

Model of Sustainable Tourism System Application Between Borders of Indonesia and Timor Leste

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Abstract - Tourism is one of the sectors most affected by the COVID-19 pandemic. As a result, the Indonesian government decided to close access for foreign tourists. As a result, based on BPS data, foreign tourist visits fell very deeply to more than 80 percent in 2020 which only reached 4 million people with foreign exchange worth 3.54 billion US dollars of which 51.1% of tourists from Timor Leste. This figure did not reach the set target of 4.9 billion US dollars. However, the number of foreign tourist arrivals remains high from Timor Leste where in February 2021 it was recorded at 117,000 visits. This number decreased by 14.74 percent from January 2021 which reached 137,200 people and decreased by 86.59 percent from February 2020 which recorded 872,800 foreign tourists. Based on the entrance, the land route between Indonesia and Timor Leste was 75,300 visits and equivalent to 64 percent of the total foreign tourist visits that month, either through the Wini land gate, Timor Tengah Utara regency, Motamasin Malaka regency and Motaain Belu regency. Based on nationality, the most foreign tourists who came to Indonesia from Timor Leste were 53.4 percent in May 2021

Keywords: *model, sustainable, border, Indonesia, timor leste*

I. INTRODUCTION

President Jokowi ^[1] has set East Nusa Tenggara with the jargon of super premium tourism in Indonesia in support of the 10 new Bali program because this province is one of the provinces in Indonesia that has many destinations and as a tourist destination that has promising prospects for unique culture and natural beauty. which has the potential to attract tourists, both domestic and foreign tourists.

In connection with this, the Ministry of Tourism is currently exploring the potentials of border tourism or

cross border tourism since 2015 where in 2021 in an effort to achieve the target of visiting 4 million foreign tourists and 275 million movements of domestic tourists so that in 2021 the province of East Nusa Tenggara The government has designated the government as a contributor to cross-border tourism or the second area after the Riau Islands or Batam as well as a contributor to state foreign exchange from the cross-border tourism sector because almost all of Indonesia's border areas are underdeveloped areas whose conditions are very concerning as a foreign face. So far, border areas have been managed by prioritizing a safety belt approach so that socio-economic development has been neglected.

The Indonesia-Timor Leste border covers the land and maritime borders between Indonesia and Timor Leste. Are between Belu regency, Malaka regency and also Kupang regency and Timor Tengah Utara regency with the Oecussi-Ambeno exclave.

Based on data from the Central Bureau of Statistics Indonesia 2021, it is known that foreign tourists from Timor Leste and Malaysia are the dominant contributors to foreign tourist visits to Indonesia in 2021. Foreign tourist arrivals from Timor Leste reached 81,500 people with a contribution of 49.8 percent and Malaysia was followed by 66,400 people. in the same period in 2020 as shown in the table below:

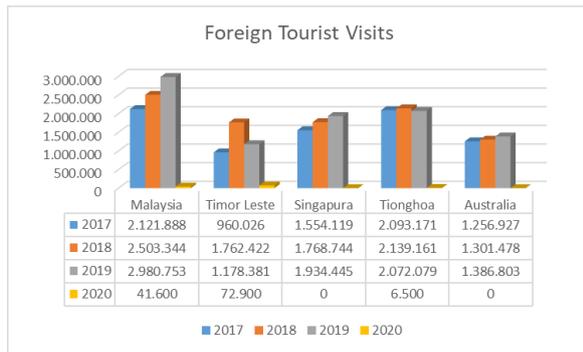


Figure 1. Foreign Tourist Visits

Based on figure 1 above, it can be concluded that the number of tourist arrivals from Timor Leste has increased both through the 3 land gates of the Wini, Motaain, Motamasin Border Crossing Posts as well as through the air gates of El Tari Kupang Airport and Ngurah Rai Airport in Denpasar Bali. This increase is also included in the 5 large percentages of contributors to foreign tourist visits to Indonesia. For this reason, the important role of East Nusa Tenggara as the southern gate of Indonesia which borders land, sea and air directly with the state of Timor Leste can be a prime mover for tourism development in this province. When the Covid 19 outbreak hit the world which resulted in the closure of air transportation routes between countries, in 2020 the number of foreign tourists visiting Indonesia was still dominated by tourists from the country of Timor Leste.

The condition of the border areas in NTT Province which is located in Belu regency, Timor Tengah Utara regency, Malaka regency and Kupang regency has not shown an ideal picture. The basic problems faced by the people in the border areas of NTT include the low level of welfare of the people in the border areas. These 4 districts are characterized by low incomes and limited business opportunities because most of the area is dry land. This is exacerbated by the lack of skills in managing resources, limited investment in tourism, especially utilizing tourism potential. In addition, inadequate tourism facilities and infrastructure, low knowledge of the community about tourism awareness, lack of tourism human resources, cellular network connectivity, causing residents to in the border area becomes isolated. Environmental damage as a result of the conversion of customary forest functions into open agricultural land that does not apply sustainable natural resource management patterns or green tourism. Tourists who cross the border area just pass without doing tourism activities. This can happen because of the absence of cross-border tour packages provided or the activities of something to do and something to buy that are not yet available.

Therefore, based on the results of the researcher's direct observations when conducting training conducted in collaboration with the East Nusa Tenggara Provincial Tourism Office, the North Central Timor Regency Tourism Office and Belu Regency which were carried out in October - December 2020, it can be concluded that several problems are the main obstacles. in the application of a sustainable tourism system across borders between Indonesia and Timor Leste, namely the following:

Table 1. The main problem

Problem Identification	Cross Border Entry Point		
	Wini-Oecussi	Motaain-Batugede	Motamasin-Suai
Tourist generating region	High	High	Low
Tourist destination region	Middle	High	Poor
Accommodation	Poor	Poor	Poor
Accessibility	Good	Good	Good
Tourist Attraction	Poor	Poor	Poor
Transit route region	No	Yes	No
Business tourism	Poor	Poor	Poor

Based on table 2 above, researchers can conclude that the main problem is the problem of accommodation that is not yet available, destination management objects that have not been managed professionally, and also the stretching of the tourism business that has not made a positive contribution to the development of the border area. This can happen due to a lack of knowledge and understanding of pentahelix tourism, especially in the cross-border area in utilizing the business opportunity of cross-border tourism as a source of foreign exchange for the country and region. For this reason, it is necessary to create a model of a sustainable tourism system by carrying out the principles of sustainable tourism for cross borders in Belu, North Central Timor and Malaka districts.

Tourism development is currently directed towards sustainable tourism development. this is because sustainable tourism development policies are directed at the use of natural resources and the use of human resources for the long term Sharpley [2]. where there is a balanced triangulation relationship between tourist destinations and their habitats and humans, making holiday packages, and the tourism industry, where none of the stakeholders can damage the balance or the more it is preserved, the more prosperous it is. This of course needs to be fostered by the same understanding or perception of relevant stakeholders and provide the widest possible space for the community as the main actors in developing tourist destinations that can be aligned with the implementation of sustainable tourism.

Studzieniecki [3] concluded that development of tourism in the borderland of the two countries is

significantly related to cross-border cooperation, Cross-border cooperation started developing in Europe back in the 1950th. Its main objectives were associated with the abolition of barriers, dividing the communities of the border areas of various European countries and Dunetz [4] conclusion that cross-border cooperation contributes to mitigation of the negative effects of state borders and the periphery of border areas, improving the socio-economic situation of the local population. To identify the prerequisites promoting tourist cooperation it is important to study the cross-border region. Cross-border systems are characterized by the integrity and mutual influence of two or several autonomous links located on opposite sides of the borders, the intersection of the geopolitical interests of the neighboring states, the asynchrony and asymmetry of changes on opposite sides of the border is a conclusion from Artemenco [5]. Tourism industries can directly affect much to the country development economically and socially development. Some of the impacts are opening it up for business, trade and capital investment, creating jobs and entrepreneurialism for the workforce and protecting heritage and cultural values is a conclusion that from Batala [6].

Hamptom [7] concluded on that cross-border tourism can be a useful addition to more conventional forms of international tourism within national tourism planning and could lead to significant economic benefits for local communities. Taena [8] concluded that development of the border between Indonesia and Timor Leste region reflects the government's performance in the neighbor country and result also showed the economic its increasingly strengthening the region as a new growth center, also shown by an increase of growth economic 68,79%. Oki [9] concluded cross border trade is a strength to develop economy in border area. However, weaknesses from inside and threats from outside must be minimalized well by optimizing all the resources. Education level of the people which is still low, limitation of capital, bureaucracy to process a license which is still difficult, becoming internal problems and weaknesses of the community to compete exploiting market demand. Strategy to be taken is by creating strengths to overcome threat.

Based on the conclusions of several researchers, it can be concluded that this research gap is the application of a tourism system based on the origin and destination of tourists, transportation used, tourist destinations and hospitality at three cross-border locations between Indonesia and Timor Leste.

A. Formulation Of The Problem

What is the model for implementing a sustainable tourism system in Indonesia and Timor Leste?

B. Research Purposes

To develop a model for implementing a sustainable tourism system in Indonesia and Timor Leste.

C. Research Benefit

The Ministry of Tourism of the Republic of Indonesia will increase the potential for cross-border tourism in 2021 in an effort to achieve the target of visiting 4 million foreign tourists where NTT has been designated by the government as the second contributor to cross-border tourism in Indonesia in order to become the prime mover of the economy in the NTT region, and Research in the field of tourism between the borders of Indonesia and Timor Leste has never been carried out in three of the four regencies in the province of Nusa Tenggara Timur which are directly adjacent to the state of Timor Leste, namely Belu regency, Malaka regency and Timor Tengah Utara regency.

II. LITERATURE REVIEWS

2.1 Defenition of system

The system is the components or subsystems that interact with each other, where each of these parts can work individually (independently) or together and are interconnected to form a single unit so that the goals or objectives of the system can be achieved as a whole.

Systems theory first appeared in the 1930s as an attempt to formalize and develop systems thinking. According to Anderson and Johnson (1997)[10], system thinking is "a school of thought that focuses on recognizing the interconnections between the parts of a system and synthesizing them into a unified view of the whole". Systems thinking is generally understood as a set of tools (a set of tools), a framework for looking at issues as a systemic whole (a framework for looking at issues as systemic wholes) and a language for communicating dynamic complexities and interdependencies (a language that offers a way to communicate about dynamic complexities and interdependencies).

2.2 Defenition of tourism system

According to Law Number 10 of 2009 concerning Tourism Article 1 Paragraph 3, tourism is a variety of tourism activities and is supported by various facilities and services provided by the community, businessmen, government, and local governments. UNWTO defines tourism as an activity or activities carried out by people who travel to and live outside their usual environment and not more than one year in a row for pleasure, business and other purposes.

Tourism as an industry is a complex system and involves many elements. A number of pioneers in the field of tourism have tried to describe the tourism system, one of which is that Leiper has done. Leiper (1979) [10] defined tourism as: the system involving the discretionary travel and temporary stay of persons away from their usual place of residence for one or more nights, excepting tours made for the primary purpose of earning remuneration from points en route. The elements of the system are tourists, generating regions, transit routes, destination regions and a tourist industry. These five elements are arranged in spatial and functional connections.

Leiper's Tourism System is a basic conceptualisation of the structure of the tourism industry. It is one of the most widely accepted and most well-known models used in tourism research when attempting to understand the tourism system

Leiper tourism system is known as one of the simplest systems and uses a geographical approach. In his system, Leiper identified the elements in a tourism system as follows: 1) a tourist; 2) an area of origin of the traveler; 3) tourist destinations; 4) transit routes for tourists traveling between the tourist origin area and the tourist destination area; and 5) the travel and tourism industry (eg accommodation, transportation, agencies and organizations providing services and products for tourists).

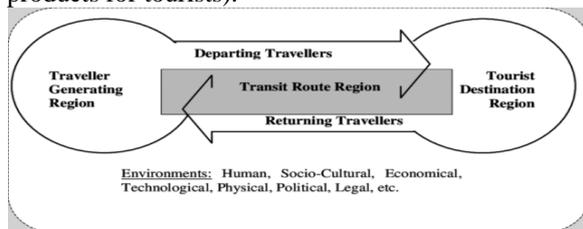


Figure 2. Leiper Tourism System

In its development, Leiper [10] divides tourism elements as follows: Element Description Tourists Human elements: persons on touristic trips Traveler-generating regions Geographical element: places where a tourist's trip begins and normally ends Transit routes Geographical element: places where a tourist's main traveling activity occurs Tourist destination regions Geographical elements: places where a tourist's main visiting activity occurs Tourism industries Organizational element: collections of managed organizations in the business of tourism, working together to some degree in marketing tourism and providing services, goods and facilities.

2.3 Defenition of travel generation region

The tourism-producing area, commonly referred to as the TGA (Tourist Generating Area), is the area where the tourism actors are located. The term tourist here, according to the researcher, is not only tourist but there is something called excursionist. So it is

more appropriate to call it a Visitor Generating Area (VGA), because there are differences between tourists and travelers. Meanwhile, the difference is that tourists are the type of visitors who need accommodation because they usually spend the night or travel > 24 hours, and travelers are the type of visitors who don't stay overnight or are often called day trippers because the trip is usually less than 24 hours. VGA is an area that produces visitors who have a demand for tourism activities. In this area there are already tourism and travel services that act as service providers to tourism actors to help carry out their tourism activities.

2.4 Defenition of tourist destination region

Tourist destination region or tourist receiving area (TRA) or more precisely referred to as the visitor receiving area (VRA) is a tourist destination or commonly referred to as a tourism destination, where the place is a tourist activity carried out by tourism actors/visitors. The VRA boundary can be considered as a travel area from where visitors carry out tourism activities that include places that are usually visited by visitors. Some experts suggest that accommodation or places where tourists stay overnight are the center of VRA. In this area there are tourist attractions, various supporting facilities for tourism activities and infrastructure provided by the community, private sector or government.

2.5 Defenition of transit route region

Transit Route Region is an intermediate route that has boundaries as a place where visitors have left the area of origin but have not yet reached their tourist destination or commonly referred to as a transit area. This is an intermediate zone before the main tourist activity occurs, in this case there are several places/areas that choose to act as transit areas to tourism destinations.

2.6 Defenition of tourism industries

According to W. Hunziker dalam Yoite [11], the definition of the tourism industry is "Tourism companies are all business entities that, by combining various means of production, provide goods and services that are specifically for tourism or tourism industries are all businesses that are directly involved in providing goods or services to facilitate the activities of visitors when they are outside their place of origin.

Having the characteristics of an open system, the organization of five elements operates within broader environments: physical, cultural, social, economic, political, technological with which it interacts. Meanwhile, the external environment consisting of economic, social, political, legal, technological and environmental factors is a macro external factor that

affects the sustainability of all components of the tourism system.

III. RESEARCH METHOD

3.1 Research sites

Site of research was conducted in the province of Nusa Tenggara Timur Indonesia in particular at the regency which in direct border with country of Timor Leste, namely regency of Wini regency of Timor Tengah Utara, Motaain regency of Belu and Motamasin, regency of Malaka. In this study, direct observation was used when researchers conducted training, and interview techniques, focus group discussions, in-depth interviews were conducted using zoom media and documentation studies.

The method used in this study is a qualitative descriptive method because the researcher wants to describe or describe the facts or conditions or symptoms that appear in tourist destinations so that a tourism system model can be made when the research¹²⁾. Informant Determination Techniques [12] informants must have several criteria that need to be considered, namely ; 1. Subjects who have long and intensively merged with an activity or activity field that is the target or attention of research and this is usually characterized by the ability to provide information by rote about something being asked ;2. The subject is still fully engaged and active in the environment and activities that are the target or research ; 3. The subject has sufficient time and opportunity to be asked for information ; 4. Subjects who provide information do not tend to be processed or packaged in advance and they are relatively innocent in providing information. Primary data is data obtained from answers given by respondents through questionnaires and direct interviews with respondents. In this study, primary data were obtained from the research field, both direct observation and interviews with informants. In this case, the researcher uses the Expert Sampling technique (expert sample) in determining the informants. According to Sofar and Widiyono [15] Expert Sampling technique itself is a technique of selecting informants as samples who master the object of research.

The selected informants or informants in the research of the tourism pentahelix element are academician, business, community, government, and media in 3 district areas

3.2 Data analysis technique

Analysis of the data used in this research is data that has been collected through observation and later interviews described and analyzed descriptively, Next, we will re-check the data obtained with the characteristics of each phase in the theory Butler is TALC [13] or tourism area life cycle and also based

on SWOT analysis [14] , which consists of 3 stages [18] namely:

- a. Data reduction: The data obtained from the field is quite a lot, therefore it is necessary to record it carefully and in detail. As has been stated, the longer the research in the field, the more data will be, complex and complicated. For this reason, data reduction is necessary. Reducing data means summarizing, selecting the main things, focusing on the things that are important, looking for thematic patterns and removing unnecessary. Thus the data that has been reduced will provide a clearer picture, and make it easier for researchers to carry out further data collection, and search for it if needed.
- b. Presentation of data: After the data is reduced, the next step that the researcher must do is to display the data. Through the presentation of the data, the data is organized, a pattern of relationships is arranged, so that it will be easier to understand. The presentation of the data that has been obtained will be arranged neatly and structurally which can help researchers to draw conclusions and actions related to research.
- c. Verification or Conclusion: Conclusions in qualitative research may be able to answer the formulation of problems problem formulations in qualitative research are still temporary and will still develop after the research is in the field. The conclusion in qualitative research that is expected is a new finding that had never existed before. Findings can be in the form of a description or description of an object. The data that has been obtained will be concluded to answer the objectives of this study.

IV. THE RESULT OF RESEARCH

The results of this study are described based on Leiper's tourism system theory.

4.1 Travel Generation Region

The traveller generating region is the destination in which the tourist comes from.

a) Motaain and Bobonaro distric

Tourists who pass through this border can come from Indonesia with Atambua City as the entry point and tourists from Timor Leste can enter through the Bobonaro district with the city of Maliana as the entry point

b) Wini and Ambenu distric

Tourists passing through this border can come from Indonesia with Kefamenanu City as the entry point and tourists from Timor Leste can enter through the Oecussi district with the city of Pante Makasar as the entry point.

c) Motamasin and Suai Distric

Tourists who cross this border can come from Indonesia with the City of Betun as the entry point and tourists from Timor Leste can enter through the Suai district with the city of Cova Lima as the entry point.

4.2 Tourist Destination Region .

In Leiper’s tourism system, the tourism destination region is the area that the tourist is visiting.

d) Motaain , Belu regency

In Belu district, tourists from Timor Leste can visit 44 natural tourist destinations, 72 cultural tours and 6 artificial tours. In addition, tourists can also enjoy 1,185 destinations throughout the East Nusa Tenggara region.

e) Wini , Timor Tengah Utara regency

In the district of Timor Tengah Utara , tourists from Timor Leste can visit as many as 11 tourist destinations, and can also enjoy 1,294 destinations throughout the East Nusa Tenggara region.

f) Motamasin, Malaka regency

In Malacca district, tourists from Timor Leste can visit as many as 14 natural tourist destinations, 11 cultural tours and 3 artificial tours and can also enjoy 1,277 destinations throughout the East Nusa Tenggara region.

4.3 Transit Route Region

The tourist transit region is the space between when the tourist leaves the traveller generating region and when they arrive at the tourist destination region. The tourist transit region is largely made up of transport infrastructure

Transportation used by tourists from Indonesia and Timor Leste can use land routes through three cross-border posts between countries with length of the road trip from Atambua to Dili is four hours, Kefamenanu to Pante Makasar is two hours and from Kota Betun to Suai is two hours.

Besides that can also be via air flights with route Denpasar to Dili and Kupang to Dili. Currently there is also an international airport in the Oecussi district but it is not yet able to serve international flights.

Table 2. International Aviation Access to Timor Leste

Route	Frequency	Aircraft Type	Airline
Denpasar-Dili	2-3 / day	A 320/Boeing 737	Citylink/Nam Air
Kupang-Dili	2-3 / week	ATR 72-600	Trans Nusa
Singapore-Dili	1 / week	A 320	Silk Air / Air-Timor
Darwin-Dili	10 / week	E 170/175	Air North

4.4 Tourism Industries

The tourism industry includes a number of hotels, restaurants, arts groups, tourism awareness groups, and other entertainment services.

g) Motaain , Belu regency

In Belu regency there are currently 43 hotels and homestays, 82 restaurants, 3 travel agents, 6 art studios, 14 entertainment services, and 13 tourism awareness groups.

h) Wini, Timor Tengah Utara regency

In TTU regency there are currently 10 hotels and homestays, 170 restaurants, 1 travel agents, 90 art studios, 5 entertainment services, and 11 tourism awareness groups.

i) Motamasin , Malaka regency

In Malaka regency there are currently 19 hotels and homestays, 35 restaurants, 1 travel agents, 5 art studios, 6 entertainment services, and 3 tourism awareness groups.

V. DISCUSSION

Based on the results of the study from the stages of the TALC or tourism area life cycle and SWOT analysis, it can be described a model for implementing a tourism system across the borders of Indonesia and Timor Leste as follows:

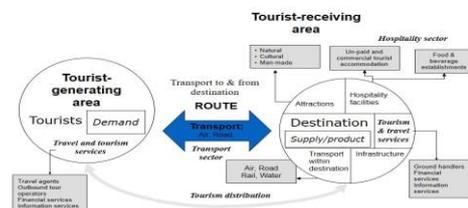


Figure 3. Model Tourism System on Cross Border Indonesia and Timor Leste

VI. CONCLUSION

The Indonesia–Timor Leste border covers the land and maritime borders between Indonesia and Timor Leste. Are between Belu regency, Malaka regency and also Kupang regency and Timor Tengah

Utara regency with the Oecussi-Ambeno exclave and the number of tourists entering through the Motaain cross-border post is 80% every year when compared to Wini and Motamasin.

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