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# Call for Papers Winter Issues 2023 Journal of Environmental Management and Tourism

**Journal of Environmental Management and Tourism** is an open access, peer-reviewed interdisciplinary research journal, aimed to publish articles and original research papers that contribute to the development of both experimental and theoretical nature in the field of Environmental Management and Tourism Sciences. The Journal publishes original research and seeks to cover a wide range of topics regarding environmental management and engineering, environmental management and health, environmental chemistry, environmental protection technologies (water, air, soil), pollution reduction at source and waste minimization, energy and environment, modelling, simulation and optimization for environmental protection; environmental biotechnology, environmental education and sustainable development, environmental strategies and policies.

Authors are encouraged to submit high quality, original works that discuss the latest developments in environmental management research and application with the certain scope to share experiences and research findings and to stimulate more ideas and useful insights regarding current best-practices and future directions in Environmental Management.

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## Safety Management Model of Tourism City Municipalities in Eastern Economic Corridor

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**Abstract:** This research was aimed to assess the level of concern and satisfaction level of safety, study safety management, and suggest a safety management model of Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province, Thailand. A mixed method research was employed which was a combination of quantitative research and qualitative research by examining 400 samples and 30 significant participants. The research instruments consisted of a questionnaire about general information, safety concern level, safety satisfaction level, and a semi-structured interview about security management of Na Jomtien Municipality.

Quantitative data were analyzed using mean, standard deviation, and analyzed the qualitative data using coding analysis. The results were that foreign tourists had a high level of security concern and a high level of safety satisfaction. In addition, it was found that Na Jomtien Municipality had a concrete safety management that was consistent with various policies and responded to the needs of the local people. The study revealed that the safety management model for the tourism city municipalities in Eastern Economic Corridor (EEC) should contain each of the following aspects, including 1) Crime, 2) Accident, 3) Natural disaster, 4) Prevention of disappearance/getting lost, 5) Travel, 6) Exploitation, 7) Health and hygiene and 8) Environment.

**Keywords:** safety management model; tourism safety; tourism municipality; Eastern Economic Corridor; Thailand.

**JEL Classification:** L83; L88; L89; Z10; Z19; R11.

### Introduction

Currently, Thailand is implementing national development according to the Thailand 4.0 policy under the 20-year national strategy that focuses on driving the economy towards stability, prosperity and sustainability, with good-income tourism and medical tourism (Affluent, Medical and Wellness Tourism) as one of the government's priorities that support, promote further development, and elevate the competitiveness of the manufacturing and service sectors based on knowledge, technology and innovation. Thus, resulting in tourism in the 4.0 era that can compete with other countries and is a power to drive the country's economy (Division of Research Administration and Educational Quality Assurance, 2016).

The Eastern Economic Corridor (EEC) project is a strategic plan for Thailand under 4.0 to extend the development of the Eastern Seaboard area that focuses on developing 3 provinces in the eastern region including Rayong, Chonburi and Chachoengsao, to become leading economic areas and is a livable city in Asia that will help support the increase of competitiveness, economic expansion of the country including improving the quality of life and income of the people (Gajanandana 2017). At the same time, an action plan for developing and promoting tourism in the Eastern Economic Corridor was formulated which is one of the sub-plans under the development plan of the Eastern Economic Corridor to be able to achieve the objective of enhancing the quality of tourism in the 3 provinces in the eastern region to sustainable world-class tourism, supporting high-income and health-oriented tourists to generate higher income from tourism for people in the area due to the increase in the number of tourists (Eastern Economic Corridor Office of Thailand, 2018). To raise the quality of tourism in the 3 provinces in the eastern region to sustainable world-class tourism that can support high-income and health-conscious tourists, it is necessary to develop tourism by building tourist confidence by creating measures and

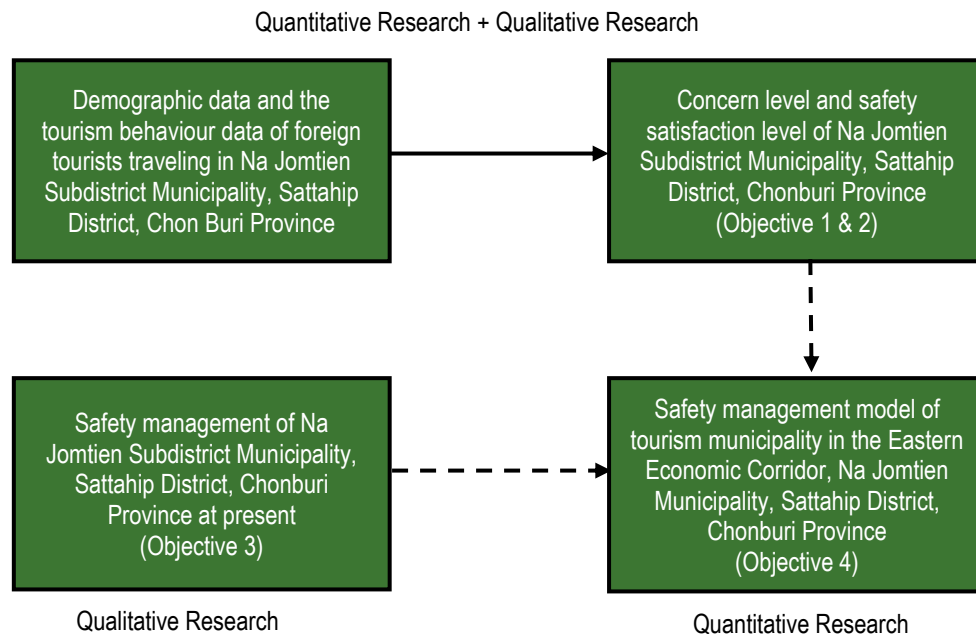


setting up a health safety system and the safety of tourists to be reliable efficient and productive, helping tourists to be satisfied, and reduce travel anxiety (Thawornprapasawat 2019).

According to the preliminary study, the researcher found that Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi province is a large community. There is an area adjacent to the Special Administrative Area of Pattaya City, which is a famous tourist attraction. There are important beaches that are popular with both Thai and foreign tourists, such as Na Jomtien Beach and Ban Amphur Beach, which are beaches with scenic views and serene atmosphere. It is less crowded than Pattaya Beach and has a wide range of hotels. In terms of health and safety in the region, it was found that Na Jomtien Municipality does not yet have a large hospital to directly support tourists in the area. In term of the area of safety, it was found that Na Jomtien municipality has some narrow and isolated transportation routes. Some points have incomplete traffic signs, and there is a problem with the drainage system, flooding, and damaged traffic surface. In addition, it was also found that Na Jomtien Municipality has a 3-year manpower plan (2021-2023) that has laid out a strategic plan and set the first strategy, which is the development of tourism and aims to make Na Jomtien Municipality become a tourist city and provide quality services standard for tourists, but no health safety issues were found and safety of tourists in the aforementioned strategic plan (Najomtien Municipality 2020).

Therefore, this research aimed to study the level of concern and satisfaction level of Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province in view of foreign tourists, analyze the security management style of the area, and suggest the safety management model of tourism municipalities in the Eastern Economic Corridor in order to use the results from the research as a guideline to drive efficient and effective safety management of the tourism municipality. The research objectives were 1) To assess the level of security concerns of the Na Jomtien Subdistrict Municipality, 2) To assess the level of satisfaction with safety of Na Jomtien Subdistrict Municipality, 3) To study the safety management of Na Jomtien Subdistrict Municipality at present and 4) To suggest the safety management model of Na Jomtien Subdistrict Municipality.

Figure 1. Conceptual framework



Source: Author's illustration

## 1. Literature Reviews

### 1.1 The Meaning of Tourism Safety

Tourism safety refers to the state of being free from danger or loss, and with no tendency to cause injury to people or damage to property. It was an unexpected event, not intending to happen cannot control, and it cannot be avoided (Wang *et al.* 2019), thus making tourism safety a priority for the tourism industry. It is an important component of the quality of tourist attractions, and a factor that affects the decision before traveling, and affects the satisfaction of tourists during the trip (Thawornprapasawat 2019).

## 1.2 Types of Tourism Safety

Tourism safety is divided into the following categories (Ma *et al.* 2020; Thawornprapasawat 2019, Wang *et al.* 2019):

- Water safety is the safety from water accidents that may occur to tourists, resulting in injury or death to tourists. The most common water safety accident is drowning, while other causes include boat sinks, crashes of tourist boats, etc.
- Road safety is the safety of car and motorcycle rental accidents that result in injury or death to tourists caused by their non-compliance with the law.
- Safety from being deceived and exploited is the safety from accidents that happen to foreign tourists due to deceiving tourists in various ways; for example, taxis do not press the fare meter and charge fares at exorbitant prices.
- Life and property safety is the safety from accidents of tourists that affect the lives and property of tourists.

## 1.3 Tourism Security Measures

Security measures that are consistent with the cause of the problem of various types of disasters, consists of the following important measures based on several researchers as Gidebo (2021), Cui *et al.* (2016), Kokovic and Markovic (2009), Esichaikul (2001):

- Crime security measures include the establishment of checkpoints and incident reporting units in tourist attractions in areas prone to theft, organizing training for volunteer groups to protect against thieves in tourist attractions, reminding tourists of crime by creating pamphlets, and warning signs.

- Accident safety measures consist of setting up warning signs about the types or nature of accidents that may occur in areas with high risk of accidents, training of disaster relief volunteers, preparation of materials and equipment at the point of rescue that can provide assistance to victims as quickly as possible, creating permanent defenses such as railings and fences for walking up the hill, establishment of a first aid unit in an appropriate location, determination of measures to control business operators that have the potential to cause accidents to tourists such as transportation business, travel business.

- Public health security measures consist of stipulating measures to control entrepreneurs in the food and beverage business and operate under sanitary conditions and as required by law, inspecting restaurants with good hygiene and declaring them to be certified as clean restaurants, and maintenance of cleanliness in tourist attractions.

- Natural disaster security measures consist of providing rescue teams in high-risk areas of natural disasters, preparing rescue equipment as appropriate for various perils and installing them at risky points, ongoing training for volunteers to help victims of disasters, providing emergency rescue troops that can rotate at any time, installing an early warning system before natural disasters, establishing a network system with agencies involved in the occurrence of natural disasters.

- Safety measures against getting lost include orientation for tourists to familiarize themselves with tourist areas, preparation of navigation signs and maps showing the location of things within tourist attractions, training of tour guide volunteers and supervising the operation of tour guides to be correct and suitable, establishing barriers to prevent tourists from getting lost in tourist attractions.

- Plant and animal safety measures include orientation and posting of warning signs to inform tourists in advance of any plants and animals that may pose a risk to tourists, arranging staff or volunteers to look after and take care of the risky areas, and making fences to prevent tourists from disturbing or destroying plants or animals during the visiting.

## 1.4 Eastern Economic Corridor

Eastern Economic Corridor (EEC) is a strategic plan under Thailand 4.0 that has an important goal to upgrade and increase the country's competitiveness, promote economic expansion, increase employment, and elevate the quality of life and income of the people (Tontisirin and Anantsuksomsri 2021). It is a spatial development that builds on the success of the Eastern Seaboard plan. In the first phase, the area was set to cover three provinces in the eastern region: Chachoengsao, Chonburi and Rayong, as well as other related provinces which is ready for transportation, infrastructure needs of operators sourcing of resources and links with other economic centers to develop the area into a leading economic area and the main trading gateway to Asia. It is also the location of the Regional Offices of foreign companies, Targeted Industrial Center (First S-Curve and NEW S-Curve),

Maintenance Facility Airport Center, Regional Ports, both commercial and cruise ports, Free Zone, etc. (Eastern Economic Corridor Office of Thailand 2018, Gajanandana 2017).

## 2. Research Design

A mixed method research was employed which is a combination of quantitative research and qualitative research.

### 2.1 Population and Sample

*Quantitative data:* The population included 636,672 foreign tourists traveling in Chonburi Province (Data from the Ministry of Tourism and Sports as of January 2023). The sample groups were 400 foreign tourists traveling in Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province. Taro Yamane 's formula was utilized to calculate the sample size, which was assigned a 5% margin of error (Yamane 1973). The sample selection criteria were as follows:

- 1) being a foreign tourist;
- 2) traveling in tourist attractions located in Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province (not including Pattaya Special Administrative Areas);
- 3) able to read, listen, write English at the basics and
- 4) willingly consent to participate in the research. Non-probability sampling, namely purposive sampling was employed in this research.

*Qualitative data:* The important participants were 30 municipal officials and members related to safety management of Na Jomtien Subdistrict Municipality, Sattahip District, Chon Buri Province. Purposive selection was used to select those participants.

### 2.2 Research Instruments

The research instruments consisted of quantitative research instrument was questionnaires, and qualitative research instrument was semi-structured interviews. Questionnaires was divided into 3 parts:

- Part 1 - General information questionnaire about respondents. The form of the questionnaire is a check list survey and fill in the blanks.
- Part 2 - A questionnaire on the level of security concerns of Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province. The form of the questionnaire is a 5-level rating scale.
- Part 3 - A questionnaire on safety satisfaction level of Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province. The form of the questionnaire is a 5-level rating scale as follow:
  - 5 refer to the highest level of concern/satisfaction;
  - 4 refer to the high level of concern/satisfaction;
  - 3 refer to the moderate level of concern/satisfaction;
  - 2 refer to the low level of concern/satisfaction;
  - 1 refer to the very low level of concern/satisfaction.

The questionnaires were examined on content validity by checking for Item Object Congruence (IOC) such as index values for consistency between the content in the questionnaire and the objectives and the correctness of the language and improved the questionnaire to be appropriate according to the advice of 5 experts. It was found that the mean of the IOC was 0.60-1.00. Then, the revised questionnaire was used for pre-testing with 30 sample groups who were not a sample but had a context close to the sample groups in the research, and the reliability value was 0.875 using Cronbach's alpha coefficient (Cronbach 1991).

Semi-structured Interviews contain open-ended questions about the security management of Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province. The interview form has been checked for quality by experts and the interview form has been revised to be appropriate according to the advice of 5 experts.

### 2.3 Data Analysis

Quantitative data. Descriptive statistics were applied to analyze the data consisting of frequency, percentage, mean and standard deviation, and interpret the meaning of the specified criteria as follows:

- 4.50-5.00 refer to the highest level of concern/satisfaction;
- 3.50-4.49 refer to the high level of concern/satisfaction;
- 2.50-3.49 refer to the moderate level of concern/satisfaction;
- 1.50-2.49 refer to the low level of concern/satisfaction.
- 1.00-1.49 refer to the very low level of concern/satisfaction.



Qualitative data. The data obtained from in-depth interviews were analysed using coding analysis and descriptive analysis was presented.

### 3. Research Findings

#### 3.1. Results of Demographic Analysis and Tourism Behavior Data

Most of the samples were female, aged 31 to 40 years old, residing in the United States, American race, single status, Christianity. The education level is a bachelor's degree. They were private employees/employees. Their income ranged from \$2201 to \$2700. They travelled to visit their friends and relatives by traveling by themselves with a friend and taking travel insurance prior visiting. It was also found that the sample group travelled 2-3 times to Na Jomtien Beach and surrounding areas at night. The travel period within the area took 1-2 days, and they had a desire to revisit for the next opportunity. The important factor in traveling is the reputation of tourist attractions.

#### 3.2. Safety Concern Level Assessment

Assessment of the level of safety concerns in Na Jomtien Subdistrict Municipality, using Mean, Standard Deviation, and the level of safety concern was shown in Table 1.

Table 1. Level of safety concerns in Na Jomtien Subdistrict Municipality

Safety Factors	Mean ( $\bar{X}$ )	Standard Deviation (S.D.)	Concern Level
1. Life safety	3.90	0.70	High
2. Properties/items safety	3.89	0.72	High
3. Exploitation	3.88	0.74	High
4. Health and hygiene	3.91	0.73	High
Total Average	3.89	0.72	High

Source: Research Results

From Table 1, foreign tourists have a high level of safety concerns in Na Jomtien Subdistrict Municipality with a mean of 3.89 and a standard deviation of 0.72. When considering each aspect, it was found that foreign tourists were concerned about the safety of their lives, properties/items safety, exploitation, and health and hygiene. The mean was 3.90, 3.89, 3.88, 3.91, respectively, and the standard deviation was 0.70, 0.72, 0.74, 0.73, respectively. Tourists were concerned in all aspects at a high level.

#### 3.3. Safety Satisfaction Assessment

Assessment of the level of safety satisfaction in Na Jomtien Subdistrict Municipality, using Mean, Standard Deviation, and the level of safety satisfaction was shown in Table 2.

Table 2. Level of safety satisfaction in Na Jomtien Subdistrict Municipality

Safety Factors	Mean ( $\bar{X}$ )	Standard Deviation (S.D.)	Satisfaction Level
1. Crime	3.83	0.75	High
2. Accident	3.85	0.72	High
3. Hygiene/Public Health	3.83	0.74	High
4. Natural disaster	3.86	0.74	High
5. Prevention of disappearance/Getting lost	3.84	0.71	High
6. Travel	3.84	0.74	High
Total Average	3.84	0.73	High

Source: Research Results

From Table 2, foreign tourists have a high level of safety satisfaction in Na Jomtien Subdistrict Municipality with a mean of 3.84 and a standard deviation of 0.73. When considering each aspect, it was found that foreign

tourists were concerned about the safety of crime, accident, hygiene/public health, natural disaster, prevention of disappearance/getting lost, and travel. The mean was 3.83, 3.85, 3.83, 3.86, 3.84, 3.84, respectively, and the standard deviation was 0.75, 0.72, 0.74, 0.74, 0.71, 0.74, respectively. Tourists were concerned in all aspects at a high level.

### 3.4. Safety Management Research

A local development plan (2022-2027) has been formulated by Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province to drive various public benefits to the local people both in terms of development to support tourism, integrated environmental management and coastal management, improving the quality of life, educational development, development administration, development in transportation, and economic development concretely to comply with government policy, Chonburi province policy, Sattahip district policy and the municipal administrators policies that have been announced to the Na Jomtien Subdistrict Municipality Council and respond to the needs of local people including safety management in life and property safety, accident, hygiene, natural disaster, exploitation, environment, and traveling.

### 3.5. Analysis of Safety Management Model

The data from the semi-structured in-depth interviews with 30 participants found that the area had a priority concern on road accident safety on risky areas which commonly agreed. Also, 22 out of 30 participants mentioned that crime was another serious concern at tourist destinations nowadays because of economic recession. Few participants discussed the prevention of lost items as well as unclear directional signages. Eight out of 30 participants stated about travel safety, exploitation and natural disaster plans to be prepared at tourist destinations. Also, health and hygiene were critically discussed due to the devastated COVID-19 issues. Lastly, environmental safety was mentioned by few participants.

From studying, analyzing and reviewing local development plans, operational plans, various strategies, with in-depth interviews with agencies responsible for safety management of tourism municipalities in Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province, using coding analysis, it is found that there are 8 safety aspects that need to highly put emphasis on, including 1) Crime safety management, 2) Accident safety management, 3) Natural disaster safety management, 4) Prevention of disappearance/getting lost safety management, 5) Travel safety management, 6) Exploitation safety management, 7) Health/hygiene safety management, and 8) Environmental safety management.

### Conclusions and Suggestions

According to research, it was found that the factor of safety in life and property is one of the three important factors that make foreign tourists travel to Na Jomtien beach and surrounding areas which shows that the factor of safety, which is an important element of the quality of tourist attractions, is a factor that affects the decision before traveling and affects the satisfaction of tourists during the trip because the starting point for tourists' decisions and expectations is to gain new experiences that they have never had before. When planning a trip, they had to compare the experience they would get with the prices and risks from insecurity in tourist destinations that they are not familiar with (Ma *et al.* 2020, Thawornprapasawat 2019). Therefore, security in life and property safety are important elements that will help build confidence in traveling for tourists and promote a better image of tourism (National Institute of Development Administration 2015).

For the level of concern of the safety management of the tourism municipality of Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province, foreign tourists are concerned at a high level. When considering each aspect, it was found that tourists were concerned at a high level in all aspects. The highest level is hygiene/public health. The secondary is life safety, properties/items safety, and exploitation safety, respectively. These supported the research of Chitphong (2018) that foreign tourists are concerned about public health safety, exploitation safety in the purchase of goods and services, life safety, and property safety. However, threats to tourists are often caused by tourist attractions that cannot be directly controlled and completely eliminated. That is why tourists are worried about insecurity (Mansfeld and Pizam 2006). As the research of Amir *et al.* (2015) shown that individuals would have security concerns when traveling to non-national destinations which related to the studies of Cui *et al.* (2016) and Kokovic (2009).

For the level of satisfaction of the safety management of the tourism municipality of Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province, foreign tourists are satisfied at a high level. When considering security management for crimes, which foreign tourists were highly satisfied, it was found that foreign tourists were most satisfied with the presence of volunteers on site to provide security. It supported the research of

Tontisirin and Anantsuksomsri (2021) and Suthikul and Wiruchnipawan (2017) that important guidelines for the development of municipal tourism management in Phuket according to the philosophy of sufficiency economy was that personnel should be employed for the safeguarding of tourists appropriately.

Tourism municipality in Na Jomtien Subdistrict Municipality, Sattahip District, Chonburi Province has 'safety management model' that consists of criminal safety management, accidental safety management model, natural disaster safety management, prevention of disappearance/getting lost safety management, travel safety management, exploitation safety management, health/hygiene safety management, and environmental safety management. The security management model is consistent with the strategy to build confidence in the safety of life and property of foreign tourists of Tourism Safety and Security Standards Division, Permanent Secretary of Ministry of Tourism and Sports, which has the main mission to monitor the situation and check the indications that have an impact or may affect the safety of tourists, published to alert tourists, develop standards regarding the safety of tourists, as well as being a centre for coordinating and building cooperation of all sectors in providing assistance, facilitating, troubleshooting fraud, ensuring safety and relief for tourists by collaborating with government agencies and the private sector to work together to create a network and strengthen the whole system (Division of Standards and A Tourist Safety Supervision 2023, Thawornprapasawat 2019). It can be seen that the most effective prevention of safety and security incidents in tourist destinations should cooperate fully with tourists, communities, private sectors in the tourism industry, and the government in building confidence and safety for tourists.

To give suggestions, tourism operators and related tourism agencies should continuously promote and communicate online marketing to the tourist population in order to attract tourists to return to travel again and participate in various festival activities in the Na Jomtien Beach and surrounding areas. Organizations involved in safety management should realize and build confidence in the safety of life and property for tourists through various security measures as well as communicating to tourists to create a good image and find ways to create awareness among tourists in order to communicate to increase confidence in the safety of crime and reduce the concerns of tourists in various aspects.

In further research, it should study effective safety management communication guidelines and styles for foreign tourists in order to develop a communication style suitable for different groups of tourists as a result to be more effective in the future.

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### Credit Authorship Contribution Statement

**Chayapoj Lee-Anant** confirms responsibilities for the following: Conceptualization, Investigation, Methodology, Project administration, Software, Formal analysis, Writing – original draft, Supervision, Data curation, Validation, Writing – review and editing, Visualization, and Funding acquisition.

### Declaration of Competing Interest

The author declares that he has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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