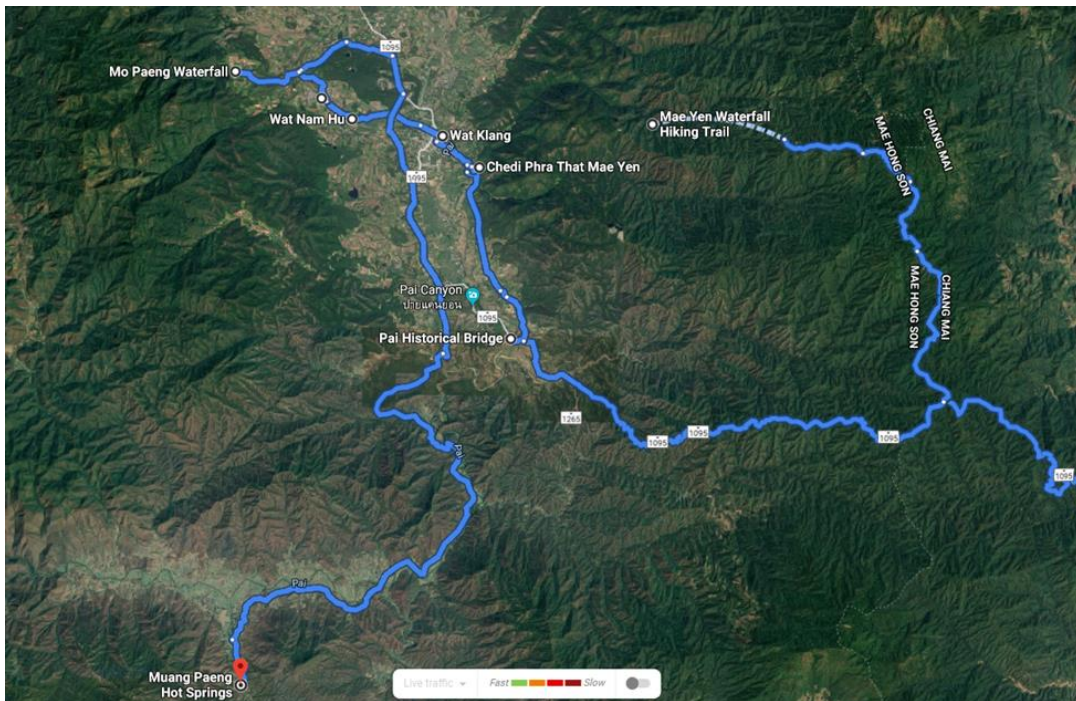


Figure 5. Data on ecotourism locations with Google Map Program

Source: <https://www.google.com/maps>

RESULTS AND DISCUSSIONS

From the study on the ecotourism route arrangement in Pai District, Mae Hong Son Province, the information on names of places, coordinates, and locations of tourist attractions were detailed, as shown in Table 1. In addition, the map showing community tourist attractions using Google Maps was created. The community tourist attractions were distributed in various sub-districts in Pai District, as shown as a map in Figure 6.

Table 1

Coordinates and locations of tourist attractions in Pai District, Mae Hong Sorn Province

No.	Name of Places	Locations (sub-districts)	Coordinates	
			latitudes	longitudes
1	Yunnan Chinese Cultural Center	Wiang Tai, Pai District	(19.37115)	(98.40325)
2	Tha Pai Historical Bridge	Mae Hi, Pai District	(19.29745)	(98.465)
3	Klang Temple	Wiang Tai, Pai District	(19.35999)	(98.44268)
4	Muang Paeng Hot Spring	Mueang Paeng, Pai District	(19.1904)	(98.37655)
5	Mor Paeng Waterfall	Mae Na Toeng, Pai District	(19.37883)	(98.37578)
6	Nam Hoo Temple	Wiang Tai, Pai District	(19.3649)	(98.41315)
7	Mae Yen waterfall	Mae Hi, Pai District	(19.36284)	(98.51088)
8	Phra That Mae Yen Temple	Mae Hi, Pai District	(19.35015)	(98.45463)

Source: Adjusted from Sermkarndee and Suppian (2015)

From Table 1, it depicts that Pai District, Mae Hong Son province, has 8 ecotourism sites ranked by the number of tourists from highest to lowest (Inthasothi H., 2009), including Yunnan Chinese Cultural Center, Wiang Tai Sub-district, Pai District, 19.37115 latitude, 98.40325 longitude, Tha Pai Historical Bridge, Mae Hi Sub-district, Pai District, 19.29745 latitude, 98.465 longitude, Klang Temple, Wiang Tai Sub-district, Pai District,

19.35999 latitude, 98.44268 longitude, Mueang Pang Hot Spring, Mueang Paeng Sub-district, Pai District, 19.1904 latitude, 98.37655 longitude, Mor Paeng Waterfall, Mae Na Toeng Sub-district, Pai District, 19.37883 latitude, 98.37578 longitude, Nam Hoo Temple, Wiang Tai Sub-district, Pai District, 19.3649 latitude, 98.41315 longitude, Mae Yen Waterfall, Mae Hi Sub-district, Pai District, 19.36284 latitude, 98.51088 longitude, and Phra That Mae Yen Temple, Mae Hi Sub-district, Pai District, 19.35015 latitude, 98.45463 longitude, respectively.

From the study of the ecotourism route arrangement in Pai District, Mae Hong Son province, it found that tourists can choose 3 types of tourist routes as appropriate for tourism planning and the time specified by tourists on the trip, including 1) arranging the travel routes according to the popularity or reputation of the tourist sites, in which tourists will target specific tourist attractions before traveling while other tourist sites are just stopover points, 2) arranging the route according to journey time appropriateness, which is a tourism that requires activities of particular tourist destinations suitable for tourism at any time, such as the Tha Pai Historical Bridge which is appropriate to travel during the morning hours due to too hot weather in other periods, and 3) arranging the shortest and most economical travel route, in which tourists from Chiang Mai International Airport, travelling by car heading to the road no. 1095 with a total distance of 133 kilometers, take a total of 3 hours to reach the tourist attractions - Mae Yen Waterfall, Tha Pai Historical Bridge, Phra That Mae Yen Temple, Klang Temple, Nam Hu Temple, Yunnan Chinese Cultural Center, Mor Paeng Waterfall, and Muang Paeng Hot Spring, respectively - and they can continue to watch the landscape without a U-turn by heading to the road no. 108, taking 3 hours and 58 minutes with a total distance of 153 kilometers from the Muang Paeng Hot Spring to Chiang Mai International Airport (Anchalee Hiranphaet, 2016), as shown in Figure 6.

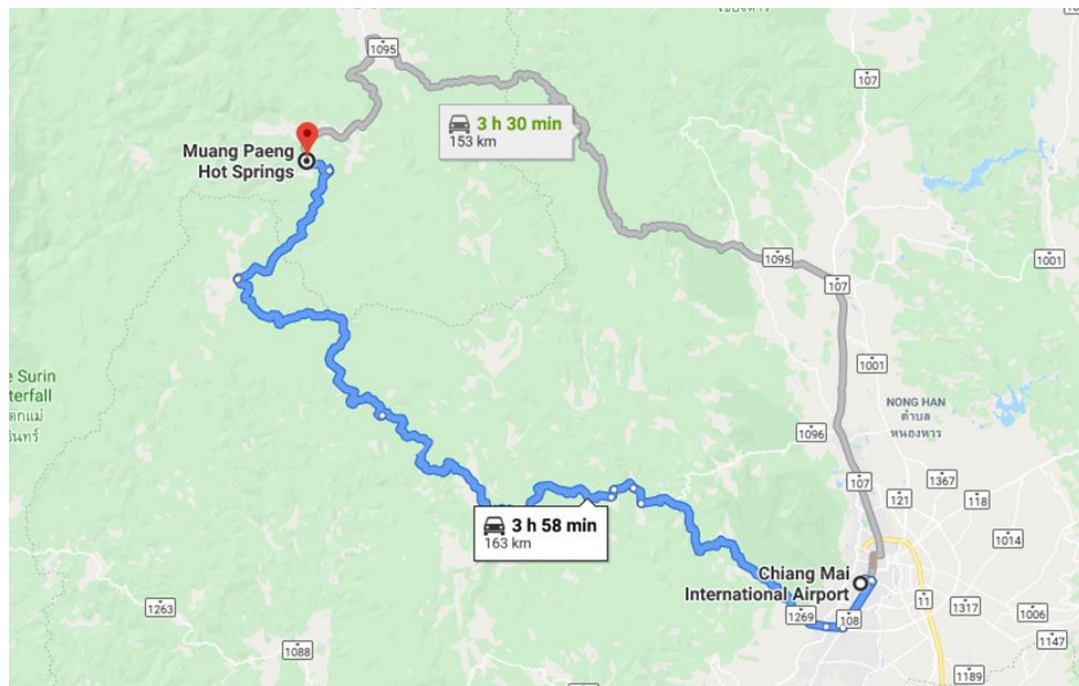


Figure 6. Map showing entire ecotourism locations in Pai District, Mae Hong Son Province

Source: <https://www.google.com/maps>

From the data analysis results on the ecotourism routes in Pai District, Mae Hong Son province, it found that there are 8 tourist attractions distributed in 4 sub-districts, including Wiang Tai, Mae Hi, Mueang Pang, and Mae Na Toeng. Some tourist attraction, such as Phra That Mae Yen Temple, is unknown to many tourists but it has beautiful ecological conditions. Facilities in the area, moreover, still lack a promotion of transportation routes for tourism. In addition, factors affecting ecotourism route development in Pai District are tourism route management planning and local knowledge, as in line with Choopak and Aunyawong (2019).

RECOMMENDATIONS

1. In creating a map showing ecotourism routes in Pai District, Mae Hong Son Province, there should be both government and private agencies to support and publicize tourism information in Pai District so that tourists easily access the information source and travel more and more.

2. Villagers in Pai District and various departments in relation to tourism promotion should collaboratively preserve the culture of tourist attractions in Pai District, both in undeveloped and developed tourist attractions, in order to prevent foreign societies and cultures from covering the identity and the beautiful ecosystem of Pai District, Mae Hong Son Province.

ACKNOWLEDGMENT

Researchers are grateful to executives, teachers and personnel of College of Logistics and Supply Chain, Suan Sunandha Rajabhat University, for the continuous research endorsement, including giving thanks to <https://www.google.com/maps> for the cooperation in providing useful information useful for the research.

REFERENCES

- Anchalee Hiranphaet. (2016). Transportation management process ABC Dye Products Co., Ltd.: Case study on transportation procedures. *Journal of Logistics and Supply Chain College*, 2(2), 87-99.
- BYU FHSS Research Support Center. (2018). Data Types and Sources. Available online at <https://fhssrsc.byu.edu/Pages/Data.aspx>
- Chaigasem T. (2019). Management for the transformation of a Historical City into a MICE City supporting the idea of MICE business in AEC. *African Journal of Hospitality, Tourism and Leisure*, 8(5).
- Choopak W. (2019). Developing of floating market's logistics and supply chain management in Surat Thani province Thailand. *African Journal of Hospitality, Tourism and Leisure*, 8(5).
- Choopak, W., & Aunyawong, W. (2019). The Development of Tourism Logistics and Supply Chain Management of Lampaya Floating Market, Banglen Nakhon Pathom, Thailand. *Research and Development Journal Suan Sunandha Rajabhat University*, 11(1), 126-131.
- Department of tourism. (2015). Thailand Tourism Standard. Available online at <https://www.dot.go.th/ebooks/ebooks-view/413>
- Driscoll & Brizee. (2017). What is Primary Research? Purdue Online Write Lab. Available online at <https://owl.english.purdue.edu/owl/resource/559/01/>
- Inthasotthi H. (2009). An Analysis of Eco-Tourism Demand in Pai District, Mae Hong Son Province. Chiang Mai University, Thailand.
- John Kyes. (2017). What Is GPS?. Available online at <https://www.geotab.com/blog/what-is-gps/>
- Ministry of Tourism and Sports. (2019). Press conference : Tourism Situation. Available online at <https://www.mots.go.th>
- Sermkarndee, P., & Suppian, T. (2015). Travel Community: One Tambon One Product (OTOP) in Amphoe Phakpayoon, Phatthalung Provice. The 6th Hatyai national conference. Hatyai University, Thailand.
- Sooksai T. (2019). Push-pull factors and behaviors of tourists to Tongchom Market, Mae La Noi District, Mae Hong Son Province, Thailand. *African Journal of Hospitality, Tourism and Leisure*, 8(4).
- Tunming, P., Chaigasem, T. & Siriwong, P. (2019). The increasing of potential in tourism logistics supply chain to Khon Kaen ME city, Thailand. *African Journal of Hospitality, Tourism and Leisure*, 8(1).